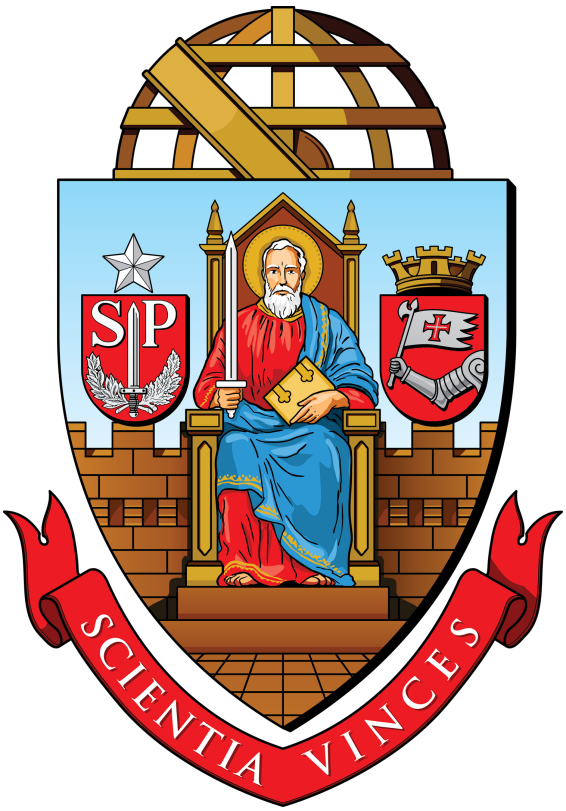

University of São Paulo

USP Institutional Assessment
2010 - 2014

SET OF INTENTIONS

Mission

1.1.1 What is the Faculty's mission?

(Computer Science - IME)
R: The Department of Computer Science (DCC) of IME-USP emphasizes the quality of its teaching activities, research and extension. Our mission is to form professionals capable of being agents of transformation of the area and of the country. In other words, besides conscious citizens, with leadership potential, we want them having a solid formation that allows the development of new technologies and methodologies, and the participation or conduction of advanced research. The mission takes shape through the offering iconic courses of undergradute and graduate. It includes generation and dissemination of programs and teaching materials aimed at the development of the area in the country. The mission of research is the production of inovative results in science, technology and methodology. These results must be disseminate on an international level, through the publication of scientific articles in worldwide circulation vehicles, with a recognized selection policy. For the inovative technological production, it would happen through patents and free software. The mission of extension is to stimulate, in São Paulo state and in the country, the use of the most recent advances of the area as well as offering oportunities of updating through courses and programs aimed at the non-academic public. Another mission of the department is to be a space for reflection and gathering of several areas that are characterized by intense use of computing. Ultimately, the department´s goal is to be an example of personal and professional environment to the students, with emphasis on the interpersonal relationships between professors, non-professors and students.

(Statistics - IME)
R: The Department of Statistics of the Institute of Mathematics and Statistics of the University of São Paulo has as its mission the search for the excellence in the fulfillment of its activity end, which is the teaching/research/extramural.

(Applied Mathematics - IME)
R: The mission of the Department of Applied Mathematics is the development of excellence of research in Mathematics and its applications, the offering of high quality courses and programs, both graduate and undergraduate, as well as extension activities. These activities meet the social functions of training graduates and postgraduates, generation and dissemination of knowledge, and the transfer of this knowledge to the society at large. The mission of the Department is in full consonance with the Institute of Mathematics and Statistics, there is a close collaboration with the activities developed by other departments and the directors office.

(Mathematics - IME)
R: The mission of the Department is to comply with the tripod of the core activities of the University (education, research and extramural) in its specific field, in which consists providing necessary instruments and environment to motivate its professors to produce mathematics with quality and to take part in the post-graduate program. The Department of Mathematics(MAT) is currently one of the largest at USP and it is responsible for the mathematical education of the undergraduate courses of the following intstitutes: Escola Politécnica(84 classes/year); Faculdade de Economia(18 classes/year); Administração e Contabilidade(2 classes/year); Instituto Oceanográfico(4 classes/year); Instituto de Química(19 classes/year); Instituto de Física(25 classes/year); Instituto de Astronomia, Geofísica e Ciências Atmosféricas(6 classes/year); Faculdade de Arquitetura e Urbanismo(2 classes/year); Instituto de Geociências(4 classes/year); Faculdade de Ciências Farmacêuticas(2 classes/year) and from IME 112 classes/year). Besides, MAT attends an annual average of 15000 enrollments in its undergraduate courses offered at USP.
MAT is responsible for the courses of Bachelor in Mathematics and Educator License in Mathematics. Each

year the Department of Mathematics receives 180 new students, being 30 in Bachelor and 150 in Eduacator Licensure. The course in Bachelor in Mathematics has as its main mission to form future researchers and professors to work in the various areas of mathematics. The course gives a solid background in Mathematics that allows the student to pursue their studies in graduate courses(master degree and doctorate) in the best institutions of the country and abroad. The course in Educator Lincensure has as its mission to form teachers in Mathematics capable to teach in middle school and high school(primary and secondary), a professional of the area of education that dominates mathematical, specific and nontrivial knowledge, who enjoys to face and solve problems with awareness of the importance of such activities in the dynamics of the teaching and learning process. We also seek that the licencesed can develop knowledge and reflection of how a school works, so he or she can choose appropriate mathematical contents and pedagogical procedures to different age group and the needs of the social-cultural contexts of their future students.
The graduate program forms masters and doctors with training in the field of mathematics. Besides, it is responsible for the Mestrado Professional no Ensino de Matemática. In the last 4 years we have received an average of 44 master degree students and 87 doctorate students. The master degree in mathematics has as its main focus to form professors and identify students with vocation for reasearch, leading them to doctorate degree. In the doctorate course, the goal is to form researchers, with its main step being elaborating a thesis where the student needs to demonstrate knowledge and maturity to do research.

1.1.2 Is the mission disseminated to professors, employees, and students and implemented in the Faculty?

(Computer Science - IME)
R: The mission of the department is widespread and continually applied between teachers, students and staff. Some concrete actions in this regard are:
1- The rules on horizontal and vertical progression in the teaching career are formalized and published on the cover page of the department's website;
2- These rules are communicated to all examination boards for promoting or hiring docents;
3- Our students of undergraduate and graduate are carefully evaluated in all academic activities.

(Statistics - IME)
R: Everyone get involved in the collective work done by the Department and take part in all of the activities that comprise the mission of the Department.

(Applied Mathematics - IME)
R: The mission of the Department of Applied Mathematics is well known to its faculty and staff. The relatively small department allows all faculty and staff to have frequent contact and the dissemination of ideas and mission occurs naturally in this interaction. In addition, we are implementing a reception program for new faculty members, explaining the main objectives of the Department and its day to day functioning.

(Mathematics - IME)
R: The mission of the Departament of Mathematics is well known among its professors and staff: So that, as an academic community, MAT may accomplish its multiple mission and show itself in the vision of its members, its mission is disseminated in a first approach, through the analysis and resolution of the following issues:
1. Quality of teaching;
2. Hiring, qualification and requalification policies;
3- Graduate course evaluation;
4- Equationing the workload of professors and staff;
5- External representativity;
6- Infrastructure;
7- Management (publicity, communication and information);

8- Integrations between the departments;
9- Integration between admnistrative areas.

Vision

1.2.1 What is the Faculty's vision?

(Computer Science - IME)
R: Aligned with our mission, the Department of Computer Science of IME-USP aims to be one of the 50 best departments of computing in the world. To achieve that, we want to recruit the best students in the country interested in the area, encourage the international performance of our faculty members in order to allow them to evolve continually, intensify our interaction with the productive sectors of the economy and increase the allocation of funds to enable increasingly bold research and education actions.

(Statistics - IME)
R: The Department intends to build an academic leadership, aiming to collaborate and participate of society based in the transparency, in ethics and in the social responsibility of the formation of the citizen. Its vision is keeping itself as a national and international reference, in teaching, research and extramural.

(Applied Mathematics - IME)
R: The Department of Applied Mathematics sees in today's world an environment where technical skills needed for the various projects are not embraced in its entirety by a single discipline of knowledge. Major scientific, technological and industrial projects are increasingly complex and require different knowledge to be realized. At the same time, the need for quantitative understanding and a logical approach brings to mathematics a key role in these processes, and places it in a key position for future developments. Thus the department understands that development professionals with great mathematical ability and knowledge of their tools and how to interact with different areas is a current priority and focus of our undergraduate and graduate courses. In addition, it is clear the lack of professionals with this profile in the country nowadays, and the department intends to be a reference center in this direction, forming professionals who should work in the various States of the country.

It is also indispensable to develop new mathematical tools that allow meeting the needs of scientific advance, and to transmit the knowledge generated and held by mathematicians to the rest of society. As all production of current mathematical knowledge is globally integrated, the department seeks to maintain a close relationship with the international community, with close cooperation with several centers. The department sees the recent internationalization of its faculty, and the increasing presence of research projects with other countries, as a trend that should be maintained and valued, in order to increase external recognition of our expertise and to permit the faster introduction and absorption of new development

(Mathematics - IME)
R: The Department of Mathematics is defined by the social commitment of a public institution. Its aim is to function with excelence in teaching, research and extramural. In teaching, the aim is to fulfill, in a responsible and consistent manner, its role of providing to its many students a solid mathematical formation in the highest level. Our research is of the basic kind, aiming the creation and perfectioning of the appropriate theoretical adequation to the scientific and technical development of the society, such research being of national and international recognition for its excellency in mathematics and its scientific leadership. In extramural, the aim is to prioritize the formation and perfectioning of the teachers and professors. Furthermore, we aim keeping a close colaboration with every department in IME-USP and with other institutes of USP.

Because nowadays the dissemination of mathematical knowledge is worldly integrated, MAT values and prioritize in its vision the search for new relationships with international mathematical community through

the internationalization of its docents and through the cooperation with various centers of excellence.

1.2.2 Is the vision disseminated to professors, employees, and students and implemented in the Faculty?

(Computer Science - IME)
R: Our vision is continuously spread by interaction with all sectors of the community that might make it more real:
1- We interact with the Institute, the Pro-Rectory of Undergraduate, with FUVEST and with the academic community to figure out the best College entrance test which will select the best student profile for our course;
2- We interact with the Pro-Rectory of Research and with the State Government to facilitate the allocation of resources to research in national and international (mostly) productive sector, suggesting tax relief for the encouragement of this activity;
3- We conduct regular meetings with our students to find the best ways to keep them longer in college and increase their performance;
4- We seek to build new channels of interaction with society through courses, lectures, programming marathons, interviews and the Competence Centre for Free Software;
5- We seek to increase national and international projection of the activities of the department.

(Statistics - IME)
R: Everyone get involved in the collective work done by the Department and take part in all of the activities that comprise the mission of the Department.

(Applied Mathematics - IME)
R: The vision is informally spread to the faculty members, a process aided by the small size of the department. Undergraduate students are also oriented on the role and importance of applied mathematics at their initial orientation.

(Mathematics - IME)
R: The Vision is informally disseminated among the professors, staff and students of the department. Thus, it is informed that, in order to fulfill our tasks, the Deparment stablishes diverse strategic purposes, goals, actions, policies and/or social commitments. The students in their totality are oriented about the role and social importance of doing mathematics.

Educational proposal

1.3.1 What is the Faculty's educational proposal?

(Computer Science - IME)
R: We elaborated a new structure of the new Bachelor of Computer Science (BCC) which has just been completed and is already taking effect. This new structure allows cover three fundamental and complementary areas: theory, technology and applications. In addition, the structure provides only a small core of compulsory subjects, increasing the number of elective disciplines. These electives were structured so they include basic lines of modern computing, guiding students to elect sets disciplines with a high degree of internal consistency. In addition, students have the right to choose another six disciplines in other units of USP.

(Statistics - IME)
R: To form prepared citizens for their future challenges, with competencies and abilities obtained through pedagogical programs that prioritize the excellence, ethics and similar content those of the international

centers of excellence.

(Applied Mathematics - IME)
R: The department aims to train professionals who master the mathematical tools which are necessary to work in multidisciplinary problems, and are able to work with competence and independence, both in technology and in teaching and research, and are also able to interact with other areas of knowledge within and outside academia.

We intend to train professionals who, for their mastery of methods and quantitative techniques, will be able to integrate multidisciplinary teams to solve real problems, having a central role in the treatment of problems in various areas such as materials processing, medical diagnostics, development of financial products, management of computer networks, weather forecast, among others. In research, we intend to form original and independent researchers who can work in universities and research institutes in Brazil and abroad, both in the production of knowledge and in interaction with society sectors that require this knowledge.

(Mathematics - IME)
R: The Department of Mathematics has never debated about which consists its educational proposition. However, we are responsible for two undergraduate courses, the Educator Licensure and Bachelor Degree in Mathematics. Within the reach of the coordinating committees of such courses, its respectives pedagogical projects have been approved and determined by the MAT counsil. Regarding the Bachelor Degree course our proposal is forming future researchers in mathematics. In Educator Licensure our proposal is forming future teacher for primary and secondary school with profound knowledge in mathematics and in-depth reflection about their practice of teaching in Brazilian schools.

1.3.2 Is the educational proposal disseminated to professors, employees and students and implemented in the Faculty?

(Computer Science - IME)
R: Recently we completed a major renovation in BCC curriculum which had the massive participation of professors and students of IME involved with the course. This reform was discussed, consolidated, improved, and our educational proposal released, which must impact on the entire Brazilian community area. Evidence that we are continuously aware about the implementation and dissemination of our educational proposal is to present articles about it in specialized conferences. Our curriculum reform plan has been published in Education and Computer vehicles, spreading our vision for the area.

(Statistics - IME)
R: Everyone get involved in the collective work done by the Department and take part in all of the activities that comprise the mission of the Department.

(Applied Mathematics - IME)
R: As in the case of the department vision, the educational objectives are informally discussed between the department member

(Mathematics - IME)
R: The professors who teach disciplines of such courses end up assimilating the proposals mentioned in the previous item. We cannot affirm that these proposals are aknowledged by all among the other teachers and staff.

SELF ASSESSMENT

Management

2.1.1 Assess the Faculty's academic-administrative organization.

(Computer Science - IME)
R: The department internal organization follows the rules of the University, with a department head, a deputy head, a department committee and administrative committees. The committees, even not directly part of the deparment from the statutory point of view, are composed of department faculty and deal with important aspects of the academic life, such as the Graduate Commission, Courses at Escola Politécnica (Polytechnic School), Competence Center for Free Software, etc.. The administrative functions of the professors are considered reasonable and not excessive but demand a substantial commitment. We seek to distribute administrative tasks from docents to not overload too few. All commissions are oriented to contribute to the academic goals of the department, particularly on research and teaching.

(Statistics - IME)
R: The Department has a body of superior decision formed by representatives from all the teaching categories, besides, the student representatives from the undergraduate and post-graduation courses. The Departmental Council is summoned at least 10 times a year in ordinary meetings, and has as its president a chosen docent by election, the Chief, with a mandate of two years. It has different Advisory Committees and all the relevant decisions are reported and voted in plenary sessions. Every Committee Representative (Undergraduate, Post-Graduation, Extramural, Research, International Relations, Library, Monitorial, Summer Courses, Courses Coordination, Timetable, Admissions and Scholarships, Informatics, Physical Space, Budget and Patrimony, Positions, Publications and Editorial Committees) are chosen by voting and report to the Departmental Council their administrative practices. The Chief of the Department participates of Technical Administrative Council of the Institute and reports to the highest body of the Institute, its Congregation, that is presided by the Director of the Institute.

(Applied Mathematics - IME)
R: The Department internal organization follows the rules of the University, with a department head, a deliberative council, secretaries, docent representation in interdepartmental committees, in the Technical-Administrative Council and in the Institute Congregation. The distribution of courses among department members is decided by an internal committee, which take both undergraduate and graduate courses into account. Sometimes the department promotes internal general meetings intended to the discussion around preferable research areas for new positions. This is working well. It is worthwhile to mention, however, that the number of administrative positions of a Department in the Institute is independent of its size, which implies, as a consequence, that small Departments as MAP are overcharged with attributions like these.

(Mathematics - IME)
R: The Department internal organization follows the rules of the University, with a Department Head, a Deliberative Council, secretaries, docent representation in interdepartmental committees, in the Technical-Administrative Council and in the Institute Congregation. The distribution of courses is decided by an internal committee. There are also the committees of the courses on the reponsability of the Department (Teaching in Mathematics and Bachelor in Mathematics) and docent representation in all units where we teach.
This is working well. It is worthwhile to mention, however, that the administrative work in the Department is very significant. We are responsible for almost all of the Mathematics teaching in USP and it is necessary to nominate 80 docents for 37 committees. It is quite common docents to participate in more than one of those committees.

2.1.2 Describe the Faculty's administrative policies and management model (goals, standards

and indicators).

(Computer Science - IME)
R: As mentioned above, the administrative department policies seek to implement actions related to excellence goals in research and teaching. The department head has played a fundamental role in integrating and join efforts for the department to move in that direction. Such efforts are usually discussed and defined by the Department Council, chaired by the head.

(Statistics - IME)
R: The management model has as administrative policy the support to the docents, students and technical-administrative workers, thus maintaining the political plurality of the university and academic liberty, aiming the execution of activities of teaching, research and extramural, its end goals.

(Applied Mathematics - IME)
R: As this is a small Department, the goals are only qualitative. The priority is to provide the best conditions for each teacher/researcher to develop his/her work in the best possible way.

(Mathematics - IME)
R: The Department of Mathematics motivates its professors to engage in the administrative work and a good part of them has been directly involved in these tasks, which has been essential to maintain the high level of performance of the core activities. Besides the statutory adminstrative structure, the Department of Mathematics has been using collective forum of discussions and decisions. Many academic policies of MAT were built in general meetings of the deparment. As an example, we mention the hiring and sabatical policies. Also, the Head of the Department is choosen after a process that involves public debate and a direct consultation of all the professors.

2.1.3 List new management practices implemented in the Faculty in recent years and analyze the impact of these practices on core activities and administrative activities.

(Computer Science - IME)
R: The Head of the department has sought to coordinate the work of various committees in order to harmonize an integrated efforts. Some important steps, such as reforms of the Graduate and Undergraduate courses and the search for the position of full professor of the department, were carried out with this model in mind. This takes the department to discuss, define and work together to achieve important results (such as the reforms mentioned before).

(Statistics - IME)
R: The Department has made efforts to participate in the internationalization of the University, either by supporting student internships abroad, or by receiving foreign researchers in short and long visits. It holds international seminaries in its various research groups and provides a strong encouragement so that the research travels and the participation in International Congresses may be a common practice in the Department. Recently it is participating with an active representative in the International Relations Committee of IME, supporting the different projects demanded by the bodies of professors and students.

(Applied Mathematics - IME)
R: There are no new management practices because in fact there is no need of them. The Department works well only with University rules, with mutual respect and with the help of all members in the task distribution.

(Mathematics - IME)
R: There are no new management practices because, in fact, there is no need of them. The Department works well with only the University rules, mutual respect and the help of all members in the task

distribution.

2.1.4 How does the Faculty manage budget resources and extra-budget resources?

(Computer Science - IME)
R: Through the management system (financial, accounting) of IME-USP.

(Statistics - IME)
R: Every budgetary resource of the Department goes through an analysis of the Committee of Budget and Patrimony, which adjusts it to the projects of the Institute and destines funds aiming the improvement of the infrastructure and work conditions. The representative of this Committee reports to the Departmental Council and is requested various budgetary rubrics, such as physical structure, support for travels and maintenance of the computational laboratories.

(Applied Mathematics - IME)
R: The budgetary resources of the Department come from the Institute budget and are not very significant. They serve for the maintenance of good physical working conditions. Spending occurs on individual demand of teachers and are decided by the Head, not being usual the existence of decision conflicts. The Applied Mathematics Postgraduate Program also receives the PROAP funding (CAPES), using it mainly for air tickets and daily expenses of visiting researchers which come to giving lectures or integrating boards of examiners, and to defray the expenses of graduate students at events. This money, however, is extremely difficult to use, especially now being managed by a central body of the University.

(Mathematics - IME)
R: The Department of Mathematics does not manage directly its budget, this role is centralized in the Institute. In what concerns the extra budget resources, like grants from projects of research groups of professors, they are managed together with the projects members aiming for the improvement of the general working conditions of the Department of Mathematics.

2.1.5 Comment on the Faculty's streamlining/optimization policies or existing resources (e.g. cost reduction and revenue generation).

(Computer Science - IME)
R: Such actions are discussed by the board and implemented by IME´s resource management system.

(Statistics - IME)
R: The Department recently had a reduction of staff, which demanded a reallocation of work. Some employees and Docents have higher responsibilities than their peers, but the Department believes that it has the necessary support to fulfill its goals through a management of the sufficient, though limited, resources. There is not an implemented policy for generating resources, but the policies of rationalization and optimization of the existing resources are discussed and well seen when feasible. The use of recycled paper is practiced in the Department.

(Applied Mathematics - IME)
R: The Department has not generated resources and seeks to act with common sense in terms of its priorities, decided by consensus.

(Mathematics - IME)
R: As we mention before, the Department of Mathematics does not manage directly its budget. The grants from projects of docents with financial agencies are otimized and managed by their members.

2.1.6 Identify the Faculty's actions in regard to environmental sustainability for the rational use of consumer goods and natural resources (e.g., water and electricity), as well as the management and treatment of effluents and waste (chemical, biological, radioactive, and recyclable, among others).

(Computer Science - IME)
R: Such actions are discussed by the board and usually implemented in an integrated manner with the direction of IME-USP.

(Statistics - IME)
R: The Department follows every guideline suggested by the Direction of the Institute and the Rectory of the University. The use of recyclable material, whenever possible, is an action promoted and practiced.

(Applied Mathematics - IME)
R: Overall, the Department follows the policies of the Institute and the University for the recycling of waste, the use of toners and paper etc. By having a small frame and not having experimental laboratories, the question applies little to our case.

(Mathematics - IME)
R: The Department of Mathematics does not manage directly its environment sustainability actions. The task is centralized in the Institute and the actions are developed by some specific committees, like the "Comissão do Espaço Físico" (Physical Space Committee). The department follows the Institute and the University policies concerning waste recycling, the use of printer toners and paper, etc..

2.1.7 Comment on how appropriate the Faculty's academic and administrative information systems are.

(Computer Science - IME)
R: The Department uses and contributes decisively to the USP information systems. Department faculty has had leading performance with the committees of the rectory responsible for the major information systems of USP (graduate, undergraduate, etc.). This decisive participation has been carried out since the 70s, when the department contributed to the creation of the CCE-USP, to the university internet connection, etc.. In addition, the department maintains a support system to Moodle courses (paca.ime.usp.br) that meets all IME-USP. This system benefits not only the Department of Computer Science, but also other departments.

(Statistics - IME)
R: All of the Systems of information, academic and administrative, made available by the Rectory are fully and the Department considers them adequate for the proposed ends. The computational capacity offered by the informatics laboratories has been periodically updated. The Department has an intern with knowledge in informatics for the support and help to the docents and technical-administrative employees.

(Applied Mathematics - IME)
R: The Department has no academic or administrative information systems. In fact, they are not needed.

(Mathematics - IME)
R: The Institute of Mathematics and Statistics has a library that serves four deparments. Its collection is for sure among one of the best ones in Brazil in the area of Mathematics. The library´s system is automated. The number of electronic subscriptions of journals is good. However, two aspects must be taken into considerations.
(i) With the budget cuts, destined to replace and acquire books and to maintain the subscriptions of scientific journals, it is highly possible that the collection will get outdated soon, which will bring serious

losses for the teaching and the research done by the Institute.
(ii) It is important to mention also that the physical space of the library has become unsuitable for its good operation.
With respect to the support in informatics of the Institute, the service has good quality. The majority of the professors of the Department of Mathematics has a computer in their offices and the Department has a Computer Lab for the use of professors, visiting professors and pos-doctorate students. In the Institute, there is another computer lab for the use of the general community. The acquisition of computer equipments of the Department are made with money from research projects or with extra budget resources that come from the Institute projects.
It is worth pointing out that the computer equipments of the Department office are updated constantly.

Connections and cooperation

2.2.1 Analyze the connections and cooperation established with internal and external entities to achieve academic goals, considering the following different levels:

a) among Faculties, academic committees and academic support boards (centers, others);

(Computer Science - IME)
R: The Department Council is responsible for designating representatives in the various committees. The Board receives information from such representatives, discusses and defines the department's policies in different instances. It is worth mentioning that the Council has also been responsible for creating and monitoring committees that brought fundamental concrete results for the department. For example, in recent years, we have been restated key aspects of graduate and undergraduate courses related to the department. They were complex processes that have involved dozens of people working for more than two years. It is worth mentioning that, although the course Graduate in Computer Science is not formally linked to the department by the statute of USP, professors who work in both courses are basically the same. Hence the great connection between the two.
It is important to note the relationship between the department and the examination board for hiring new professors. Such boards are always chosen based on the CVs of potential members, seeking docents from other institutions with recognized strong academic profile. The Head of Department has been responsible for passing on the academic values of the department to these examination boards. These practices have led to the hiring of young professors who represent a good renewal of the department.

(Statistics - IME)
R: The Department of Statistics has active and assiduous members in all of the Committees and bodies of support, whether from the Institute or the Rectory. The strategies to achieve the academic goals are all analyzed and reported to the Department Council that, in deliberative instance, proposes eventual changes and practices.

(Applied Mathematics - IME)
R: Positions are decided by mutual agreement. Physical space issues are negotiated by representation in the Physical Space Committee (which is a CTA advisor) and CTA itself. There is space for dialog in the Undergraduate Commission and in the Congregation for issues about undergraduate courses that are of common interest. There is also interaction with researchers from other Departments with common interests and mutual participation of teachers in graduate programs of other Departments.

(Mathematics - IME)
R: The Department of Mathematics encourages all docents to participate in the administration. Many of them are part of committees, such as the Graduate Committee, the Teaching Committee, the Bachelor Degree Committee, etc.. Between our professors, there are strong participation in intern committees, like in the Research Committee (as coordinators and representatives), in the International Relations

Committee - CRInt-IME - (coordination) and in the Library Committee (as coordinator).
The "Mestrado Profissional em Ensino de Matemática" (Professional Master´s Degreee in Mathematics Teaching) has accredited six professors in its program from the others deparments of the Institute.
Several of our docents participate in the "Centro de Aperfeiçoamento do Ensino de Matemática João Afonso Pascarelli - CAEM, a unit of the Institute attached exclusively to the Department of Mathematics (MAT). The members of CAEM study ways of teaching mathematics with different approaches, they elaborate classroom notes and present works in seminars and meetings, showing the results of the studies to mathematics teachers and professors who work with continuous education of mathematics teachers.
We also have the "Centro de Difusão e Ensino Matemateca", which is attached to the Department by the compulsory participation of our professors in the command of this unit. The scientific dissemination is still incipient in Brazil and "Matemateca" is the greater collection of mathematics teaching. It is a reference and a encouragement to the research in this field (in the museological and museographic aspects, besides scientific communication and scientific dissemination).
There is an interaction between researchers from the others departments with common interests and mutual participation in graduation programs.

b) among core activities (undergraduate and graduate programs, research, culture and extension);

(Computer Science - IME)
R: The department's professors work in virtually all core activities mentioned. Thus, the Council of the department has served as an integrated forum for discussion of different initiatives, building actions in order to achieve excellence goals. The previous answer provides concrete examples of department initiatives.

(Statistics - IME)
R: The students in the last year of the Bachelor Degree in Statistics participate of the activities in CEA - Center of Applied Statistics of IME -, where they provide services of statistical analysis to the community. The majority of projects attended are projects of master, doctorate or research from other areas. Thus, the undergraduate student has the opportunity to realize extramural works at the same he or she stays in contact with research in various areas. The seminars of the post-graduation are open, and the undergraduate students are encouraged to participate. The post-graduation students develop activities in the program PAE - Program for Improvement of the Teaching -, and in this activity, participate as assistants to the undergraduate teaching. The research activities are disseminated through seminars organized by the various active research groups in the Department. In good part of the 2010-2014 period, the posts of president of the Committee of Undergraduate, Post-Graduation and Culture and Extramural of the IME-USP were filled by docents in the Department.

(Applied Mathematics - IME)
R: Joint distribution of undergraduate and graduate courses, with an eye in leave entitlements and of absence, sabbatics and fulfillement of positions. Freedom for the creation of new courses. Appreciation of culture and extension actions.

(Mathematics - IME)
R: The undergraduate student is informed about the scientific initiation as soon as he joins the course, putting him in touch with the researchers of IME-USP and their research fields, aiming the learning and development of concepts and methods more advanced than they would learn in the regular undergraduate course, including topics of current research. In general, scientific initiation aims to introduce the student into research activities through the study of topics that are not presented in the disciplines of the course. In the case of a student of Bachelor´s degree in Mathematics, it is expected that he develops this work from the second year of the course. We have succeed in raising awarness about the importance of this activity. In the case of a student of a Teaching course, the scientific initiation

sometimes awakes a taste for research, allowing a richer education and a professional with a wider point of view. The professors of the Deparment of Mathematics have been producing numerous, interesting and original works. The "Simpósio de Iniciação Científica" (Scientific Initiation Symposium) is organized at IME-USP, where the students can present their work to the public.
The coordination committee of the Teaching Degree in Mathematics has a representative in the Committee Interunits of Teaching Courses of USP, allowing a systematic joint of the activities of our course with the others Teaching Degrees. The Graduate courses in Mathematics are well integrated to the activities of the Deparment with the professors aligned with the research fields. That is why most of the professors of the graduate courses are from this Deparment. The graduation activities, in many cases, blends with the research activities. The articulation between the PPG-MAT and the other deparments of the Institute happens between their members and students with external researchers, through academic collaboration agreements and research internships. In the new program of the "Mestrado Profissional em Ensino de Matemática" (2012), several of our professors participated actively, teaching or guiding. The extension activities related to Department of Mathematics occurs through the CAEM. Many of our professors participate of the continuous education program of the Secretary of State Education and USP. Students of the Teaching Course are interns of CAEM, which contributes for their profession.
There is a member of the Comissão Coordenadora da Licenciatura do IME who is also a member of the Comissão Interunidades das Licenciatura da USP which holds regular meetings four times each semester.

c) with other teaching and research Faculties, specialized institutes, complementary boards and/or entities associated with the University, if it is the case;

(Computer Science - IME)
R: See above.

(Statistics - IME)
R: In the activities developed in the CEA, the undergraduate students Interact with researchers (docents and post-graduation students) from other Departments and Institutes of USP. It is usual practice in the Department to invite representatives from other Institutes and Entities for lectures that involve docents and students from undergraduate and post-graduation. It is usual the participation of the Docents of the Department at Boards of Scientific Associations, such as ABE - Brazilian Association of Statistics -, and ABJ - Brazilian Association of Jurimetrics.

(Applied Mathematics - IME)
R: The Department participates in the administrative and academic management of Molecular Sciences Course, in partnership with other Units. One professor works in partnership with CPTEC/INPE - Weather Prediction and Climate Studies Center. There is a lot of research interaction with the Institutes ICMC - Institute of Mathematical Sciences and Computation in São Carlos, IF - Institute of Physics, and IAG - Institute of Astronomy, Geophysics and Atmospheric Sciences, and more recently with the Faculty of Public Health, in the area of epidemiology. Recently there was a lot of interaction with Polytechnic School related to changes in the curriculum of engineering courses. As a result, the Numerical Calculus course was changed in content and now is given in the fifth semester instead of the second. One of us created a discipline given jointly with FAU - Faculty of Architecture and Urbanism, called "Mathematics, Architecture and Design".

(Mathematics - IME)
R: The Department of Mathematics (MAT) is one of the largest, if not the larger deparment of USP, responsible for the mathematics education of the courses of the following units: Escola Politécnica (EP); Faculdade de Economia, Administração e Contabilidade (FEA); Instituto Oceanográfico (IO); Instituto de Química (IQ); Instituto de Física (IF); Instituto de Astronomia, Geofísica e Ciências Atmosféricas (IAG); Faculdade de Arquitetura e Urbanismo (FAU); Instituto de Geociências (IGc) e Faculdade de Ciências Farmacêuticas (FCF) and other courses of IME. The Departament is also responsible for the courses of Bachelor´s Degree in Mathematics and Teaching in Mathematics. Every year, MAT receive 180 new

students, 30 from Bachelor´s and 150 from Teaching course and receives 15.000 enrollments in their undergraduate disciplines offered at USP per year. The number of courses at the undergraduate level is annually around 160, out of 112 classes in IME. Through public announcements of the Pro-Rectories of USP, including PrPG, the Graduate Program of MAT has many colaboration projects with the other units of USP.

d) with other institutions in Brazil and abroad (e.g., Multidisciplinary Master and Doctoral Programs between two units, Undergraduate and Graduate dual degree programs, involvement of students and professors in scholarly exchanges, cooperation agreements, research networks, and integrated research projects, among others).

(Computer Science - IME)
R: In addition to the above comments, it is worth mentioning that the department has responsibility for activities such as authorization placements in enterprises, undergraduate internships abroad (Ciência Sem Fronteiras - Science without Borders) and others. Those responsible are instructed to deal with criteria such actions, always aiming at quality academic research and teaching.

(Statistics - IME)
R: We have received undergraduate students of other universities in Brazil and from abroad, who attend courses together with the undergraduate students. The students in our courses also have been leaving for internships abroad. The post-graduation program has received in accentuated way many students from other Institutes, from Brazil and abroad, and the various projects of research are in permanent contact with researchers from other Universities.

(Applied Mathematics - IME)
R: Interactions with other institutions happen, in general, in the level of research, within the contact network of each researcher. But it is worthwhile to mention the partnership IST/IME, where researchers from the Institute and, in particular, from our Department, organize a joint meeting with the Instituto Superior Técnico of Lisboa. It is also worthwhile to mention the partnership between USP and the University of Lyon, with joint meetings and also a recent joint mathematics exhibition intended to the large public, involving Matemateca and Maison des Mathématiques et de l'Informatique de Lyon. There are also interactions between graduate programs, e.g. with UNIFEI - Federal University of Itajubá - and UNIFESP São José dos Campos, from where one of the new teachers came.

(Mathematics - IME)
R: The MAT research groups have been one of the most productive departments at IME with a very wide range of sub-areas with significant scientific production internationally recognized. Most of the work of MAT is focused on the research groups and graduate programs, on researchers that will contribute in this university and in others too. Due to the efforts of the department, MAT has a policy about professors leaving for a short or long period or time in order to keep in touch with other researchers. As a consequence of its good reputation abroad, MAT has around a dozen of academic cooperation agreements, specially with European and American universities, and two agreements with double degree with French universities. The graduate program has students under the guidance of co-supervisors from different institutions and a total of twelve accredited foreign professors. Besides, professors of Graduation Program have been supporting another graduate programs, like ProCad Program - under the Capes funding - which helps the scientific development of UFV (Universidade Federal de Viçosa) and UFMG (Universidade Federal de Minas Gerais), and the Procad-NF-2009, in collaboration with UFPA (Universidade Federal do Pará). The Graduate Program of MAT has countless projects in collaboration with Brazilian and foreign institutions by means of development agencies of the federal government and "linhas de fomento" (grant lines) of Fapesp (five themes).
CAEM has producing support material to teachers of Ensino Básico (Basic Education) as a result of the teaching experience in courses and workshops, besides the research done by professors and students of IME. The books published by CAEM have been a reference in Teaching courses and civil service

examinations.
The "Programa de Estágio Curricular Obrigatório" (Mandatory Traineeship Program) of the Teaching Degree in Mathematics began in 2009. Since then, the partnerships with state and municipal public schools have had very significant results, both to the interns and to the participant teachers of Ensino Básico.
During this period, seven students from Teaching Degree in Mathematics and eighteen from Graduate in Mathematics went abroad to attend courses or to participate in events in the following countries: Portugal, England, Argentina, France, Australia, Finland, Germany, China and Hungary. They participated of split-PhDs, promoted by USP, Ciências Sem Fronteiras Program and others.

Infrastructure

2.3.1 Briefly comment on the development of Faculty infrastructure in recent years, identifying, in relevant cases, difficulties that hinder improvement of the Faculty's academic standards (e.g., in regard to physical area, classrooms, study rooms, faculty offices, libraries, specific laboratories and multi-user laboratories, access to computers, living areas, leisure and food areas, among other possible issues).

(Computer Science - IME)
R: The department is located in Block C of IME and in the Centro de Competência em Software Livre (CCSL), adjacent buildings. Block C has 3 floors, 400 m2 of building area, with 30 faculty rooms. CCSL was built by an iniciative and project of the department itself, schich included funds from FINEP and USP. CCSL has 400 m2 of floor space, 6 research laboratories, an auditorium and 12 rooms for the professors. In addition, the department has teaching laboratories and for the use of students (principamente, graduation) in other blocks of the IME. As the department is responsible for a large portion of students at IME-USP (both undergraduate and graduate), it is still a challenge to have more space for laboratories, in order to encourage the maintenance of the students on campus.

(Statistics - IME)
R: The Department has good conditions in what concerns physical space, though some the professors' offices require improvements and not all of them have individual offices. The study rooms are appropriate and the collection of the library of IME is excellent. The undergraduate and post-graduation laboratories are in permanent update and recently IME has made available new Multimedia and Multi-User rooms. The infrastructure, mainly for evening activities could be improved. Areas for leisure and food courts are nonexistent at IME. The access for the physically disabled had advances, but still need improvements.

(Applied Mathematics - IME)
R: Classrooms, study rooms, library, computer network, living areas, food spots, are all shared in the Institute and their issues are decided together. The study rooms are never enough, since the Institute has more than 2000 undergraduate and graduate students. Classrooms are very sought, mainly at the so-called prime times (10 AM and 2PM). Library and network work well. We still hope to reopen the cafeteria.

Nowadays, members of the Department cannot rely on individual rooms, which would be an ideal situation. It was decided in the past that priority of individual rooms is for more graduated professors, but even this rule cannot be followed anymore due to the staff growth.

The Department has a Computer Lab, LabMAP, widely used by graduate students and also undergraduate students doing some kind of scientific training. In addition to the Head room (that traditionally is not used by the Head, except for meetings), that has a blackboard, it would be nice to have one or two common areas with a blackboard for small group discussions or else for student-supervisor conversations in the

case of teachers that share rooms.

(Mathematics - IME)
R: 1) Physical Space: The physical space available for the Deparment of Mathematics (MAT) is not appropriate. There is a shortage of rooms for professors and visiting professors and those who exist are of poor quality. Many of them are shared by two professors of our department. Professors with rooms in "Bloco B" of the Institute complain frequently about the poor working condition. In relation to the students, the physical space is not appropriate due to the no replacement of retired professors. As a consequence, there are few professors and an increase of the number of students relative to professors. That has an impact over the quality of the learning.
There are also a lack of classrooms and those who exist have many structural problems.
The "Centro de Aperfeiçoamento do Ensino de Matemática" (CAEM), unit under the responsability of MAT which presents quality services with social importance, has no appropriate facilities. Its expansion is been inhibited by that.
2) Room for graduate students: The physical space available for graduate students (an average of 130 students per year) has not been expanding in recent years. The increase of graduate students and researchers in postdoctoral programs have been leading to an overcrowding of rooms.
3) Library: The Institute of Mathematics and Statistics has a library that serves four deparments. Its collection is for sure among one of the best ones in Brazil in the area of Mathematics. However, the physical space of the library is becoming unsuitable for its good operation.
4) Informatics: The Institute of Mathematics and Statistics has a Computer Section that offers a good quality service. Most of the professors of MAT have a personal computer in their work-rooms. The reestructuring of the Computer Lab at "Bloco A" (one of the buildings, Block A) which allows anyone to use it , have been benefiting the whole community at IME.
5) Living areas, leisure and food: The Institute of Mathematics and Statistics has just a few living and leisure areas. The coffee room is the only room for coexistence nowadays. The restaurant was closed years ago. There are plans to reopen it as a cafe.

Technical and administrative employees

2.4.1 Does the Faculty have a specific system (goals, indicators, performance standards) to assess the activities of technical and administrative employees, in addition to the institutionalized processes outside the Faculty?

(Computer Science - IME)
R: The Department has only three secretaries, having no other employees under his direct responsibility. Thus, only the institutionalized processes of USP are used for evaluation.

(Statistics - IME)
R: The technical-administrative Servers provide support in all the activities of the Department, interacting with the professors, students and visitors in order to help and instruct about the various demands that appear. Every eventual difficulty found are reported to the Chief and/or the Department Council that may propose solutions and adjustments. The goals and standards of development are defined and controlled by the Departmental Council.

(Applied Mathematics - IME)
R: The Department's Head follows the work of employees for compliance or otherwise of their tasks. Adjustments are made according to the purpose of attaining them.

(Mathematics - IME)
R: The Department of Mathematics (MAT) does not have a policy for such. The recruiting and evaluation are determined by the Unit and made when needed. However, the Department´s Head and the Department´s office are always aware of the good relationship between the administrative staff and their

professional development.

2.4.2 Report the Faculty's policies concerning the improvement of technical and administrative employees in regard to:

a) Integration of recently hired employees;

(Computer Science - IME)
R: Because it is only three secretaries, two of which are in the department for over 15 years, the integration of new servers was performed only once in the last 15 years, having been made informally. The more experienced secretaries passed information and training.

(Statistics - IME)
R: The servers are encouraged to participate of the various existent programs of formation and sponsored by the Institute and Rectory. The newly hired receives the specification of their tasks according to the legislation of the University, accessible in the different platforms of the Corporative Systems made available by the central bodies. All are encouraged to seek courses, congresses and activities of continuous formation offered by different instances in the University.

(Applied Mathematics - IME)
R: Since the administrative staff is small, the improvement policy is the responsibility of the Institute. The Department has only the Secretariat staff. Up until 2014 the Department had three secretaries and one continuous, and now, after the buyout (PDV), it has only two secretaries. The chief-secretary arrived during the referred period and has adapted quickly to the work of the Department.

(Mathematics - IME)
R: The Department of Mathematics (MAT) does not have a policy for such. However, the Department´s Head and the Department´s office are always aware of the good relationship between the administrative staff and their professional development. Until 2014, the Departament had three female secretaries, one male secretary and one administrative assistant. After the PIDV, we have one less secretary.

b) Incentives for professional improvement;

(Computer Science - IME)
R: The secretaries attend periodic refresher courses, being encouraged to perform them.

(Statistics - IME)
R: The workers are encouraged always to look for a professional improvement, either by congresses or courses and lectures.

(Applied Mathematics - IME)
R: Since the administrative staff is small, the improvement policy is the responsability of the Institute.

(Mathematics - IME)
R: The improvement policy of the administrative staff of MAT has been to encourage the participation in professional development programs, such as the professional trainings offered by the Institute and the Central Administration of USP. Those programs include english classes, computer classes, writing, etc..

c) Criteria for career development;

(Computer Science - IME)
R: Institutional evaluation criteria of USP are used.

(Statistics - IME)
R: The Department follows the norms of the University and informs the technical-administrative employees the different guidelines that are determinant to all workers in finding an evolution in their career, according to their capacities and abilities.

(Applied Mathematics - IME)
R: Responsibility of the Institute.

(Mathematics - IME)
R: The Department of Mathematics (MAT) does not have a policy for such. However, the Department´s Head and the Department´s office are always aware to encourage the professional development of the administrative staff, through the professional trainings offered by the Institute and the Central Administration of USP.

d) Institutional engagement.

(Computer Science - IME)
R: Academic department values are explained and discussed permanently with the 3 secretaries of the department, seeking to involve them in departmental initiatives.

(Statistics - IME)
R: The Institutional engagement of the technical-administrative employees of the Department has always been a characteristic of their activities.

(Applied Mathematics - IME)
R: The secretaries are highly engaged in their tasks and receive all the confidence of teachers in their work.

(Mathematics - IME)
R: The secretaries have professional attitude and are engaged in the office routine, demonstrating reliability. The institutional engagement, in general, of the administrative staff happens inside the Department, in the Institute and in the Central Administration of USP. Some of them participate in central comittees, such as SAUSP, Treinamento e Desenvolvimento.

Faculty members

2.5.1 Analyze the progress of the Faculty's members profile on the basis of core activities developed in the last 5 years (hiring, career development, job contracts, and retirement, among others).

(Computer Science - IME)
R: In recent years, the selection processes of the department have been very disputed, which has led to excellent hires. Virtually all teachers of the department who applied to horizontal progression were approved. This is a significant fact because, in computing, the horizontal progression criteria are strongly based on academic criteria, for example, considering average rate of good quality publications and the existence of seminal articles, and to evaluate the other activities at the university. An indicator of the depth of horizontal evaluation at USP computing area is that only 50% of professors at USP in the area

were promoted. Only one of our professors is not in RDIDP regime. Most of our retirees are still cooperating with the department in academic activities.

(Statistics - IME)
R: The Department has today 39 active docents and 4 seniors (retired with an approved collaboration plan). In the last 5 years, 4 professors have retired and 3 were hired. Not all the professors entered the recent Horizontal Promotion program, however, of those who have chosen for the process, most were promoted. All of them are Doctors and on Regime of Full Dedication to Teaching and Research. Every semester is issued a Tender Notice to Associate Professor hiring and we had 2 candidates in the last 5 years, both approved. The Department has a proportion of 0,18 active Full Professors per docent and recently has received permission to put into Tender Notice 3 posts for Full Professors made available due to retirements. One of these selection is already concluded. A policy of concession of new vacancies for professors, as well as new posts for Full Professors, is a short and long term necessity in order to maintain the quality standards that the Department aims. It is guaranteed for the next 2 years, at least 5 retirements (2 of them mandatory of Full Professors) and this should be equated by the administrative management.

(Applied Mathematics - IME)
R: New members: Rodrigo Bissacot, Renato Vicente, Gabriel Haeser, Marcone Corrêa Pereira, Pedro da Silva Peixoto, Pedro Tavares Paes Lopes, Antoine Laurain, Julio Michael Stern (full professor), Christian Dieter Jakel (full professor).
Regime change to RDIDP : Joyce da Silva Bevilacqua.
Retirements: Jorge Manuel Tello Sotomayor, Orlando Lopes, Helena Maria de Ávila de Castro.
Julio and Gabriel came to fill a need in the Optimization area, which was almost depleted; Pedro Peixoto and Antoine make reinforcements for Numerical Analysis; Christian and Rodrigo reinforce the area of mathematical physics, which had previously only one faculty member; Marcone strengthens Evolution Equations and Pedro Lopes strengthens PDEs and pseudodifferential operators, who also had previously only a single integrant; Renato strengthens Mathematical Modelling. The renewal brought more balance between areas.

(Mathematics - IME)
R: The Department of Mathematics (MAT) had 110 professors in the mid-1990. From 2000, the teaching staff was reduced to 87 professors. Between 2010 and 2014, the number of the members was: 85-89-89-89-87. However, in that period, the Department had an increase of workload due to the creation of new courses, therefore, more classes to teach. It is important to mention that, in the years of 2013-2014, we solicited 8 positions to substitute retirements and resignations but none was granted. Today, there are 3 retirements whose replacement were already solicited. Until 2017, we will possibly have only 64 professors due to retirements. The workload increased in the last couple of years and the Department had to cut some classes; there was a discouragement to continue the Summer School and the activities of the Centro de Aperfeiçoamento do Ensino de Matemática (CAEM). In view of the above figures, it is not surprising that the teaching load, in average, for the professors of MAT at IME-USP is one of the highest in USP.
Nowadays, there are 17 full professors, 20 associate professors, 46 professors and 2 assistant professors. In the last 5 years, we had 2 open vacancies for full professor. Open vacancies for the early stage of the career, were 13. Many professors from other universities have been interested and some were hired. Some of our professors (4) are trying for "livre-docência" and through the new program of progression in the docent career (created by USP in 2011), many of MAT professors were promoted.

2.5.2 Does the Faculty have a policy concerning the hiring of professors (e.g., internationally published public notices)? Comment on how appropriate this policy is in regard to the Faculty's profile and its development projects, including new areas such as attracting new talent for

academic careers.

(Computer Science - IME)
R: Notice of open vacancies are widely publicized in the country and abroad. In many of them, we had foreign candidates. Our selection processes tend to be very crowded, in some of them, we have had about 20 candidates. Normally our procedures are not defined in a particular area, which increases the quality and competition among the candidates.

(Statistics - IME)
R: All the Tenders for the ingression are amply disseminated and even allow the option for the tests not to be performed in portuguese language. The hiring policy of the Department involves a formation of an evaluation committee of the highest level who will examine and choose accordingly to scientific and academic criteria the best candidates presented. In the last 5 years, only one Tender had a specific area defined in its Notice, but there were no candidates approved. This policy, undoubtedly, forms a staff highly qualified, but often allows that areas of the Department, be it research or teaching, have deficiencies in human resources. Graduates in the areas of Probability and Statistics, with excellent curriculums, remain considering the Department very attractive for the development of an academic career. There are areas with need of qualified professionals in the Department and new hires will be needed to minimize such difficulties.

(Applied Mathematics - IME)
R: Notice of open vacancies are publicised both institutionally (Sent to national and international related departments, redacted in English) as well as individually, with faculty reinforcing the possibility by using their contact networks. This has already attracted several foreign candidates in recent contests, and resulted in the hiring of an Austrian and a Frenchman in the last two years. Unfortunately, the bureaucracy still greatly hinders the hiring of foreigners, because the huge demand for documents and their physical presence is extremely expensive and exhausting. The aforementioned hires were only possible given the individual perseverance of the Department faculty. As for areas, the Department works with two types of competition: by specific area and general. The aim of the first is to strengthen areas that are in danger of weakening, or even nonexistent. Recently the department has sought to expand its business in the field of mathematics applied computing. The purpose of the second type of competition is to try to select the best available candidates seeking a position at that time. Decisions are made by the Department Council on the available vacancies, or even by general assembly of member's. Anyway, long-term plans are not considered, since the distribution of vacancies at the University is not sufficiently predictable to allow for detailed planning.

(Mathematics - IME)
R: In the last 5 years, MAT hires professors in RDIDP who can engage immediately in one of our research groups, joining forces with the Departament. Our open vacancies are publicised in the institutional homepage of IME and sent to related departments from Brazil and abroad. The dissemination of vacancies are also made by the professors through their contact networks. By this kind of approach, many foreign candidates have been hired: 2 from France, one from Chile and 2 from Ukraine.
MAT has, in the recent years, made efforts to obtain more vacancies for the career of full professor with the Congregação of IME and the Dean because of the lag in the number of full professors compared with its academic and scientific activities. In 1996, the Department established a new policy for competition to full professor (since they had positions available) in a rotation system that would contemplate different research groups.

2.5.3 Describe the primary individual indicators concerning the quality of the work performed by the Faculty's members.

(Computer Science - IME)

R: The criteria of the department are mainly academic: publications in leading journals, awards, counseling, awards for students, offered courses; etc. The department adopts the standards defined by the committee of horizontal progression of the computing area.

(Statistics - IME)
R: For the Horizontal Promotion, Tenders for Associate Professor and posts for Full Professor, the preponderant criteria are publications in articles of indexed journals, with editorial board in international level. The formation of students and Coordination of Projects of Research also are considered, but the most important criteria is the number of published articles. The proportion for Associate Professor/ Full Professor is of 2,43. Three of the seventeen Associate Professors have the Productivity Scholarship of CNPq, 2 from level 1 and 1 from level 2. The scientific production of the Associate Professors is 5,2 published articles indexed by ISI in the last 5 years. All the Associate Professors participate actively in the academic activities of the undergraduate and post-graduation courses, with orientation for Undergraduate Research, masters, doctorate and post-doctorate.

(Applied Mathematics - IME)
R: The indicators are qualitative and there is a great respect for the individual decisions of the faculty. In general, it is expected that professors comply with their teaching load, orient students, produce, in research and / or in extension and bring resources to the department through the funding agencies. The dedication of the professor to each of these activities is an individual decision. Since mathematics is individual in nature, the researcher needs freedom. The Department believes this, and we are reaping the fruits of this attitude.

(Mathematics - IME)
R: The recognition by the academic and scientific community of the quality of our work is the main goal of the Department professors and it can be partially measureable by the following indicators, associated to the three core activities: teaching, research and extension:
1- Dedication to education
2- Scientific production in international renowned journals;
3- Training of researchers;
4- Participation of professors in national and international conferences;
5- Participation in partnerships, thematic projects and education programs;
6- Grants for research projects;
7- Effective exchange with other research groups;
8- Organization of national and international conferences.
We emphasize that the teacher's dedication to each one or several of these activities is an individual decision. The Department has always believed that and has achieved good results, despite the lack of hiring new professors.
The research groups of MAT is one of the most active in the country, with national and international recognition. An important part of the MAT work is done through the effective performance of its research groups with the graduate, forming researchers who will contribute primarily in this and other universities. The Department of Mathematics of IME-USP has strong research groups, namely: Algebra, Geometry, Topology, Mathematical Analysis, Logic and its Foundations, Mathematics Education, and Dynamical Systems. It also stands out as one of the most productive departments in research in the country. MathSciNet (www.ams.org/mathscinet) is the main reference for scientific publications in Mathematics and shows that the scientific production of the Department of Mathematics has grown substantially in recent years. Also on MathSciNet we can see the citations of articles produced by a lecturer of the Department, which is a strong indicator of scientific production quality. Science policy today can be summarized in the constant support scientific exchange with peers from other universities in Brazil and abroad. MAT has been able to provide good working conditions for visiting professors and postdoctoral trainees. The visible growth, in recent years, in the number of these visitors and trainees is a good indicator that we are on the right track.
Professors of the Mathematics Department coordinate 5 theme projects of Fapesp, which proves MAT research quality.

The Teaching Degree in Mathematics has partnerships with state and municipal schools. Since 2012 participates in the project PIBID USP and receives CAPES grants for education teachers.

2.5.4 In addition to the institutionalized assessment processes outside the Faculty (CAPES - The Brazilian Agency for Coordination of Improvement of Higher Education Personnel, CNPq - National Council for Scientific and Technological Development, USP - Office of the Vice-President, CERT - The USP Especial Committee of Labour Work, and CPA - The USP Permanent Assessment Committee), does the Faculty have a specific system to assess its faculty members' activities? If yes, what kind of work is developed?

(Computer Science - IME)
R: All of our contests are marked by the rules of horizontal progression of computing career area.

(Statistics - IME)
R: All the Docents of the Department have teaching activities in the Undergraduate course. Some develop different extramural activities and/or are leaders of research in the area of Probability and Statistics. The Department has an heterogeneous body of Docents and the different Advisory Committees of the Department keep a systematic assessment of the end activities that concerns each one, reporting eventual problems to the Council.

(Applied Mathematics - IME)
R: In a small department of about 30 faculty members, adding another formal evaluation process only comes to transfer energy from the main goal of the department. However, since the end of 2014, the Department had created a commission to think about its image, its mission and goals, and mid- and long-term planning.

(Mathematics - IME)
R: There is no Department explicit policy to evaluate the activities of professors. However, the Department encourages all of them to engage institutionally.

2.5.5 Does the Faculty have a Pedagogical Support Group (PSG) or any type of pedagogical advisory program to support the work of professors? If yes, what is the work developed? Characterize the adherence of professors to the proposed activities.

(Computer Science - IME)
R: No.

(Statistics - IME)
R: Until the last semester of 2014, IME had a GAP (Professionals of the Management of Attendance of Projects) team, which did the follow up and evaluation of all its undergraduate courses, that was enabling a communication channel with the undergraduate students and a fast solving of problems. We intend to give continuity to this project and also to count with pedagogical evaluations from different Institutes of USP of which the Department is responsible for disciplines.

(Applied Mathematics - IME)
R: No. At hiring, the candidates are already evaluated by their didactical habilities. Individual problems are treated by the Course committees (both undergraduate and graduate), and there is always an open channel for discussion of possible incidents.

(Mathematics - IME)
R: There is no specific Department policy to support the teaching. However, there is a very well-defined program of tutoring by PRo-G USP (Incentive Program for Undergraduate Studies - Monitoring), which

gives a fundamental support to various undergraduate and postgraduate. In general we can say that the vast majority of MAT professors who require a monitor has achieved.

2.5.6 Report whether the Faculty provides conditions for improving the teaching of the faculty body, analyzing its importance in regard to the existing educational proposal. If the Faculty does, what are the activities developed? Comment on advancements and difficulties.

(Computer Science - IME)
R: The department values the teaching improvement and supports docents to write books, prepare new courses, videos, etc..

(Statistics - IME)
R: Every mean and resources are provided to the docents interested in developing didactical improvement, including technological innovations, and the experiences are communicated to all through lectures, seminars and congresses. The Department is responsible for giving disciplines to different university courses and this creates difficulties, because the preparation of the students is not uniform. Advancements are found by the quantities of formed students and the quality of the activities performed by the docent body.

(Applied Mathematics - IME)
R: There is no specific activity focusing on improving didactic.

(Mathematics - IME)
R: The Mathematics Department currently has no specific activity focused on teacher improvement faculty. In general, the professors have greater freedom of action in the classroom.

2.5.7 Provide information on the Faculty's policy concerning the valorization and development of teaching careers in regard to:

a) Integration of recently hired professors;

(Computer Science - IME)
R: The integration of new professors happens usually within the graduate and in all other activities of the department.

(Statistics - IME)
R: Initially, the Professors recently selected share classes with more experienced docents and like the majority of them interacted (used to be an undergraduate and/or post-graduate student), the integration is satisfactory. Every discipline have a well-defined syllabus that have been taught for many years. The Department provides all the necessary information for the new colleague to be clear of the expected activities, be it in teaching, research or extramural.

(Applied Mathematics - IME)
R: The integration is done ad hoc. For example, placing professors in the same room. Entrusting them with small tasks or commissions. We avoid engaging a new professor in a very laborious commission. The department offers a pleasant environment for new faculty members. Every Friday takes place the Colloquium of the department, with a lecture preceded by a confraternization involving professors and graduate students.

(Mathematics - IME)

R: There is no explicit policy of integration of the new professors from the Department. The integration is done in very quiet and natural way by older professors of MAT. Small actions taken by the department help this integration, such as placing professors in the same room, putting new and older professors together to teach, etc.. In addition, we avoid as far as possible, engage new professors in very laborious commissions. The Department usually offers a pleasant environment for new hires.

b) Incentives for improvement and post-doctoral programs;

(Computer Science - IME)
R: We have a policy of regularly send professors to do a postdoc abroad, in general, boasting premium license and / or academic scholarship.

(Statistics - IME)
R: All are encouraged and supported to make programs of research abroad, with priority for the new doctorates. There is a strong incentive for international interaction, and for that, the Department supports and encourages short and long term travels. In 2015 we have 4 colleagues in international travels for research with period of more than 6 months.

(Applied Mathematics - IME)
R: The Department has always had a policy of facilitating internships abroad, accepting submissions almost automatically for requests for up to 1 year, and possibly up to 2 years. The Department greatly appreciates the improvement of the faculty members with internships in other institutions.

(Mathematics - IME)
R: The scientific policy of the Department of Mathematics can be summarized in the constant support to scientific exchange, aimed at the growth of exchanges and the consequent strengthening of its working groups and research. MAT currently has a policy for long and short clearances allowing active researchers to maintain a constant academic contact with other groups aiming at internationalization and scientific improvement of the Department faculty. Participation in conferences and training as visitors and post-doctoral professors are always encouraged by the Department among its staff.

c) Institutional engagement.

(Computer Science - IME)
R: Our docents normally participate in committees and activities of the department, Institute and USP.

(Statistics - IME)
R: All the Docents have strong and wide Institutional engagement, be it through activities of research, teach, extramural or participation in Administrative Committees, in the Department, the Institute and the Rectory.

(Applied Mathematics - IME)
R: Most professors are involved institutionally in the form of participation in various committees. But the Department resents that the Evaluation to Horizontal Progression discouraged our staff because precisely this institutional commitment was not taken into account, as had been promised at first.

(Mathematics - IME)
R: The Department of Mathematics encourages all professors to engage institutionally. Many faculty members of the Department participate in MAT administration. This institutional work is very significant indeed. We are responsible for almost all the teaching of mathematics at USP, so the organization of administrative tasks in various working committees is required. In all, the Department must indicate around 80 names for 37 commissions.

Some of our professors are also part of any internal committee to MAT like the Education Committee, the Bachelor Committee, Teaching Degree Committee, Exemption Committee, etc. Decisions about the various MAT and IME internal committees are made by the Departmental Council after collective consultation to all professors. Also, as mentioned before above, MAT has collective discussion forums where all the academic community of the department can participate. In these forums are also discussed the goals of the Department.
We emphasize that many of our professors were unmotivated to participate in this aspect because the "Avaliação Docente para Progressão Horizontal da USP" did not take into account that, as had been promised at the beginning.

2.5.8 How important is the participation of professors in support centers, complementary boards or specialized institutes for the achievement of the Faculty's goals?

(Computer Science - IME)
R: Our docents have participated of numerous activities in research centers and highly prestigious projects such as Cepids. Three of our full professors engaged in research management at FAPESP. One of our professor is a representative of the computing area in CAPES. Besides, we are present in various committees and other activities of interest to the department and the São Paulo and Brazilian community.

(Statistics - IME)
R: Many Docents have activities towards support centers, Bodies and Institutes, duly reported to the Council. With the exception of travels for research authorized by the Department Council, all must fulfill an annual load of 3couses/year (12 hours/class), with at least two disciplines for undergraduate students, and therefore, the participation is encouraged and valued by the Department, and brings no harm for the achievements of the goals defined by the Department.

(Applied Mathematics - IME)
R: The department offers consulting services to the community through the Centre for Mathematics and Applied Computing. Faculty members are also involved with the Matemateca Center whose main objective is the dissemination of mathematics to the general public. In addition, professors are individually engaged with other institutions within their academic interests, as CEPETEC, Petrobras, IPEN, Medicine, Public Health, Department of Health and Butantan Institute.

(Mathematics - IME)
R: MAT coordinates two centers: the Centro de Aperfeiçoamento do Ensino de Matemática (CAEM) and the Centro de Difusão e Ensino MATEMATECA. Several of our professors have an active participation in them. Despite being subordinated to the IME Board, the CAEM is academically linked to the Department of Mathematics, since the academic board is indicated by MAT. The work of this center has contributed greatly to the academic performance of MAT, whether in offering workshops and courses for the general public, or in the strengthening the Mathematics Education Research Group. In both directions, MAT is thus aiding in the improvement of mathematics teaching in its various levels (see details on the CAEM in item 2.10). The other center has ties to MAT through participation (mandatory) of professors of this department in its management. The scientific diffusion area is still incipient in Brazil and Matemateca has the largest national collection about teaching mathematics, being a reference and a stimulus for research in the area.

Teaching and learning processes

2.6.1 Assess the Faculty's teaching and learning processes, including the teaching means and techniques and their coherence with the educational proposal.

(Computer Science - IME)

R: We adopt modern techniques such as videos, projections and demonstrations on computer, or the classic one, with chalk and eraser. Each professor is free to decide how to conduct a course.

(Statistics - IME)
R: The pedagogical strategies contemplate expositive classes, practical classes, development of group activities, laboratory classes, availability of laboratories and activities at CEA - Center of Applied Statistics. The activities to be developed by the students must permit the daily use of computational equipment, the realization of bibliographical research, in multimedia or in library environment, the reading and discussion of texts and the participation in the solving of specific problems. The Bachelor in Statistics is a course that demands many work hours outside class from the students. Individual or group study of the subjects taught in class, the resolution of exercises lists and making of classwork that demand statistical applications are demanded in almost all the disciplines and constitute a necessary condition for the student to have a good performance.

(Applied Mathematics - IME)
R: The processes of teaching and learning in the MAP are the usual: regular courses, TCC projects and scientific initiation (IC) and participation in lectures and seminars. A significant portion of our faculty is strongly dedicated to mentoring students in TCC and IC projects. Sergio, Sonia, Manuel, Pedro Tonelli, Joyce, Rodrigo and Luis Carlos guide most students. Professors who have not been listed weren't so just because their dedication is not as obsessive as those listed.

(Mathematics - IME)
R: We can not say that the Department has processes of teaching and learning, since the professors have freedom of action in the classroom.
In the Bachelor Degree in Mathematics, the program of the disciplines and some established tradition are very coherent to the expected profile of the egressed.
In Teaching Degree in Mathematics, great efforts have been made to encourage our professors to adapt their teaching and learning processes to the desired profile for future teachers. Based on the recommendations of the Programa de Formação de Professores da USP, it was created a new alternative model of contract notice for MAT professors in RDIDP signaling a professional performance profile consistent with the initial and continuing training of basic education teachers and new practices of Mathematics teaching. We have had four teaching positions filled by such notice.
Through CAEM, workshops and courses were offered to about 2,000 people in the past five years, related to the course "Projetos de Estágios: Aprendendo Matemática com Projetos". Among the participating public, we have teachers of basic education, Teaching Degree in Mathematics students of IME-USP and, to a lesser extent, students of Pedagogics of FE-USP.
Matemateca began in 2004 and was institutionalized in 2014, when it became a center. Matemateca has been concerned with developing different expographic proposals for the consolidation of a permanent display to the public. Today, Matemateca is the largest and most comprehensive collection of mathematical objects of Brazil and is a benchmark for other institutions.

2.6.2 Is the profile of Undergraduate and Graduate alumni used as reference to define teaching and learning processes? How so?

(Computer Science - IME)
R: Yes, our undergraduate and graduate programs aim to train professionals of high technical standard. Our courses are designed to achieve this goal. They are also known for the high level of demand.

(Statistics - IME)
R: Our egresses are hired in government bodies, industries and mainly the financial market. Other egresses remain studying by doing post-graduation, in Statistics or in other areas, some of them pursuing academic careers. The Department always promotes lectures by egresses, who tell their experiences to

the students.

(Applied Mathematics - IME)
R: Yes. Alumni suggestions are used to adapt the curricula of the various qualifications and demands of graduate students serve as feedback for undergraduate courses.

(Mathematics - IME)
R: In general, the Department of Mathematics does not make use of the egressed profile to define their teaching and learning processes.

2.6.3 Describe the incentive policy intended to encourage the production and use of teaching materials (e.g. books, movies, videos, online material, software, prototypes, simulators and others) directed to the Faculty's teaching in the Undergraduate and Graduate Programs.

(Computer Science - IME)
R: Substantial material has been produced by docents. The introduction to computing content is being produced and purified for over 20 years. The latest version is available on the internet at http://www.ime.usp.br/~macmulti/. This material contains Web pages, pdf exercises lists, solved exercises with explanations that use animations and / or computer simulations. This material is freely accessible and has been used in universities in Brazil since its initial release 20 years ago.
In addition, several courses have generated materials that have been published in book form (one of them even received the Prêmio Jabuti de 2007 - Jabuti Award 2007). Other materials are available on the internet.
The absolute majority of undergraduate and graduate courses use our customization of Moodle system (http://paca.ime.usp.br/) to manage the courses. Thus, generated materials (such as exercises, slides, handouts, etc.) can be easily reused in the following offerings of disciplines, creating a living memory of the courses.

(Statistics - IME)
R: All are encouraged to produce and use didactic material, and the Committees that distribute the annual teaching workload take into consideration, prioritizing the request of docents that act in this task.

(Applied Mathematics - IME)
R: Some teachers, on their own initiative, prepare lecture notes and make them e-available. Although there is no incentive on the part of department for the production of teaching materials, neither is there much need for such materials as there are many very good books available.

(Mathematics - IME)
R: There is no specific policy for supporting the publication of books, etc., addressed to the teaching to Undergraduate courses and Graduation programs. In general, this has been done by the research groups. Professors interested in such projects can publish their work successfully. Several professors of MAT develop and maintain pages of disciplines on the Internet with teaching materials and information for students.
MAT has been concerned with this issue in recent times and started to seek more efficient ways to disseminate their activities. The Department has offered the Calculation Course 3 on Web (distance learning course with tests in the classroom) for students of the Polytechnic School who failed the course. In addition, the classes of calculation subjects taught at the Polytechnic School are being recorded by UNIVESP and put online. There are already available 2 disciplines of calculation and this semester 2 more are being recorded.
MAT also produced a proposal for a blended learnig Teaching Degree course that was approved at IME and partner units (Institute of Physics and Faculty of Education). So far there has been no final decision on this course by the Central Councils of USP.
With respect to materials for the elementary school and high school, stands out here the Centro de

Aperfeiçoamento do Ensino de Matemática (CAEM) hat has done good corporate disclosure. These materials have been produced by MAT professors in CAEM and through projects such as the Programa de Educação Continuada (Continuing Education Program).
MAT, to the extent possible, has supported the development of Matemateca through its disclosure, the growth of its collection and its consolidation as a permanent exhibit for public viewing. Today, Matemateca is the largest and most comprehensive collection of mathematical objects of Brazil and is a benchmark for other institutions.
The Mathematics Department believes that, with the consolidation of its good academic performance, it is imperative to strengthen, recognize and disseminate our institution within and outside the university.

2.6.4 List the primary forms of academic assessment used in the Faculty's Undergraduate and Graduate Programs.

(Computer Science - IME)
R: There is a regular process of evaluation of courses organized by the students.

(Statistics - IME)
R: The evaluation is basically qualitative. We hear the students that have representative in the collegiate bodies, and the docents that give continuity to the courses that had or not, its syllabi fulfilled satisfactorily. The Committees, by being informed, seek manners to solve the eventual problems that come up.

(Applied Mathematics - IME)
R: Commissions of the State Department of Education periodically visit the IME. Moreover, as mentioned in 2.6.2, we have meetings with students and graduates to discuss the courses.

(Mathematics - IME)
R: In undergraduate disciplines taught in other units the evaluation process is due to the unit responsible for the course. It is interesting to note that at the Polytechnic School, where a fairly consolidated system was established, the professors and the classes of the Department of Mathematics are very well evaluated.
In the courses of Bachelor Degree and Teaching Degree of MAT, students have the habit of looking for the commission or the student representative to talk and exchange ideas. This closer interaction with students allows a reasonably efficient monitoring. The course committees, the student representatives and professors who give classes end up bringing to the department board issues that deserve more attention.
At the initiative of the Graduate Committee, a more structured evaluation process was initiated, through questionnaires and meetings, but the feedback expected from the students was low.
For the Mestrado Profissional (Professional Master Degree), we use CAPES procedures and student evaluations. MAT's Graduate Commission holds sporadic meetings with students and professors of the Department, in which we analyze the evaluation results of CAPES and ways to improve the program, besides the content of disciplines and also the annual list of disciplines is prepared, after the discussion has been made in the research groups.

2.6.5 In the Faculty, is there any program encouraging technological innovation, entrepreneurship, or junior enterprises? Analyze the results.

(Computer Science - IME)
R: We have the Centro de Competência em Software Livre (Competence Center in Free Software), IME-Jr company, programa de fomento de startups (startups development program) and the support for technical interactions with national and international community of highly complex technological

problems.

(Statistics - IME)
R: There is a Junior Enterprise at IME-USP that has active students from the Bachelor in Statistics. The Department encourages the innovations and the senior students are faced and informed of the different possibilities in the contact with people of the various work areas of the egress in Statistics. This is one of the purposes that CEA - Center of Applied Statistics - aim to achieve and provide to the interested.

(Applied Mathematics - IME)
R: The IME Jr is a company (with its own CNPJ) where students come into contact with entrepreneurship, its challenges and difficulties, in a controlled environment. In the MAP Computer Laboratory students develop software and work with numerical calculation on larger scales than in undergraduate courses.

(Mathematics - IME)
R: The Department of Mathematics has no specific stimulus program. This type of stimulation is done in a timely manner. Students of the Mestrado Professional (Professional Master) of MAT are encouraged to become multipliers of knowledge and trainers of other professionals of basic education, as the graduate students are encouraged by their supervisors to conduct research in high-level mathematics, as well as the training of new researchers.

Undergraduate program

2.7.1.1 Describe the primary advancements attained in the Faculty's Undergraduate Program and the difficulties faced in the last 5 years.

(Computer Science - IME)
R: The most influential teaching activity was the creation of continuous evaluation with direct participation of the student body. This activity allowed a better integration between the classes and the teaching staff. The creation of CCSL (Competence Center for Free Software) and the growing of opportunities for scientific initiation in advanced projects has contributed greatly for the graduation of students. More recently, we started an update and reformulation of BCC curriculum. The most difficult issues are the average time for conclusion, which is larger than ideal for most students. In second place, there is evasion. We do not have relationship problems among students, staff and faculty, the few occurrences are rare.

(Statistics - IME)
R: In 2012 the Bachelor in Statistics suffered changes in order that the contents studied were updated and important subjects have been included in the structure. The teaching workload of the course was increased and all this process of change was very discussed among the professors, with wide participation of the students. With that the course has become denser and had a decrease in the evasion rates. The Department follows the norms and guidelines defined by the Pro-Rectory of the Undergraduate Courses, such as legislation, requirements and credits attributed to the disciplines, what often makes the eventual revision of procedures slow and bureaucratic.

(Applied Mathematics - IME)
R: The evening course BMAC consolidated and stabilized. The students are on average older and more responsible and a significant number of them have graduated within the expected time. In addition, new qualifications are being introduced (as in Actuarial Sciences at the FEA).

As for difficulties, the diurnal course has had a relatively large evasion. The main reasons are difficulties in reconciling study and work and shift to other more traditional courses, such as Poli (engineering) and FEA (economics and management). Moreover, the qualifications provided for daytime are less attractive and less varied mainly due to the difficulty with schedules. This, incidentally, is perhaps the greatest

operational difficulty we have: assemble a timetable combining disciplines in various units is very difficult and often has to be done on a case-by-case basis.

(Mathematics - IME)
R: The Departament of Matemathics is responsible for two undergraduate courses: Bacharelado em Matemática (BM) (Bachelor Degree in Mathematics) and Licenciatura em Matemática (Lic) (Teaching Degree in Mathematics), the later in two versions: evening classes or daily classes. The department is also in charge of a large number of subjects in other faculties, which represents 60% of the total classes taught.
For the department to continue providing a good performance it has to be able to hire new professionals as a matter of urgency. The classes are unpleasantly crowded. For instance, in Escola Politecnica we have 84 classes with an average of 80 students per class. In addition, there are not enough professionals to offer each semester courses with high repetition rates. Solving these issues have been an important goal of the department for the last 10 years, at least.
At IME facilities, the classrooms are inapropriated in number and size which affects greatly our undergraduate courses. In the last few years, the Bloco B has been remodelled to increase the living comfort in the classrooms, but they are in number and size beyond the requirement.
The BM syllabus has been modified aiming a better distribution of the subjects and allowing more flexibility in what respects the electives. The Algebra and Diferencial Geometry courses have been restructured; the freshman classes now include Numeros (Numbers) seeking to acquaint the students with mathematical rigour early in the course. Scientific initiation project is now part of the official program (Iniciação ao Trabalho Científico) and the number of electives has increased. It is important to add that these changes have been discussed with the students either in meetings organized for this purpose or by means of the student who is member in the course committee (Comissão Coordenadora do Curso do Bacharelado em Matemática).
During this period, we consolidated the new (2006) curriculum of Licenciatura em Matemática, and implemented the new internship program officially required. As part of the program, from 2009 on, MAT has been offering to mathematics teachers of Public Schools, annual extension courses (60 hours) conducted concurrently with the undergraduate subject MAT1500 - Stage Projects. In these courses, we deal with "teaching through projects" working in groups formed by the Public School teachers and Licenciatura students. The idea is to design a project or didactic sequence to be actually deployed by the teachers in their current classrooms, with the contribution of students as interns. Annually, there are new projects between public schools and IME, establishing partnerships that ensure both stages for students and continuing education for teachers. This innovative program has represented an extremely rich trainee experience and is providing a very positive contact between our students and the reality of Public Schools in São Paulo.

2.7.1.2 Characterize the connection and cooperation among the Faculty's Undergraduate Committee and the Courses' Coordination Committees.

(Computer Science - IME)
R: The department holds only one course (BCC). The course coordinator is currently the vice-president of the Undergraduate Committee (UC) and the vice-coordinator is a member of the Department Council. The most important issues related to the course are discussed in the departmental sphere and the conclusions are presented to the UC.

(Statistics - IME)
R: The Committee of Undergraduate Courses and the Coordinating Committees of Courses are in permanent touch with the Departments and all the decisions that involve students have the feedback from the involved department, either because it is the responsible for the course, or because it is responsible for the discipline.

(Applied Mathematics - IME)

R: Members of the MAP in the two committees are the same. As a rule, the decisions of the CG are based on the suggestions and demands of Course Coordination Committees.

(Mathematics - IME)
R: The department choses the members of the courses coordination committees and one of them is chosen to be the represenatative in the "Comissão de Graduação do IME". The course coordination committee sends proposals of change to the "Conselho do Departamento de Matemática". If approved, the proposal goes to the "Comissão de Graduação do IME". In the Departament of Mathematics, a special committee allocates the classes between the professors and mediates issues about the courses, especially the ones offered to other units in USP: "Comissão de Ensino". The undergraduate structure of USP is not designed foreseeing so many classes outside the unit and the department dealt with the problem creating this committee. Our department is the only one in IME that has Comissão de Ensino.

2.7.1.3 List the relevant innovations, initiatives, and tendencies in teaching of the Faculty's Undergraduate Program in regard to:

a) New Programs and Courses;

(Computer Science - IME)
R: The department did not create new courses, but rather invested in the current one. Elective disciplines are created and offered continuously, reflecting current trends and faculty research fields. Recent years have seen the emergence of disciplines aimed at market, specifically "Law and Free Software" and "Entrepreneurship".

(Statistics - IME)
R: In the restructuration of the course, the disciplines MAE0514 - Introduction to Survival Analysis, MAE0524 - Bayesian Data Analysis and MAE0526 - Topics of Regression, which includes more advanced models that the ones offered in MAE0328 - Regression analysis, as the Generalized Linear Models; have been included as mandatory. Such disciplines were optative. Besides, two disciplines were created: MAE0125 - Perspectives in Statistics, so that the students in the first semester may get acquainted with the kinds of problems and the areas that the Statistician may act upon; and MAC0313 - Introduction to the Database Systems for Statisticians, so that the egress may know how to deal with strong databases, a demand of the market nowadays.

(Applied Mathematics - IME)
R: Our courses are relatively young: both the BMA and the BMAC are about 11 years old. We anticipate the introduction of new qualifications this year with the consequent introduction of new disciplines. For example, there is a new major in Actuarial Sciences to be held at the FEA. The discipline "MAP 2001: Mathematics, Architecture and Design" was created recently and has been very successful in its two years of existence.

A clear need for us - to have a qualification in science and engineering which is entirely nocturnal - has stumbled repeatedly against negatives by higher instances of the university administration.

(Mathematics - IME)
R: Several readjustments have been made in subjects offered outside IME motivated mainly by requests from the course coordination. In all cases, either a professor from MAT was part of the course committee or one was assigned ad hoc to consider the problem and to suggest solutions. An example are the new classes created to meet the expansion needs of Escola Politecnica in Santos and in EACH.
New algebra courses in BM are MAT0164-Números Inteiros (4 hours, first semester), MAT0264-Anéis e Corpos (4 hours, third semester), MAT0265-Grupos (4 hours, fourth semester), and MAT0364-Teoria de Galois (4 hours, fifth semester). These four courses replace MAT0123-Álgebra I, MAT0213-Álgebra II and

MAT0313-Álgebra III. MAT0164 replaces MAT0123. The new course MAT0164 has a less extensive program (including only integer numbers and not Ring Theory) and is part of the first semester instead of the third. The aim is to promote close contact with proofs right in the beginning trying to solve difficulties that appear to be each year more acute amongst freshman classes. MAT0264 and MAT0265 replace MAT0213-Álgebra II, separating rings and fields from groups, in two different courses. Finally, MAT0364 replaces MAT0313-Álgebra III, with minor changes in the program just do adapt to the other new courses.

Still about Bacharelado em Matemática, a new course has been created MAT0148 - Introdução ao Trabalho Científico. It is an annual course, with 300 hours. Typically, the student works in a scientific initiation project with a supervisor. In the end, the student presents a written report about the activities. In the new curriculum of the Licenciatura, implemented from 2006 on, new subjects have been introduced and others reformulated, due to the new component "practice as curricular component". The last five years we have consolidated and improved the formative objectives of the reformulated and new disciplines.

b) Increase in the number of slots;

(Computer Science - IME)
R: The Department understands that there is no conditions to increase offered places, even though the demand for the course has increased in the last five years (from 11:1 in 2010 to 34:1 in 2015, both ratios for 1st option). The lack of conditions come from limited room and faculty shortage.

(Statistics - IME)
R: The increase of vacancies is seen as a goal to be reached in near future, however, for that, it demands some definitions about how do reduce the evasion rate and the limited capacity of collaboration with service disciplines, those that are offered to other Institutes of the University. Nowadays we offer 50 undergraduate disciplines to 16 Institutes of USP, 10 of them with classes of an average number of 50 students enrolled, 3 of them passing 70 students per class, in 1 of them the average is of 35 students enrolled, and one institute (FEA) to which we offer 6 disciplines with an average of 50 students per class. At IME, we have 33 disciplines with classes of an average of 40 enrolled students. All the docents of the Department participate of these activities.

(Applied Mathematics - IME)
R: Does not seem necessary to us.

(Mathematics - IME)
R: The undergraduate courses Bacharelado em Matemática and Licenciatura remain with the same number of freshman classes: 30 in BM, 100 in Lic Noturno (evening) and 50 in Lic Diurno (daily).
In both courses, one of the more important issues is the high dropout rates. In this context and needing more professors, the department does not intend to increase the number of undergraduate students.

c) Attraction of talented students;

(Computer Science - IME)
R: The creation of a separated career for Computer Science in 2011 promoted more visibility for the course in the media and started to attract directly interested students. The same effect occurred in the "Profession Fair" and in monitored visits. For some time we made visits to high schools describing the course and the working fields, but this initiative was deprecated as the demand for the course increased. We created a channel on YouTube describing the disciplines and BCC itself. There is also a permanent committee for advertising the course and elucidate questions of potential candidates.

(Statistics - IME)

R: From the third semester of the Bachelor degree, talented students are encouraged to participate of Undergraduate Research programs, Seminars, Lectures and Congresses. Such initiatives are open and divulged so the interested parties may develop their formation with the biggest support possible.

(Applied Mathematics - IME)
R: The Molecular Sciences course is actually an incubator for talented students. The current course coordinator (Fabio Tal) is a professor of MAP. Another MAP professor who came from this course is Renato Vicente. Our strong relationship with Molecular Sciences enables us to attract good students to attend our disciplines, conduct TCC with our professors and eventually enroll in postgraduate courses in MAP. We also created this year a new discipline for Poli ("Introduction to Real Analysis"), which aims to attract talented students with interest in mathematics.

(Mathematics - IME)
R: The department participates in the event "USP e as profissões" when students who are about to choose a career come to visit several units in USP. We also attend "Feira de Profissões" another event in USP that attracts thousands of students. The Matemateca exhibitions also collaborate to promote our undergraduate courses, as well as the projects amongst students who participated in OBEMEP: PIC and PICME.

d) Changes and flexibility in the curricular structure;

(Computer Science - IME)
R: The current curriculum is very flexible, with a large number of elective disciplines. But, as the field is highly dynamic, we realized the need of an update, which was started to be analyzed in 2011 and is currently being implemented. It is a new curriculum, composed of a basic core holding the essential foundation and groups of coordinated elective disciplines, allowing the student to get a more specific formation. In this fashion, the student may opt for a general formation or follow one of the available tracks. In this model, the student is not forced to choose a track a priori, it is enough to collect credits for the desired track(s). At this moment, the offered tracks are eScience, Algorithms and Complexity, Software Systems and AI. The 2015 new students are already in the new system.

(Statistics - IME)
R: Besides the encouragement to take courses with a wide variety of free optative disciplines in other Institutes of USP (IB, IAG, IPT, FEA, FE, FFLCH, POLI etc...), the program offers around 8 optative disciplines a year. The Committee of Undergraduate Courses also analyses equivalencies of disciplines taken even outside USP. This allows a certain flexibilization of the syllabus. The Changes have been recently made and the Committee of Undergraduate Courses have been sensible to the different demands.

(Applied Mathematics - IME)
R: The courses offered by MAP are flexible par excellence: sufficient it to notice that ten qualifications are offered in ranging from Animal Health to Control and Automation, to several others. The heterogeneity of the department always made us we value diversity and flexibility: this is an integral part of our departmental identity. Among other things, our students are encouraged to make elective courses in other departments and other units (even if this has often been prevented, beyond the minimum required, by rules of USP).

(Mathematics - IME)
R: In this period, there has been an augmentation of the elective subjects making the Bacharelado de Matemática syllabus more flexible; the student chooses five electives (related to mathematics) and one elective in any subject. The lack of human resources makes it difficult to offer a wide range of subjects. Since the BM has few students, it is possible to ask the students and meet their demands.
Licenciatura em Matemática has a flexible curriculum structure (with several blocks of elective disciplines)

since 1994. In 2006, this feature was maintained and even stressed - mainly by the addition of elective disciplines, not just from other departments in IME, but also from other units of USP, including the Faculdade de Educação. In the last five years, there were no other changes in this regard.

e) Renewal, updating, and use of new teaching methodologies.

(Computer Science - IME)
R: Virtually all subjects have support via internet, via Moodle, with forums of doubts and discussion, tasks delivered remotely and provision of teaching materials. Another initiative is a circulating laboratory of robotics for the study of autonomous intelligent agents.

(Statistics - IME)
R: The Committee of Undergraduate Courses systematically revise (with internal feedback) the suggested bibliographical references, the innovations proposed by different Docents in different disciplines and provides support to renovations that are adequate to the syllabus and the current pedagogical program.

(Applied Mathematics - IME)
R: The teaching of mathematics using the traditional chalk and blackboard still appears to us to be quite efficient. Several instructors use substitutes like projections on Beamer or Power Point, but this depends on the context and the instructor. Several instructors use Maple, Mathematics and SciLab in their courses, as they see fit.

(Mathematics - IME)
R: The department offers a Web course of "cálculo 3" (distance learning and in-person tests) for students from Escola Politécnica who have already fail the regular course. Moreover, the four calculus courses taught in Escola Politecnica are being recorded to be available to everyone in the WEB.
The department proposed a blended learning course in "licenciatura" that has already been approved by IME, Instituto de Física and Faculdade de Educação. There have been no decision about the course by ten central committees of USP.

2.7.1.4 Characterize the monitoring of the Faculty's Undergraduate teaching. Describe the procedures and indicators used in this process.

(Computer Science - IME)
R: The department has a sophisticated monitoring system since 2011, the project "Apoio ao BCC" (Support for BCC) (http://bcc.ime.usp.br/principal/). The Support for BCC centralizes various tasks associated with the general monitoring of undergraduate and is referenced elsewhere in this report. Each year has a student representative, responsible for attending meetings with the coordination and preparation of questionnaires that students respond in the first third of the semester. These questionnaires seek to obtain the students' perception about the quality and effectiveness of lessons, teaching skills and the student's own performance. There is also room for including free comments. Responses are tabulated and used for trend analysis. All comments are collected by the representatives that make a summary report presented to the corresponding professor. Then, there is a meeting with students and docents of each year to solve any problems and clarifications. Experience shows that most issues can be resolved before the end of the semester, in addition to causing greater integration in each class and improve the student-professor relationship.

(Statistics - IME)
R: Periodical meetings with the students are realized. Until the last semester, all the disciplines were evaluated by the students that answered a questionnaire, whose answers generated a report that was forwarded to the professors. A meeting of the class representatives with de Coordinator of the Course was held semiannually, mediated by the Pedagogic Orientation. The class representatives would prepare a

summary of the comments made by students while the solving of any problem raised was sought. The participation of the Students Representative in the Departmental Council is encouraged and allows a fast follow up of the eventual problems and difficulties found.

(Applied Mathematics - IME)
R: The numbers used are the usual ones, mainly the annual number of graduates and the average graduation time. The department is small enough so that we can "personally" follow the demands of students and the development of courses and qualifications. We have regular meetings with the students where these and other issues are discussed and analyzed.

(Mathematics - IME)
R: Other institutes are in charge of the evaluation in what concerns the classes our professors teach outside IME. It is worthwhile to stress that in Escola Politecnica, where there is a consolidated evaluation process, the professors from our department are used to earn very good grades.
In the BM and Lic, it is usual that the students come to talk and exchange ideas with members of the course committee (each committee has a student as a member). In particular, the BM forms a small community and this closer interaction allows reasonably effective monitoring. In both courses, the course committees, the students in these committees and the professors who are actually teaching bring to the Conselho do Departamento issues that deserve a closer attention. The Comissão de Graduação has initiated an evaluation process based on a questionnaire and a student meeting for each subject. The results achieved were below expectations, probably due to the structure being based on the idea of a "student class" which is not the reality neither in the Bacharelado de Matemática nor in the Licenciatura. The need to appoint staff members to help in the process (and the lack of staff resources) also collaborates to the discontinuity of the process.

2.7.2.1 What is the profile of Undergraduate alumni pursued by the Faculty?

(Computer Science - IME)
R: The expected profile of a former BCC student is a versatile professional that should, first of all, be attentive to the market changes and to be able to easily learn new technologies. His technical training should encompass key areas of Computer Science (as pointed out in the curriculum guidelines of the MEC) and should also be aware of the philosophical and ethical aspects of his profession. Typically, the egressed will serve the market in the development of new systems and computing tools. The course aims to train professionals who can be agents of change, active in various areas of knowledge and producers of high-end computing systems in the country.

(Statistics - IME)
R: The mission of the course is to form Statisticians to act on the market, in private companies and public service, as well as to form prepared professionals to pursue an academic career, following with the realization of the master and doctorate, a future performance in universities and centers of research, nationally or abroad. We aim to achieve the interest of the students for the new knowledge and an ethical and citizen posture is a demand in every stage of their formation. We aim to achieve a formation of excellence that enables the Egress for any challenge one may find in one's future professional activities.

(Applied Mathematics - IME)
R: Professionals who can work with mathematics in technology companies or in graduate programs in mathematics and other areas, such as engineering, economics, management, etc. See educational project for more details.

(Mathematics - IME)
R: The bachelor of mathematics has a solid academic training in the basic subjects of Algebra, Analysis, Geometry e Fundaments. Classes in Statistics, Applied Mathematics, Physics and Computer Science allowed the student to be well acquainted with tools and applications of Mathematics. The electives may

either consolidate expertise in certain fields of Mathematics, aiming academic research and teaching, or broaden the student scope of knowledge seeking a non-academic position. The bachelor aquired the mandatory requirements to be autonomous in his work and the initiative to seek new information in order to solve problems in a wide range of subjects. The daily contact with active research groups in different fields of Mathematics, the access to a high quality library and modern computers and softwares allows the future bachelor to be well tuned with the latest developments in science and technology. In addition, the bachelor ackowledges the need to continuously update himself and is able to learn how to adapt the mathematical language to different fields of activity. The articulation of these skills and expertises enables the bachelor to continue his studies in Mathematics in the best institutions, or to iniciate a career teaching in faculties or to work with applications of Mathematics in the labour market.

The desired profile for the egressed of Lic is a mathematics teacher that:
- Dominates specific and not trivial mathematical knowledge with awareness of the proper production mode of this Science - origins, cultural integration, deductive rigor, proper inductive procedures in mathematical creation, seen as a problem-solving activity, and its applications in various areas;
- Realize that the knowledge domain and the development of skills adequate to the making of mathematics are relevant to the full exercise of citizenship, being able to articulate his work with other school teachers to foster a multidisciplinary and meaningful student learning;
- Has familiarity and reflection on the characteristic logical forms of mathematical thinking and the assumptions of Cognitive Psychology in order to, on the one hand, encourage the development of reasoning of their students and, on the other hand, do not extrapolate the appropriate rigor demands to each age;
- Has familiarity and reflection on methodologies and the use of diverse teaching aids, and on continuing evaluation, being able to observe their students and seek alternatives for action to foster the development of their autonomy of thought.
- Engaged in an ongoing process of professional development, with the opening to incorporate the use of new technologies and to adapt his work to the socio-cultural demands and to his students.

2.7.2.2 Are the courses syllabuses and subjects of the Faculty's Undergraduate Program consistent with this profile?

(Computer Science - IME)
R: Both the previous curricula as what is being implemented now are designed with this profile in mind. The strong theoretical base of the first semester (concentrated in so-called basic core) is counterbalanced by practical projects throughout the course. Students are exposed to all kinds of reasoning necessary for a strong presence in the area and get enough conceptual training for the assimilation of new trends quickly and solidly.

(Statistics - IME)
R: Yes. We believe that we form professionals that will adapt to the most various scenarios, through a solid formation and with a high share of challenges discussed throughout the formation. The demand of the "market" may change, but we believe, that our Egresses are prepared.

(Applied Mathematics - IME)
R: Yes: they were created with this express purpose in mind.

(Mathematics - IME)
R: In what concerns the Bacharelado em Matemática, either the curriculum and the syllabus are in line with the profile of the bachelor. It is worthwhile mentioning that the course hours do not take into account the hours of study outside the classroom. In BM students usually study a lot and this is a decisive factor in the good results obtained.
The case of the Lic Degree was discussed in depth between 2002 and 2005, concurrently in a great debate throughout the USP when preparing the Teacher Preparation Program at USP. The new curriculum

implemented from 2006, as well as the summaries of the disciplines, were widely discussed by many professors involved in the course and also by the student body. Every effort was made in this direction: that the curricular path was indeed consistent with the desired profile. We have had good results. There are greater difficulties in evening classes because the vast majority of students work during the day and have little time to devote to study outside the classroom. The ideal is to conclude the course in 5 years. The daily course needs only 4 years. This is an attempt to better match the profile of the students, but that does not seem enough. Few students of the evening classes can complete the course in the ideal period.

2.7.2.3 Are the Faculty's teaching and learning processes consistent with this profile?

(Computer Science - IME)
R: Students have some difficulty adjusting at first but veterans help explain the importance of theory. Much of the disciplines include projects where the concepts are applied in practice and students recognize the result. The evaluation process of the "Support for BCC" helps to resolve any coverage gaps in any discipline and allows for course correction in each instance. The result has been recognized by undergraduate students, by the labor market and by the performance of those who opt for a graduate.

(Statistics - IME)
R: Yes. Besides a solid formation of contents linked in the various disciplines, through syllabi defined by the different coordinating bodies, that compose the course program, including a new requirements policy between the different semesters, the group and lab works are encouraged and make part of the requested formation.

(Applied Mathematics - IME)
R: Yes. The system of qualifications, in particular, was created precisely to enable our educational goals.

(Mathematics - IME)
R: We cannot say there is a departamental process of teaching and learning since the professor has a great autonomy in the classroom.
In what concerns the Bacharelado em Matemática, the syllabus and a certain tradition are indeed fairly coherent with the bachelor profile.
The Licenciatura course committee has made concrete efforts to encourage our professors to adapt their teaching and learning processes to the desired preparing profile for future teachers. We promoted discussions about the meaning of Teaching Practices that have been incorporated into some courses of the department, seeking ways to organize the implementation of this curriculum component that were compatible with their goals and that could be assumed by our professors. Also from the recommendations of the Teacher Training Program at USP, we organized a debate in the department, to create a new alternative hiring model in order to signal a required professional activity profile consistent with a real experience with initial training and continued Basic Education teachers. We have had 4 teaching positions filled this way, which has been quite effective as regards the objective of seeking to hire professionals better suited to take responsibility for the Licenciatura course.

2.7.2.4 List the support services provided by the Faculty to students.

(Computer Science - IME)
R: - Monitoring in virtually all disciplines;
- Laboratories in sufficient numbers to classes, as well as specific rooms and laboratories for scientific initiation projects;
- Wireless Internet access throughout the institution;
- Personal Service with the coordinator and vice;

- From the first half of 2015 students have a tutor.

(Statistics - IME)
R: Besides the Section of the Undergraduate Students, that offers support in any academic issue, the Coordinating Committee of the Course is permanently available to guide the students. Information to the alumni, especially to the freshmen, are made available in a systematic way, either by the Committees of the Department as well as by the Pro-Rectory of Undergraduate Courses, providing the legislation and current norms.

(Applied Mathematics - IME)
R: Strong incentive to participate in scientific initiation programs with scholarship; mentoring programs; computer rooms and library.

(Mathematics - IME)
R: The organization of the courses and subjects and the assignment of the students (graduate and who will be teaching assistants) are done by committees in the department. It is worthwhile to mention the mediation role the department has in issues involving other institutes and the subjects taught outside IME. In what concerns facilities, the library, computers and students internships, the central committees treat these issues in IME. In each of these committes there are department representatives.

2.7.2.5 Does the Faculty have any system to monitor the training process of Undergraduate students? Comment.

(Computer Science - IME)
R: The project itself "Support for BCC", quoted above, produces a graph of student performance by discipline.

(Statistics - IME)
R: The Committee of Undergraduate Courses has individual information of all students. The follow up of their formation is observed and guided in details in order to achieve the international quality indicators.

(Applied Mathematics - IME)
R: Yes. We have regular meetings (every six months) with students aiming to clarify aspects of the courses and receive feedback. Furthermore, we are strong adepts of personal (and informal) communication between teachers and students.

(Mathematics - IME)
R: The department follows the progress of the undergraduate courses by means of the course committees, the Comissão de Ensino do IME and eventual reports from professors and students. More delicate or important issues always come to the attention of the department chief or of the Conselho do Departamento as a whole.

2.7.2.6 Indicate incentive actions intended to promote Scientific Training for Undergraduate Students, participation in studies and research groups, among others.

(Computer Science - IME)
R: There are several research projects underway, both within the department and in interdisciplinary initiatives. In almost all projects, there is the participation of undergraduate students and all students are welcome to seminars. In every year, the Pró-Reitoria de Graduação (Dean of Undergraduate) provides funding for events (Pro-Eve and Pro-Int). This money is used for national and international participation in events, when students have some work presentation. Caravans for participation in the "Festival Internacional de Software Livre" (International Free Software Festival) were also financed every year, as

well as the "Semana do BCC" (Week of BCC") a symposium during the Homeland Week, entirely organized by the students with the institute guests, including some from abroad.

(Statistics - IME)
R: All Docents and their groups of research encourage in a daily basis the participation of the students in their seminars, Undergraduate Research projects, orientation and participations in Scientific Congresses. The search for the interested does not only open the perspective to the discovery of talents, but also incentivizes the deepening of the programmatic contents developed in the formation of the students.

(Applied Mathematics - IME)
R: We mentioned above the strong incentive given to participation in SI programs. Several MAP instructors have a (very) well established history of training students in these and TCC projects. In addition, some of our instructors participate in PICME program for students who excel in the Math Olympiads.

(Mathematics - IME)
R: Scientific Iniciation is now part of the Bacharelado em Matemática curriculum: the student works in a project for one year in the course Iniciação ao Trabalho Científico. Usually, the BM student works more than one year in scientific iniciation. A final paper is optional in the end of the Licenciatura. The supervising work for these projects and for the scientific iniciation activity as a whole is provided by some of our professors who volunteer.

2.7.2.7 Does the Faculty have any formal relationship with Undergraduate alumni? Is there any system to maintain ties with Undergraduate alumni?

(Computer Science - IME)
R: There is an indirect contact via the Internet and email. Every 5 years is held a party / activity where all former students are invited. The last edition was in 2014 (http://bcc.ime.usp.br/40anos/). The page for contact with former students is http://bcc.ime.usp.br/principal/index.php?id=ex-alunos.

(Statistics - IME)
R: There is no formal relationship with the ex-student, but as many of them follow their studies in the post-graduation program, they end up bringing information about the professional activities of their colleagues. Besides, ex-students acting in the work market are invited to lecture and to talk with undergraduate students to discuss the perspectives of work. The discipline MAE0125 - Perspectives in Statistics has as one of its purposes to put the egresses and students in touch to discuss the possibilities of professional action.

(Applied Mathematics - IME)
R: At the moment no, but we have plans to create a program to do so in the very near future. We do have informal contact with several former students, but we would like to create mechanisms that allow us to track a larger number of graduates.

(Mathematics - IME)
R: There is no regular formal follow-up of our graduate students after they leave IME. The bachelor usually keep in touch with professors even when they continue their graduate studies elsewhere. The social networks in the web enable the information exchange, and members of the course committees participates in several groups.

2.7.2.8 Comment the professional practice fields and skills required by the Faculty's alumni.

(Computer Science - IME)

R: The former student can act in all areas of computing, from the administrative applications to the quality of software development in all architecture levels: micro computers to high-performance systems. Many egressed founded their own companies and / or work in consulting. Others go for large companies such as Google, Samsung and IBM. In the academic area, students are able to attend graduate degree in virtually any course in exact sciences and many follow this career.

(Statistics - IME)
R: It is difficult to cite an area in which the egresses of Statistics are not working in the last years. Industries, hospitals, public service, financial system, market companies, judiciary, communications and marketing, energy and sanitation companies, and so on, every day new opportunities appear for graduate students in Statistics.

(Applied Mathematics - IME)
R: Graduate programs in various areas from mathematics and applied mathematics to journalism, to engineering, financial market and technology companies. The main skills that these professionals have in common is the ability to use quantitative and qualitative reasoning for modeling and problem solving and data analysis.

(Mathematics - IME)
R: The bachelor of mathematics typically follows academic career pursuing graduation and doctoral studies. More rarely the bachelor seeks a position in the labor market and, in these cases, frequently in banks or financial institutions.
Many graduates from Licenciatura embrace the mathematics teaching profession in public or private schools. Others pursue graduate studies, mainly in the areas of Mathematics Education, Mathematics, Statistics or Applied Mathematics. Many of them end up following academic careers as university professors. Lately, some students have found work in publishing companies editing textbooks of Mathematics. But there are also many graduates from Licenciatura, mainly from the evening course, working in banks or in Technology of Information and other areas. Some of them already worked in the same place during the undergraduation period, only benefiting the diploma for the purpose of better pay in the company.

2.7.2.9 Comment on the performance of the Faculty's alumni in professional exams, and exams from the medical field and similar contexts.

(Computer Science - IME)
R: There are no examinations in computing, but former students have their ability recognized in the labor market.

(Statistics - IME)
R: There are no Class exams. We have news of the professional success of the majority of the egresses.

(Applied Mathematics - IME)
R: Does not apply.

(Mathematics - IME)
R: The former student of Bacharelado de Matemática usually succeeds in obtaining scholarship to graduation programs in the most prestigious institutions in Brazil and abroad. The course committee closely monitors these first steps after the undergraduate conclusion, since the number of students is small and the interest in their future choices is great. Between the students from BM who are interested in graduation studies, it is extremely rare not to be accept in good institutions.
All graduates from Licenciatura who applied for a teaching position in public Basic Education have been approved. They are usually very well accepted as teachers in good private school. Publishers of textbooks seek our undergraduate students even during the course itself, offering paid internships. One of the

implications of the flexible characteristic of the course curriculum is to enable students to deepen their knowledge in areas that they are most interested. Choosing electives from Bacharelado em Matemática or from Faculdade de Educação, students are able to be accepted in academic masterships in IME, FE or another equally reputable program.

2.7.3.1 Indicate whether there are initiatives concerning distance learning in the Faculty.

(Computer Science - IME)
R: We are starting a project with the participation of several professors, to develop a web course for Introduction to Computing.

(Statistics - IME)
R: Some Docents have expressed interest in recording their classes to divulge and form students. This initiative is yet incipient and we believe that might come to be implemented and diffused in a near future.

(Applied Mathematics - IME)
R: No.

(Mathematics - IME)
R: Some professors from the department have worked thoroughly on a proposition of a blended Licenciatura course. The proposal has been discussed and utterly aproved by the Conselho do Departamento and the Congregação do IME. There is not yet a decision on this course by the Central Councils of USP.

2.7.3.2 Describe primary Undergraduate extra-curricular activities in the Faculty.

(Computer Science - IME)
R: So far, there has been no significant investment in extracurricular activities.

(Statistics - IME)
R: The students are encouraged to participate of events and congresses in the areas of probability and statistics. The students with good performance may develop activities of orientation in disciplines already taken, which not only aids the younger students, but also promotes the integration of students of different years. Though it is not mandatory in the course, the great majority of the students do, after the third semester, paid internships in companies on the work market. There is a huge demand for interns of Statistics.

(Applied Mathematics - IME)
R: The Scientific Initiation is certainly the most extensive and important. Mentoring programs are also present. Besides these, many of our students work as monitors in exhibitions of the Matemateca.

(Mathematics - IME)
R: Most students from the Bacharelado em Matemática have been, at some point, teaching assistants. Some of them, usually the top students, attended summer courses outside São Paulo and participated in Mathematics Olimpiads. The exhibitions of the Matemateca usually counts on explainers from BM. Students of Licenciatura, besides being teaching assistants in IME undergraduate courses and explainers in Matemateca exhibitons, are also able to be trainees of the CAEM. Every two years they organize, with the support of the course committee, the "Semana da Licenciatura", an event to which inviting lecturers and teachers offer short courses and workshops. The target audience of this event are students of Licenciatura and teachers from basic school. Licenciatura students regularly attend workshops and courses offered each semester by CAEM aiming continuing education of teachers from basic school. Since 2012, professors from the department have coordinated the PIBID / USP subproject of Mathematics

of IME/USP. Since then we have had the participation of up to 40 Licenciatura students as PIBID fellows, engaged in actions to improve public school. This experience has been extremely enriching and positive for their professional preparation.

2.7.3.3 Comment on the impact for the Undergraduate Program from academic agreements, supervised training programs, and agreements with the public and private sectors, as maintained by the Faculty.

(Computer Science - IME)
R: We are currently discussing a stage policy for undergraduate students.

(Statistics - IME)
R: The existence of some impact is given by the perfecting of the formation of those students with a Strong interest in the activities of Applied Statistics, through internships during the course, be it on the complementation of their studies like in academic internships encouraged by the Department.

(Applied Mathematics - IME)
R: Although not compulsory, many students do internships. Rodia created an internship program because of good students of the MAP that had a traineeship there. Banco Itaú also successfully received MAP students.

(Mathematics - IME)
R: It is not expected that a student from bacharelado have to work as a trainee in the market. On the other hand it is not particularly discouraged. On the other hand, there is a growing interest for international exchange programs kept by IME. The existence of an agreement is important to guarantee to the student that the information will help him to choose better academic value with the logistics aid.
In what concerns the Licenciatura, the Curricular Internship Program began in 2009. Since then, the partnerships developed with Public Schools (state and municipal) have had very significant results, both for our trainees students, as for the numerous Basic Education teachers who have participated in the last six years. Since 2012, some of these teachers and schools have participated in the IME math subproject (PIBID USP), as supervisor teachers by the CAPES scholarship program. Enthusiasm is great with the results of the actions of PIBID (and partnerships within the IME Internship Program) in their schools. All this has represented an extremely positive impact of the department actions in partner public schools.
On the other hand, IME Curriculum Internship Program demands for its effectiveness each year, a very intense effort of the professors involved. They not only take the double teaching load - undergraduate and extension, in the guidance of joint projects to be applied in schools, but they need to address the creation of the annual extension course and the establishment of partnerships, or the stages do not happen. For this last action, we have the support of an CAEM Educator and some graduate scholarship holders students. They perform the role of disclosing the Internship Program in schools and seek to effect partnerships; throughout the year they are the direct link with schools and make the monitoring of stages of the students in the field.
In the time of the new curriculum implementation in 2006, the department asked for 3 educators to work with the schools. It is fundamental to the dissemination of the Internship Program and to an effective dialogue with schools during the partnership. The university provided only one person in this position. This lack of technical staff overloads the professors responsible for the Licenciatura intership under the responsibility of department.

2.7.3.4 Relate the Faculty's main inter-disciplinary projects.

(Computer Science - IME)
R: The web page of the Competence Center Open Source (http://ccsl.ime.usp.br/) lists a number of projects underway. Apart from these, there are interdisciplinary projects in linguistics

(http://www.nehilp.org), astrobiology, cancer, medical imaging, ...

(Statistics - IME)
R: The Program of Undergraduate Course makes available various optative disciplines in diverse areas of action of the University, such as offered vacancies at IB, IAG, IPT, FEA, FE, FFLCH, POLI etc... Senior students must participate of projects, with guidance from the Docents of the Department, in different areas of action coordinate by the CEA - Center of Applied Statistics. During 2013, CEA guided 29 projects and 17 consultations, and in 2014, 29 projects and 22 consultations. Such activities are always coordinated by docents of the Department and multidisciplinary docents.

(Applied Mathematics - IME)
R: Almost all the qualifications of our courses are interdisciplinary par excellence. Moreover, even within the IME our students enroll in disciplines from all departments.

(Mathematics - IME)
R: Almost all our courses are interdisciplinary. Moreover, our students study disciplines from all of the departments of IME.

2.7.3.5 Describe the Faculty's monitoring and tutoring programs.

(Computer Science - IME)
R: The department disciplines have monitors of the Institute and from the Rectory programs. The monitoring is very important in disciplines that involve projects and therefore almost all disciplines have with monitors. The "Programa de Aperfeiçoamento de Ensino" - PAE (Teaching Improvement Program - PAE) allows graduate students serve as teaching aids, approaching those of undergraduates. Tutoring has been implemented in the past, but fell out of favor for being inefficient. From 2015 a new attempt is being made in other molds, dedicated to the freshmen this year and the later ones.

(Statistics - IME)
R: The Program of orientation includes all the disciplines that the Department is responsible of, and has corresponded successfully to its goals. There is not a Tutorship program in the Department.

(Applied Mathematics - IME)
R: PAE, Graduate Mentoring programs of IME and USP, PEEG of CAPES. Monitors are supervised by instructors during the semester, having regular discussions about how the interactions with students are going.

(Mathematics - IME)
R: The teaching assistance has been established in IME many years ago and has been a great help for professors and students. More recently the PEEG has been created by the Pró-Reitoria de Graduação in a somewhat different shape, much less flexible. Professors and students from IME prefer to work with the IME program, which is organized by the Comissão de Monitoria composed by one professor from each department of IME.
In general, it is fair to say that the great majority of the professors asking for an assistant is attended. The assistants help to advise, to resolve exercises with the students and to correct written assignments.

Graduate program

2.8.1.1 Comment on innovations, initiatives and other relevant tendencies of the Faculty's Graduate Programs in regard to:

a) New Programs, merger or division of old Programs;

(Computer Science - IME)
R: The Graduate Program in Computer Science of IME-USP was formally established in 1997. However, its origins date back to the creation of the area of research in Computer Science within the Department of Applied Mathematics at USP in 1972 and the creation of Bachelor in Computer Science in 1971. Currently the program is consolidated and strengthened with the promotion to level 6 in the latest assessment of CAPES, and there is no intention of merging or dividing the program.
In 2002, the docents of the department led the initiative for the creation of an "Programa de Doutorado Interunidades em Bioinformática" (Inter-institutional Grad Program on Bioinformatics). The program was awarded with 20 scholarships and a CAPES notice, and was the first of its kind in Brazil. Professors of MAC Department and its graduates make up about 25% of the program faculty.

(Statistics - IME)
R: Some docents in the Department participate as orientators in the programs of post-graduation in Bioinformatics and in the recent program of professional master in Teaching of Mathematics. The complete relation of Thesis defended by the Post-Graduation Program in Statistics may be found at http://www.ime.usp.br/mae/pos/concluidos and the relation of disciplines offered by the Post-Graduation Program in Statistics may be found at http://www.ime.usp.br/mae/pos/disciplinas.

(Applied Mathematics - IME)
R: N/A

(Mathematics - IME)
R: The new program of Professional Master of Sciences in Mathematical Education has begun in 2012 and the first 11 students started to work in August of that year. In what follows, we will refer to the traditional Graduate Program (Master and PhD) in Mathematics as PPG-MAT and to the new Professional Master in Mathematical Education as MPMAT.

b) Professional Master's Program(s);

(Computer Science - IME)
R: Our Graduate Program does not offer a professional master´s degree.

(Statistics - IME)
R: Some of the program docents take part as orientators in the post-graduation programs of the recent program of professional masters in teaching of mathematics.

(Applied Mathematics - IME)
R: N/A

(Mathematics - IME)
R: The MP-MAT has a total of 58 students which started work in 2012, 2013 and 2014 and 27 accredited supervisors. The 11 students who started in 2012 are already in the final phase of writing their dissertations.

c) Increase in the number of slots;

(Computer Science - IME)
R: The number of vacancies in the program varies and depends on the availability of the accredited professors. At the moment, it has 104 students in master's and 105 doctoral students (these data are

from April 2015). With around 45 graduates a year (212 students from 2010 to 2014, of which 45 were doctoral), the program is trying to keep the current number of students each year. In recent years, the number of master's students has fallen and there is an increase of the same order in the number of doctoral students.
In the period 2010-2014 the doctoral program in Bionformatics doubled in size, from 18 to 36 students. The Master's program also increased, going from 20 to 26 students.

(Statistics - IME)
R: Nowadays we offer annually 25 vacancies for master and 18 vacancies for doctorate in the Program of Post-Graduation in Statistics. The vacancies for master have not been fully taken in the last years, on the other hand the search for our doctorate program has increased and it is possible to think raising this number in the next period depending on the availability of the docents for orientation.

(Applied Mathematics - IME)
R: The program has a policy to accept all applications that reach a minimum criteria, and, typically, there isn't a limit to the number of accepted students.

(Mathematics - IME)
R: There was no need to increase the vacancies for the MP-MAT up to now. The PPG-MAT opens each semester a number of positions (50 for Master students and 50 for PhD students) which is sufficient to accept all students that attain the criteria established by the coordinators and we do not fill all of them. After increasing the number of students from 1995 to 2005, the number of graduations during 2010-1015 kept in the same order of magnitude as in the previous five years, with a small decrease in the number of issued Master titles: we issued 46 Masters and 57 PhD during the last 5 years (while during the previous 5 years we issued 45 Master and 57 PhDs). We have now 130 students (45 in the Master program and 85 on the PhD program). Compared with other graduate programs in mathematics in Brazil and around the world, the PPG-MAT is considerably numerous and we do not feel necessary to accept more students than we do now.

d) Changes and flexibility in the curricular structure;

(Computer Science - IME)
R: There has been a consolidation process, yet informal, of the disciplines the areas of concentration. Thus, several areas of concentration create a core of subjects that all students supervised by researchers from these areas are targeted to attend. In addition, the course includes several advanced courses offered periodically. In this particularly group, new disciplines were created to cover new research topics and disciplines whose research interest has decreased were not renewed.
During the reform of the regulations of the University (2013), Regulation of Bioinformatics Program suffered major overhaul in order to improve the basic training of students as well as introduce statures monitoring to improve the quality of research.

(Statistics - IME)
R: Both master and doctorate suffered many changes in the recent years. The master program was restructured in 1996 and the doctorate program in 2000, the latter is still suffering changes. Nowadays, the students have only one mandatory discipline in the Master and one, chosen among two disciplines, in the Doctorate. We offer around 12 disciplines each semester and another 2 in the summer. This offer covers disciplines of fundamentals and theory of Probability and Statistics and other ones of a more applied characteristic. The students may yet take disciplines from other programs since authorized by the Post-Graduation Committee of the Institute. The Students have, therefore, reasonable flexibility to choose disciplines. In addition, part of the number of the mandatory credits may be obtained by publishing in journals and congress annals.

(Applied Mathematics - IME)

R: N/A

(Mathematics - IME)
R: Two new courses for the MP-MAT were created in 2014 (one summer course) to meet the demand of the students to help with their dissertations. Concerning the PPG-MAT, the main change of our structure occurred in 2011, when the term deposit of the Master dissertation was reduced from 44 to 36 months. The main purpose of this change was to decrease the average time that the students stay in the Master program. Despite the fact that the change is relatively recent, the average graduation time already fell from 36 (2005-2009) to 33 months (2010-2014). We also had a reformulation of one of the mandatory courses for the Master's level. Moreover, the high average of work per
professor of our department made us offer less graduate courses. While the average number of graduate courses per year during 2005-2009 was 31, it decreased to 30 in the period 2010-2014, and during the last two years we offered only 26 graduate courses each year, despite the augmentation of the number os students.

e) Flexibility and incentive(s) for its Graduate Programs to cooperate with other institutions and the society's productive sectors;

(Computer Science - IME)
R: Many professors have interdisciplinary research activities in areas such as Bioinformatics, Digital Humanities, Informatics in Education, Medical Informatics, etc.. Therefore, the interaction with other units and departments takes place as part of the research activity in USP, Unicamp, Butantan Institute, the Cancer Hospital A. C. Camargo, among others. In addition, the evolution of areas such as Computational Learning and Artificial Intelligence are natural links with the research areas in Mathematics and Statistics of IME-USP.
In addition, the course is part in a DINTER-CAPES PhD program with the Federal Technical University of Paraná (UTFPR) in the campus of Campo Mourao. Several students from the UTFPR come take courses at USP and also, periodically, docents of the Department of Computer Science of IME give classes in Campo Mourao.
The inter-unit program of Bioinformatics has the participation of 10 faculty members of the department. In this program, interaction with professors from other units and other universities is intense, often in co-supervision of master and doctoral students activities.

(Statistics - IME)
R: The docents of the department are involved with projects in collaboration with other teaching and research institutions. For more details of these projects, see section 2.8.3.3.

(Applied Mathematics - IME)
R: The program has the participation of several professors from other departments of the Institute, other institutes of the University and other institutions. The program is often visited by researchers from other institutions in the country and abroad.

(Mathematics - IME)
R: The professional MSc course encourages students to apply the methodology and ideas developped in the course to their work in the classroom. The articulation of the PPG-MAT with other departments, units and institutions occurs mainly through interaction and collaboration of its members and students with researchers from abroad. Thus, the incentive occurs by establishing academic cooperation agreements and research internships of students and professors.

f) Readjustment of research projects and lines of research, so as to follow or encourage

advancement in the field;

(Computer Science - IME)
R: The pervasive nature that Computer Science has had on society in general in recent decades, research lines tend to be influenced by the dynamics of penetration of computing in various areas of knowledge. Therefore, there is a constant readjustment of research projects, which are being formulated with increasingly interdisciplinary caracteristics. For example, we have proposed projects in the areas of Smart Cities, Sports, Bioinformatics, Jurimetria, Computer Music, among others.

(Statistics - IME)
R: A good share of the post-graduation docents have an active collaboration with docents from other institutions, nationally or abroad; such fact, together with the participation at congresses, provides the constant update of the knowledge of the docent body about the advances in their research fields.

(Applied Mathematics - IME)
R: Research areas now include with more emphasis areas of computational applied mathematics.

(Mathematics - IME)
R: The projects and lines of research of the MP-MAT are comprehensive enough to welcome easily the advances in the area. On the other hand, the PPG-MAT has a large and dynamic program, so that its research lines and projects are in constant readjustment. Thematic projects in the various fields and subfields are constantly renewed with the purpose of covering new directions, including the participation of the new professors hired at the Department. For instance, the project in Representations of Algebras has been transformed into Theory of Representations, involving a broader area and including a larger number of students and professors.

g) Renewal, reformulation of courses (objectives, syllabuses, assessment, language, professors) and use of new teaching methodologies;

(Computer Science - IME)
R: Graduate courses are renewed, by regiment, every 5 years. At the time of renewal, content, bibliography and objectives are properly updated to fit the new needs of the area. In this process, many disciplines are canceled and simultaneously, new disciplines are created to address new topics. Professors from Bioinformatics Program participate in the projects of Computational Biology CAPES, which provides activities such as co-supervision, joint workshops, visits to lectures and short courses.

(Statistics - IME)
R: Recently, a great number of disciplines have been deactivated and the syllabi of various others have been reviewed and updated. The intention was making the active disciplines have updated content and bibliography and constituting the set of given disciplines at least once in the last 5 years. Every time a discipline is going to be reactivated, a new syllabus must be submitted and approved. This makes the syllabi of the disciplines always to be updated and reviewed. Regarding the use of new teaching methodologies, the use of modern audio-visual resources has been made in various disciplines. At the same time, many disciplines have increasingly demanded more extra class work which involves the use of computational resources for the stochastic simulation and the statistical analysis of data. The aim in the Doctorate is the original Research that leads to a thesis with the possibility of international publications of articles in competitive journals of international standard. Specific goals: a. Development in a wide range of abilities in Statistics and Probability; b. Learning about the challenges and opportunities for the Statistics and Probability in the involvement with other sciences, with the engineering and other fields where the application of Statistics and Probability may be of use; c. Understanding of the need to collaborate with different fields and researchers; d. The acquisition of vital abilities necessary for the professional researcher aiming to: Write scientific articles and texts of scientific divulging; Prepare research and funding projects; Develop and use statistical and mathematical software; For the master

program we have as general goal to: Complement the formation of a student that completed the undergraduate course through: a. Set of disciplines in specific fields - theoretical and applied - of Statistics and Probability; b. Development of the capacity of realize intellectual group work; c. Development of the capacity of realizing independent intellectual work; d. Writing and defense of a masters dissertation. Specific goals: a. Acquire a good technical knowledge and a global and updated vision of the theory and the relevant methods for the field of interest; b. Conduct bibliographic survey about relevant texts for the object of the study; c. Develop the capacity to realize complex calculations; d. Understand the most important theorems of results of the field of interest as well as know its demonstrations and possible applications; d. Analyze data banks of large size; e. Design algorithms and implement them efficiently; f. Work with a good degree of independence; g. Write a text in which the argumentative structure, exposition of ideas and language respect the norms of the Portuguese, or English, if the case be; h. Reflect critically and to present in a clear way their work.

(Applied Mathematics - IME)
R: New courses were created and reformulated to meet the advances of the area.

(Mathematics - IME)
R: The courses in the MP-MAT are taught by several lecturers alternately and their contents are revised every three years. The PPG-MAT has 5 compulsory courses (2 on the Master's level and 3 on the PhD level) and those on the Master's level have been recently reformulated. Also, we have a list of courses which are considered basic and offered annually or biannually, and a number of disciplines that are renewed every year, based on proposals made by several research groups. The PPG has also been encouraging the professors of the Department to request some of their visitors to teach short courses of 10 hours on more specific topics, which give the opportunity for students to contact research topics from different areas of mathematics. More than that, the CCP has sought to ensure that a minimum of 2 of these short courses take place each semester.

h) Attention provided to the inclusion of professors who are provisional hires, especially those who need to extend this phase;

(Computer Science - IME)
R: To enable the integration into the Graduate Program of the new hired professors, the regiment of the program has different rules (easier to be met) in the analysis of the first certification of a docent. On the other hand, the rules for re-accreditation are stricter and, besides reflecting the criteria considered reasonable in the context of the program, try to meet the demand of quantity and quality required by the pursuit of excellence.

(Statistics - IME)
R: Every docent accredited in the post-graduation programs can ask for disciplines to give, or even propose new ones, and according to the Committees of the Post-Graduation programs, be invited to lecture courses. The accreditation is conceded after the request of the interested party and the judgement based on the academic activities developed by the docent with emphasis on publications in journals of international circulation with arbitration.

(Applied Mathematics - IME)
R: Newly hired professors are encouraged to apply for the program.

(Mathematics - IME)
R: The professors in experimental period are encouraged to accredit to the PPGs under the Department's responsibility. Those accredited to the MP-MAT have to be attached to a research project and very soon supervise students. In the PPG-MAT we have many active young colleagues not only accredited to the

program but also composing the CCP and the Admission and Scholarship Committee.

i) Others.

(Computer Science - IME)
R: Promotion to level 6 of the last CAPES evaluation out of 7 possible levels. Several teachers have CNPq research grants, and many of them were promoted at the last renewal.

(Statistics - IME)
R: The Department of Statistics is responsible for a post-graduation program in Probability and Statistics created in 1970, and currently collaborates with the BioInformatics and Professional Master in Teaching of Mathematics Programs. Until 2002, The Department was responsible for the only Doctorate in Probability Statistics program accredited in the country. The program has received the excellent mark (grade 7) in the last CAPES evaluation regarding the triennial 2010-2012. Our program is the only one in Brazil with this maximum grade in the field of probability and statistics. Every year, we receive students from Brazil and abroad. Currently, the Master and the Doctorate have around 45 and 75 students, respectively, those coming from all regions in Brazil and abroad, with its majority of the latter from Latin America. The Department has also an active Post-Doctorate program that embraces young researchers. In recent years, we have received researchers from Germany, Argentina, Bulgaria, France, Israel, Italy, Portugal, Russia and Brazil.
The Program has graduated 295 masters and 137 doctors. In the last 5 years these numbers were 71 and 61, respectively. In general, the Thesis originated from the program are published in important journal such as: Annals of Probability, Biometrics, Biometrika, Computational Statistics and Data Analysis, Journal of Applied Probability, Journal of Multivariate Analysis, Journal of Nonparametric Statistics, Journal of the Royal Statistical Society B, Journal of Statistical Planning and Inference, Journal of Time Series Analysis, Probability Theory and Related Fields, Sankhya, Scandinavian Journal of Statistics e Statistical Inference for Stochastic Processes. Undoubtedly, the Doctorate in Statistics of the Department of Statistics of the IME-USP is the most important center of formation of doctors in the fields of Probability and Statistics of the Latin America.

(Applied Mathematics - IME)
R: N/A

(Mathematics - IME)
R: n/a

2.8.1.2 What is the percentage of the Faculty's professors linked to Graduate Programs?

(Computer Science - IME)
R: The Department currently has 41 professors and 30 of them are part of the graduate program, ie 75%.

(Statistics - IME)
R: Currently 33 docents of the department are linked to the Post-Doctorate Program in Statistics, and this corresponds to approximately 79% (including retired docents).

(Applied Mathematics - IME)
R: Of the 30 faculty members (including two retired), 3 are not in the program (10%), however, one of them was recently hired and is away for a postdoctoral stage and will certainly be included in the program, reducing this rate to 2 in 30 (6.6%).

(Mathematics - IME)

R: About 63% of the Department's professors are accredited as full advisors of the PPG-MAT and 32% in the MPMAT, with a small intersection. In addition, professors who are not accredited to neither programa contribute by offering graduate courses or through other activities. Both programs have some professors from other departments of IME.

2.8.1.3 How are the Faculty's Graduate Programs assessed?

(Computer Science - IME)
R: The content of the subjects is analyzed (with the help of referees) at the time of re-accreditation, following the Regiment of Graduate Degree of USP. Program evaluation is done by Capes. The Coordination of the Graduate Course (CCP) discusses the program's problems and eventually suggest changes in his regiment, which underwent a complete overhaul in 2014.

(Statistics - IME)
R: The master and doctorate programs and the choosing of disciplines are periodically discussed in meetings of the responsible docents. The choosing of the docents that give the disciplines is made based on their research and student orientation activities. The evaluation of the Program is performed periodically by CAPES.

(Applied Mathematics - IME)
R: The program Comittee frequently evaluates the accreditation of new professors and disciplines, focusing on what is better for the students.

(Mathematics - IME)
R: For the MP-MAT, we use CAPES procedures and student evaluations. The CCP of the PPG-MAT organizes occasional meetings with students and professors of the Department, in which we analyze the results in the evaluation of CAPES and ways to improve the program, in addition to the contents of the disciplines and where we ellaborate the annual list of subjects after the discussion has been made in the research groups.

2.8.1.4 Analyze the performance of the Faculty's Graduate Programs considering the last two assessments performed by CAPES.

(Computer Science - IME)
R: Our area has matured along with Capes e has three programs of concept 7, and five programs of concept 6. As a result of the ongoing efforts that the Program has been performing, it was promoted from concept 5 to concept 6 in the latest assessment of Capes, corresponding to the 2010-2012 period.
We emphasize that the program is already one of the three programs in Brazil that most publishes in international journals in the field.
The Bioinformatics program, despite its faculty and its graduates were praised in the CAPES evaluation form, was reduced to concept note 4.

(Statistics - IME)
R: In recent CAPES evaluations the Post-Graduation in Statistics Program received maximum grade (an A until the 1994-1995 triennial evaluation and "excellent" - mark 7 - in the following evaluations). Our program is the only one in Brazil with the maximum grade in the area of Probability and Statistics and 1 between 6 evaluated with such grade in the last triennial in the field of Mathematics. Particularly, in the last evaluation, positive points have been marked such as the good quality of the research activities, the adequate syllabi and the good quality and quantity of the publication emphasizing a substantial number of co-authorship with students. The Program of Post-Graduation in Statistics of the Institute of Mathematics and Statistics of the University of São Paulo (IME-USP) is constituted by an academic masters and doctorate (with or without master degree). Currently, the master has 41 students (of which 20 entered in

2013 and 16 in 2014). These students are from various regions in Brazil, from other countries in Latin America, United States and Europe. In the last 3 years 44 masters and 29 doctors were formed. The average time for the accomplishment of the master course is 32 months generally, 24 months between scholarship fellows (from CAPES and CNPq), while the average time for the accomplishment of the doctorate course is of 48 months. The Post-Doctorate program is also highly active, embracing young researchers. In recent years, besides Brazilians, we have received new doctors from Germany, Argentina, Bulgaria, Chile, France, Greece, Israel, Italy, Portugal, Russia and Switzerland. The PGP in Statistics of IME-USO is the most important program of formation of doctors in Statistics of the Latin America. It has a role of great relevance, for it has graduated doctors that acting as docents and researchers in universities and institutes of research from Brazil and other countries in Latin America. In 2012 the program has reached the important mark of 200 defended doctorate thesis, besides over 320 masters dissertations. The Program has a docent body formed by specialists in various fields of Probability and Statistics, including the perfecting of Asymptotic Methods, Actuary, Bioinformatics, Econometrics and Finances, Bayesian Inference, Inference in Stochastic Processes, Stochastic Modelling in Neurosciences, Modelling in Interacting Systems, Models of Regression and Applications, Linear Generalized Models, Probability and Stochastic Processes, Time Series, Reliability Theory. It is necessary to mention that 15 permanent docents of the Program were productivity scholarship granted fellows of CNPq during the triennial of 2010-12(8 scholarships in level 1, with 2 of them in level 1A, 5 in 1B and 2 in the 10, and 2 in level2). The orientation of students is in charge of a body of accredited orientators. The Accreditation is conceded after solicitation of the interested.

(Applied Mathematics - IME)
R: The program has received grading 5 since 1997. In the three-year review in 2010, the commission pointed out the growing improvement of the program, indicating that it was heading naturally to an increase of its grade. But the 2013 evaluation had reduced its grade from 5 to 4. The Programme Committee does not agree with such grade and believes that the grade will naturally increase in the next evaluation. One of the main criticisms is that, due to its broad profile, the program attracts the interest and accredits many professors from other departments and institutes from the University and also other universities. Although we believe that this is a quality of the program, this practice has had negative numerical impact, as these professors, who are linked to more than one program, do not contribute to the scientific publication output of our program.

(Mathematics - IME)
R: The MP-MAT started in 2014 with grade 4 of CAPES. The PPG-MAT obtained in the penultimate the grade 6 from CAPES and in the last, which result came out in early 2014, the Area Committee indicated the grade 7 to the PPG and the Administrative Technical Committee of CAPES changed it to 6. The indication of grade 7 to our PPG, after years of excellence with a grade 6, shows the progress in the quality of work done by professors of the Department in recent years. All this, despite the difficulties faced by PPG due to the low number of scholarships, the high cost of leaving in São Paulo and the increasing workload we face in the department, resulting from many retirements which were not replaced and the expansion of undergraduate courses.

2.8.1.5 Note national and international awards and other indicators of quality received by the Faculty's Graduate Programs in the last 5 years.

(Computer Science - IME)
R: Regarding the awards, we highlight awards received by both faculty and students for the program. Among them we quote: (1) in 2014, student Phablo Moura, with the guidance counselor prof. PhD Yoshiko Wakabayashi, won the first prize in the contest CLEI de Tesis e Maestría; (2)also, in 2014, he won the honorable mention in the master's theses contest sponsored by SBMAC; (3) in 2012, student Ewerton R. Andrade, and the guidance counselor prof. PhD Routo Terada, received the best thesis award at Concurso de Teses e Dissertações do Simpósio Brasileiro de Segurança, SBSeg 2014; (4) still in 2014, student Andre Casimiro, Marcos Broinzi and guidance counselor prof. PhD. Joao Eduardo Ferreira, received the

award for best article of the proceedings of Simpósio Brasileiro de Banco de Dados (SBBD 2014); (5) in 2013, student Leissi Margarita Castañeda León, with guidance counselor prof. PhD Roberto Hirata Jr.. won the second best prize in CLEI de Tesis e Maestría; (6) in 2011, the Golden Medal in Olimpíada de Inovação da USP by professor Marco Aurélio Gerosa e student Ana Paula Oliveira dos Santos for the project Arquigrafia Brasil; (7) admission of professor Yoshiko Wakabayashi in Ordem Nacional do Mérito Científico (ONMC) in Comendador class in 2010; (8) the ACM 10-year best paper award for the article Middleware'2000 by prof. Fabio Kon; (9) the award of former student Karina Delgado in Concurso de Teses e Dissertações em Inteligência Artificial (CTDIA 2010); (10) the first prize award in the category of Tesis of Doctorate of Márcio Moretto Ribeiro in the SBC contest in 2011; (11) the award of Ms. Glauber de Bona in the Concurso de Teses e Dissertações em Inteligência Artificial (CTDIA) 2012, and the second prize award in CTDIA 2012 for PhD. Marcio Moretto Ribeiro; (12) second prize award for Ms. Ary Fagundes Bressane Neto in CLEI de Tesis e Maestría in 2011.
We also highlight the Capes Thesis Award received by Dr. Gordana Manic in 2007 and an honorable mention in 2009 Capes Award received by Dr. David C. Martins Jr.

(Statistics - IME)
R: In 2012 the post-graduation program was evaluated with the maximum grade mark (7) by CAPES. In 2013 the professor Florência Leonardi was presented with the Award "For Women in Sciences" given by L'Oreal - Academy of Sciences - Unesco. In 2011 the doctorate thesis of the student Arthur Lemonte, oriented by the professor Silvia Ferrari received the honorable mention in the CAPES Thesis Award. In 2014 the masters dissertation of the student Elizabeth Gonzalez Patiño won third place in the contest of masters dissertations of SINAPE.

(Applied Mathematics - IME)
R: N/A

(Mathematics - IME)
R: We have various members of the Brazilian Academy of Science and Paulista Academy of Science. In addition, some of our professors were and are members of advisory committees on research funding agencies CNPq and CAPES.
In the latest assessment of the CAPES, the result came out in early 2014, the Area Committee indicated the Note 7 to our PPG and the Administrative Technical Committee of CAPES changed this note to 6. Note 7 to PPG after years of excellence with grade 6, shows the progress in the quality of the work done by the professors of MAT in recent years.

2.8.1.6 Comment on the national and international impact of scientific and technological knowledge generated by theses and dissertations.

(Computer Science - IME)
R: The quality of the work arising from theses and dissertations oriented in the program has generated numerous publications in major international media of computing.

(Statistics - IME)
R: The majority of students graduated by our program act as docents in Brazilian universities, in the various states of the federation. There are egresses that act as docents in Latin-American universities, in the United States and the European Community. These remain developing research activities, often in collaboration with docents of the department. Considering that the basic research activity developed in Brazil is essentially performed by the Brazilian public universities, the impact of those egresses are huge for the formation of new researches in Brazil and in South America. Besides, the results of the thesis and dissertations generate scientific articles published in important international journals. These works have been presented in various international congresses of the area, often with the financial support of the

Program.

(Applied Mathematics - IME)
R: Results from theses and dissertations are typically published in high impact journals with international circulation.

(Mathematics - IME)
R: The dissertations of the MP-MAT will start appearing in 2015. The theses and dissertations of the PPG-MAT are of high quality and the growing number of articles published by members and students of the PPG-MAT show the importance of the knowledge they produce. In addition, many of our students get jobs in other research centers of the country, taking the ideas generated here to their workplaces.

2.8.1.7 Comment on the impact of the involvement of the Faculty's students and professors within the Graduate Program in scholarly exchanges.

(Computer Science - IME)
R: Program faculty members have offered systematically, disciplines and courses at other universities and institutes as the Federal Technological University of Paraná (UTFPR), FioCruz, University of California - Irvine, but also in other graduate programs of USP as in programs inter-units in Biotechnology and Bionformatics.

(Statistics - IME)
R: Students and docents of the program participate periodically of international and domestic congresses in the field. This participation is essential for the divulgement of their works and also to expand the field of performance of our post-graduation. The participation in congresses and the visits of international cooperation are essential to renew the interests in research and keep the connection with the internationally developed research in the field. Many of our students have developed a doctorate project of the sandwich kind, allowing the scientific living in another country. Such experience has demonstrated much importance for the renewal of the research topics and also of the creation of new disciplines. A similar result is observed on the visits of docents to other research centers, developed with the support to cooperation projects international or national.

(Applied Mathematics - IME)
R: The strong interaction of our students and professors with other centers in the country and abroad broadens the department, bringing new ideas and problems, producing theses and dissertations of better quality.

(Mathematics - IME)
R: Professors from both the MP-MAT as the PPG-MAT participate in scientific meetings in Brazil and abroad, bringing important contributions. On the other hand, students who perform research internships at other centers develop their thesis work in modern themes, which are closely related, but yet different, to those developed in the Department, bringing new ideas and problems.

2.8.2.1 Describe the policy governing how scholarships are distributed from the Faculty's Programa de Aperfeiçoamento de Ensino (PAE) [Teaching Training Program].

(Computer Science - IME)
R: We understand that the training of graduate students becomes complete with a teaching internship at some undergraduate discipline. In PAE program activities are supervised directly by a professor of the Department, often the student's advisor itself. Through PAE, many students of graduate have the opportunity to teach undergraduate courses classes, designing tasks and exercises, participate in the tasks of correction, offer exercise classes, etc.. This stage is mandatory for scholarship students from

CAPES, but also open to other students at IME-USP.
The applications and awarding grants are judged according to the following criteria:
1. applicant's academic performance;
2. analysis of the Projeto de Atividades do Estágio - PAE (Internship Activities Project);
3. proper candidate´s background to the discipline of undergraduate program which the internship will be developed;
4. the number of times that the student attended the Etapa de Estágio Supervisionado (Supervised Internship Phase);
5. In case of a tie in the other criteria, students with Capes grants have priority.

(Statistics - IME)
R: After the subscription along the PAE Committee, the candidates are selected and classified obeying the following criteria:

1. Academic development of the Candidate.
2. Analysis of the Project of Activities of the PAE Internship
3. Adequation of the formation of the Candidate to the syllabus of the undergraduate discipline of which will be developed the Internship Stage
4. Number of times the student has participated of the Internship Stage, as well as his or her performance
5. In case of draw in the above criteria, the CAPES scholarship fellows will be prioritized.

(Applied Mathematics - IME)
R: PAE grants are distributed according to the academic performance of students.

(Mathematics - IME)
R: The PAE Commission makes an assessment of the submitted projects, to see if they are in accordance with the program rules, and establishes an order of priority, primarily based on student achievement in graduate courses.

2.8.2.2 What is the relationship between demand for and availability of scholarships from the Faculty's Teaching Improvement Program?

(Computer Science - IME)
R: In recent years we had the following figures:

2010
1st semester - 11 applicants - 08 with scholarship
2nd semester - 06 applicants - 06 with scholarship

2011
1st semester - 06 applicants - 05 with scholarship
2nd semester - 04 applicants - 04 with scholarship

2012
1st semester - 09 applicants - 09 with scholarship
2nd semester - 08 applicants - 08 with scholarship

2013
1st semester - 15 applicants - 14 with scholarship e 1 volunteer (option of the student)
2nd semester - 09 applicants - 08 with scholarship

2014

1st semester - 07 applicants - 07 with scholarship
2nd semester - 07 applicants - 05 with scholarship

TOTAL
82 applicants - 75 with scholarship

(Statistics - IME)
R: Until the first semester of 2014, the demand was fully attended. In the second semester of 2014, there were 20 requests attended and two voluntary candidates were accepted in the program.

(Applied Mathematics - IME)
R: The amount of PAE grants are usually sufficient for the demands of the department.

(Mathematics - IME)
R: Until mid 2014, almost all PAE requests were filled. In the second semester of 2014, about 82% of the applications were filled, while in first semester of 2015, we had 88%.

2.8.2.3 Report dropout rates of the Faculty's Graduate students in the last 5 years. Are there policies to avoid dropout in these Programs? Comment.

(Computer Science - IME)
R: In the last years, we had the following figures:

2010
1st semester - 11 applicants - 08 with scholarship
2nd semester - 06 applicants - 06 with scholarship

2011
1st semester - 06 applicants - 05 with scholarship
2nd semester - 04 applicants - 04 with scholarship

2012
1st semester - 09 applicants - 09 with scholarship
2nd semester - 08 applicants - 08 with scholarship

2013
1st semester - 15 applicants - 14 with scholarship e 1 volunteer(option of the student)
2nd semester - 09 applicants - 08 with scholarship

2014
1st semester - 07 applicants - 07 with scholarship
2nd semester - 07 applicants - 05 with scholarship

TOTAL
82 applicants - 75 with scholarship

(Statistics - IME)
R: In the doctorate program the average rate of evasion was 7.2% and in the master, 15.6%. The adopted policy for the reduction on the evasion is to keep a rigorous method of selection in order to avoid that the unprepared student enter the program. Besides, keep a reasonable number of scholarships providing to the students an exclusive dedication to the program. However, even with the availability of a scholarship, many master students choose keeping a professional activity due to the low value of the grant in comparison with the salary the market in the statistics field can offer. In summary, the evasion of

the Masters is strongly related to the impossibility of certain students to maintain the necessary dedication for a good performance.

(Applied Mathematics - IME)
R: In 2005-2009, the program titled 69 masters and doctors, and from 2010 to 2014, titled 57. The dropout rate increased from 24% to 33%. We believe that the high dropout rate is given by the high cost of living in the city of São Paulo and the small amount of available scholarships.

(Mathematics - IME)
R: The PPG-MAT's dropout rate in the last five years was 32%, against 25% in the previous five years. We believe that this increase is related to the increase in the offer of Graduate Programs in Brazil, coupled with the high cost of living in the city of São Paulo and the low proportion of scholarship students in our program, a result of the low number of institutional scholarships (CAPES and CNPq). As a policy to prevent evasion, we seek to engage in monitoring activities or programs such as PAE the non-scholarship students who have good academic performance and a clear work plan. In addition, PPG-MAT uses every possible money coming from the PROEX-CAPES for scholarships and has made repeated requests to CAPES and CNPq for a greater number of scholarships. We also encourage supervisors to request FAPESP grants to their mentees.

2.8.2.4 List the support services provided by the Faculty to Graduate students (not considering those provided by the Central Administration).

(Computer Science - IME)
R: The Department offers 10 computer labs for students in newly opened building. These laboratories, with exclusive access to each area, allow students access to all the computing resources they need to conduct their research, as well as provide a place of study and meetings. Services include access to the web and printing.

(Statistics - IME)
R: Besides the infrastructure offered by IME (library, places for study, laboratories with computational equipment), the groups of research of the Department have been offering support to the students. Equipment obtained through projects of research are being made available for the students and aids for the participation at congresses have been granted the same way. The Post-Graduation Committee has also been supporting the participation of students at congresses, either in Brazil or abroad, through grants from CAPES/PROEX. Many disciplines have a webpage that allows professor and student to keep interacting even out of class hours. Such webpages also serve as orientation for other Brazilian post-graduation and undergraduate programs that wish to use it as basis. In the Department of Statistics there are 3 rooms with informatics equipment, one room with 11 microcomputers and 2 printers. It is used by post-graduation students. In another room there are 13 microcomputers and 3 printers for the use of undergraduate students, all linked by an integrated network. On the third room there are 5 computers for use of the post-graduation students. There is, in power of the professors, computers belonging to specific projects. IME-USP has an audiovisual section with notebooks and projectors, which have been often used in the undergraduate and post-graduation disciplines offered by the Department of Statistics. This year, we are replacing some of these machines. IME has a room restricted to the access only of post-graduation students and docents that nowadays has 24 microcomputers. The IME network is strongly based on free software, but has important commercialized software for use in research, such as Maple, Mathematica, Matlab. Besides, many laboratories make available equipment of the same level for the students, which have servers dedicated to their projects. Undergraduate students use a separated network, with more than 150 points of access. The library of IME-USP is one of the most complete in the field of mathematics in Latin America. Its collection specialized in Mathematics, Statistics and Computation, gathers 67.166 works (dictionaries, dissertations and thesis, e-books, encyclopedias, flyers, books, technical reports) and access to 1.429 journal titles (including the titles with electronic access, besides those with subscription counting 141.745 issues). Every year a great effort is made in order to keep the collection updated

through the acquisition of new titles or new editions of famous titles, and the constant expansion of the access to journals. Since 2006, the collection has free access to any person interested in consulting it. This way, all users of the library have direct access to the volumes, and the data bank containing information about the bibliographical collections from all libraries at USP, through the search system DEDALUS. Besides this, users have access to the various bibliographical databanks.

(Applied Mathematics - IME)
R: There is a specific secretary to assist students. Are made available to students access to study rooms, lockers, laboratories, Xerox shares, etc.

(Mathematics - IME)
R: IME provides to the graduate students the following services: study offices (in poor quantity and quality, given the critical situation regarding the space in the whole Institute), cabinets, monthly quotas for photocopying, access to the library collection, computer labs with disk storage´s quota and print´s quota, tablets and notebooks for loan.

2.8.2.5 What is the profile of Graduate Alumni expected by the Faculty?

(Computer Science - IME)
R: Our graduate aims to form MScs and doctors with strong academic background in order to become leaders both in the labor market (companies) as in academia (research institutions and universities). The Bioinformatics Program aims to form MScs and doctors that, in addition to expertise in computing, have additional formation in any area of biological research, being able to act in an interdisciplinary way. All program graduates are employed, mostly in federal or São Paulo State public institutions.

(Statistics - IME)
R: With the doctorate egresses, the main goal is to form researchers and docents to attend the demand of the Brazilian universities and abroad. In the field of statistics the offer of doctors is still small comparatively to the demand. A second goal is to attend the specialized work market, though nowadays it is an area with a smaller demand of doctors than teaching. On the other hand, in the case of the masters egresses, it's the other way around. The demand for masters in statistics in private companies, public and financial sectors have been growing in recent years. Every new doctor is encouraged to perform post-doctorate internships, and during their study at post-graduation, invited to participate of internship that aim also the teacher training, such as the PAE program - Program for the Improvement in Teaching. The expected profile of the Egress, in our post-graduation programs, is an individual who is: 1. Capable of developing the theoretical aspects of Statistics and Probability; 2. Capable to deepen and expand the applications of Statistics and Probability in any field of the human knowledge; 3.Capabel of participating of multidisciplinary groups acting on leading roles regarding the knowledge of Statistics and Probability.

(Applied Mathematics - IME)
R: Masters students will be able to act as professores in higher education as well as in companies that require application or mathematical research. PhD graduates can act as researchers in institutions of excellence in the field of mathematics.

(Mathematics - IME)
R: For the MP-MAT, it is expected that the egress students will be able to create new teaching methods, evaluate didactical projects and train professionals in the educational area. The students who obtain a Master Degree in the PPG-MAT have an extensive background in the various fields of Mathematics and are mostly prepared for their PhD or to teach in colleges and universities. The students who finish the PhD program in the PPG-MAT are prepared to become good researchers in Mathematics and get a tenured position in some university, as a professor and researcher.

2.8.2.6 Are the subjects and teaching and learning processes implemented in the Graduate courses within the Faculty consistent with this profile? Comment.

(Computer Science - IME)
R: The course curriculum in its entirety, with constant monitoring for updates, is aimed at academic education of students, with cutting-edge knowledge so that they are able to become leaders both in the labor market (companies) as in academia (institutions research and universities).

(Statistics - IME)
R: Yes. The post-graduation program gives special attention in making available different disciplines that may fulfill the different interests of its students. There is a concern of the post-graduation Programs linked to the department so that the average time for graduation follows the standard of the main fomentation agencies. The Program has a wide syllabus with disciplines of theory of Probability and Statistics and a set of specific disciplines covering fields related to the lines of research developed by the docent body. It is offered around 12 disciplines per semester and 2 disciplines in the Summer Program of IME-USP. In addition, in the Summer Program, it is offered a preparatory discipline for the candidates of the Masters and new students. The students have still an intense schedule of conferences and seminars organized by the groups of research in the Department of Statistics. It is necessary to add that the program encourages and gives financial aid so that the students may participate in scientific events of excellence in Brazil and abroad.

(Applied Mathematics - IME)
R: Yes. Courses syllabus cover relevant and current research topics in applied mathematics.

(Mathematics - IME)
R: In the MP-MAT there are specific courses for the development of projects, evaluation methods and learning of new technologies. In Master Degree of PPG-MAT, students must complete two basic compulsory courses, ensuring maturity and preparation for a little more advanced disciplines that they should attend to complete the required minimum credits. During this period and after completing them, they study research articles, participate in seminars and prepare their thesis. In the PhD, they have 3 required courses that more than ensure that the students are prepared for the thesis work, give them a broad training in the main fields of mathematics: Algebra, Analysis and Geometry. When they finish the credits in courses, the students begin their research work through discussions with the supervisor, participation in seminars and working groups and their individual studies. The short courses which are offered help them in choosing the topic.

2.8.2.7 Does the Faculty have any formal relationship with Graduate alumni? Is there any system within the Faculty to track these alumni?

(Computer Science - IME)
R: The department maintains an email list of alumni and voluntary update, which is used to contact them.

The small number of graduates allows the Bioinformatics program to follow the professional destiny of each. There is also an email list of graduates, regularly used for outreach of events and career opportunities.

(Statistics - IME)
R: The Department has kept constant interaction with a vast number of egresses from the program. Ex-students, especially of the Doctorate, have kept partnership in research with our docents, participated in

evaluation committees and often visited our department.

(Applied Mathematics - IME)
R: The monitoring of graduates are typically given by the research partnership maintained between student and advisor.

(Mathematics - IME)
R: The professional MSc will follow the development of the egress students in their professional careers. In 2013 the PPG-MAT organized the 1st Meeting of Former Graduate Students of the PPG-MAT of IME-USP, with about 35 participants and 4 days of activities. We intend to continue the initiative and hope to maintain a link for tracking graduates.

2.8.2.8 Comment on the fields and areas of professional practice of the Faculty's Graduate alumni (both in the academic and non-academic fields).

(Computer Science - IME)
R: Our graduates have had two basic destinations. In the industry, they work at start-ups (Caelum, Playax, etc.) and for large software companies, such as IBM, Accenture, Intel, etc. At the academy, our students are faculty members of several computer science departments in universities: USP-SP, USP-São Carlos, Unicamp, UFABC, UFPR, UFSC, etc..
In Bioinformatics, there is no specific data for former students guided by professors of the department. But the overall figures give us an idea of their professional performance. Of the 38 PhDs formed since the program's inception in 2002, thirteen of them are part of the faculty of Brazilian public universities (7 from the University of São Paulo); three of them hold positions in Foreign universities (San Augustin in Peru, Queensland in Australia, Princeton in the USA), 7 hold the position of researcher in national institutions (LNCC, Ludwig Institute, EMBRAPA and LNBio, Instituto do Cerebro, AC Camargo Hospital) and from abroad (Vandique Institute, Chile), and 4 are in the private initiative (IBM, Aché, Illumina).

(Statistics - IME)
R: Most of the doctors graduated by our program are docents in Brazilian universities in different states of the federation and keep developing activities of research often in collaboration with docents in our department. A considerable number of students are docents in Latin-American universities such as, for instance, Pontificio Universidad Catolica de Chile, Pontificio Universidad Católica de Peru, Universidad de Valparaíso, Universidad de Santiago, Universidad Nacional del Mar del Plata, e Universidad de Buenos Aires. Regarding the Masters graduates, some act in the teaching field, however, most of them have professions in private companies. Financial institutions, research institutes, insurance companies and the industries have been absorbing the most part of the egresses from the Masters. Many master students follow directly to the doctorate program.

(Applied Mathematics - IME)
R: The program graduates typically work as university professors in the federal or state public system. Some seek post-doctoral internships abroad before getting a fixed position in the country.

(Mathematics - IME)
R: It is expected that the egressed students from the MP-MAT will work on schools, on publishing houses for didactical books, producing didactical and paradidactical materials, work on official institutions, among other possibilities. The vast majority of PPG-MAT former students works in Brazilian public and private universities. Many develop post-doctoral projects in Brazil or abroad before being absorbed into the educational system.

2.8.2.9 Mention outstanding performances of the Faculty's Graduate alumni.

(Computer Science - IME)
R: Daniel Takahashi is a researcher at Princeton, Vinicius Maracajá Coutinho is Research Director of the Institute Vandique, Chile, Alexandre Cristino is Research Fellow at the Queensland Brain Institute (Australia), Ricardo Vêncio is the Program Coordinator. Six other docents take up professorship at USP and are guidance counselors at the program.

(Statistics - IME)
R: Many of the egresses from our program are professors in universities and fill important posts as head of the departments, head of post-graduation programs and presidents of scientific societies, besides acting as members of scientific committees of agencies of fomentation such as FAPESP, CAPES and CNPq.

(Applied Mathematics - IME)
R: Many program graduates work as research leaders in their areas in our own department or in other institutions.

(Mathematics - IME)
R: The MP-MAT have no egressed students yet, but there are some of them who develop extension work with CAEM. Most of the students who obtain their degree from the PPG-MAT are getting permanent jobs in Brazilian and foreign institutions, or post-doctoral positions. Some of them are head of their departments in universities like Universidade Federal do Espírito Santo, Universidad de La república in Uruguay, Universidad de Mar del Plata etc.

2.8.3.1 Is qualification to work in the Graduate Program taken into account when hiring new faculty members? Comment.

(Computer Science - IME)
R: In the selection process, the academic title evaluation takes in consideration mainly the research capability of the applicant and his ability to be a guidance counselor in graduate program.

(Statistics - IME)
R: In the analysis of the candidates of contests for hired professor, the evaluation committees usually attribute a great weight to the research activity of the candidate.

(Applied Mathematics - IME)
R: Yes. The ability to conduct scientific research of excellence in the program area and to advice students are an essential criterion for hiring new professors

(Mathematics - IME)
R: Surely the candidate's ability to act in the Graduate is a major criterion in hiring new professors. Thus, those hired in recent years in our Department are young outstanding researchers and contribute much to the graduate programs, by teaching graduate courses, supervising students etc, and some of them are part of the Program Coordinating Committee of the PPG-MAT and its Committee of Admission and Scholarships.

2.8.3.2 Indicate initiatives intended to strengthen the internationalization of the Faculty's Graduate Programs.

(Computer Science - IME)
R: On average, two professors of the program have gone in a postdoctoral internship abroad each year, increasing ties with institutions abroad. In addition, students in the graduate program have received

funding (some source of PROAP-CAPES) to attend events abroad.
The Bioinformatics Program has provided financial support for the submission of full papers in some foreign conferences. In the annual workshop of the program, all students that have already passed the qualifying exam present their work in English to a committee with two foreign researchers who assess the overall quality of research in the program. All split PhD for quality institutions are approved.

(Statistics - IME)
R: Different forms of internationalization have been made: interaction of research groups from the Department with groups abroad, coming from foreign professor to lectures disciplines and give seminars, participation of docents and students in international congresses, diverse doctorate programs abroad, scientific publications in international journals with students' co-authorship, some also in co-authorship with foreign researchers, etc... interchange with docents and researchers, post-graduation and undergraduate students, just as with technical-administrative employees, like for instance the signed agreement with the Universidad Nacional de Rosario, with expected duration until 2019, are encouraged by the Department.

(Applied Mathematics - IME)
R: The department encourages their professors to seek post-doctoral internships abroad. Students are also encouraged to conduct research internships and participate in conferences abroad. Often the program receives foreign visitors as well as students and post-doctoral students. Recently the department has invested in internationalizing its hiring councourses, allowing the hiring of foreign professors.

(Mathematics - IME)
R: The internationalization of the MP-MAT and PPG-MAT occurs in different ways. The PPG-MAT historically receives a large number of foreign students, particularly Latin-American and African. In addition, the growing Brazilian funding opportunities, such as collaborative projects of the Science without Borders, USP-Cofecub, Math AMD Sud, Theme etc, have attracted foreign postdocs and researchers for the Department. The clearest initiative that aims to strengthen the internationalization of the graduate programs is the establishment of several international academic partnerships that include mathematics area with institutions from different countries: Chile, Denmark, Finland, France, Mexico, Portugal. In order to maintain and improve the internationalization, the Department has a policy of supporting scientific exchanges with peers from Brazil and abroad, and rules for long and short clearances - which allow active researchers, especially those working in the graduate programs - to maintain constant contact with academic research groups in Brazil and worldwide. In addition, the Department has been able to offer good working conditions for visiting professors and postdocs, despite the problems of space faced by IME-USP, so that the number of these visitors and trainees, mostly foreigners, has increased considerably.

2.8.3.3 Indicate the Faculty's projects and Programs collaborating with each other and/or with other Faculties within USP and also with other public and private institutions.

(Computer Science - IME)
R: The inter-unit program in Bioinformatics is eminently a collaborative program with other units of USP.

(Statistics - IME)
R: The post-graduation in statistics program has a CEPID-FAPESP project in Neuromathematics, coordinated by the professor Antônio Galves, which has members of various national and international institutions. Most of the members of the department are part of two great thematic projects FAPESP: 12/21788-2 Models of Regression and Applications, coordinated by the professor Heleno Blafarine, and 09/52379-8 Stochastic Modelling of Interacting Systems, coordinated by the professor Luiz Renato Fontes. Both have members from other institutions. The thematic project FAPESP 2013/00506-1, coordinated by professor Pedro Alberto Morettin is formed by researchers from IME-USP, IMECC-UNICAMP and FEA-RP-USP. Besides that, docents of the Department are members of the following interdisciplinary projects: Center for Support to Research of Complex Fluids in the Institute of Physics of USP; Center for

Convergence of Life Sciences, Physics and Engineering for the Innovation in Diagnostics and Therapies, NAP from the Pro-rectory of Research/USP; Center for Research in Public Policies - NUPPS - Group od research Group of Inductive Statistics based on UFSCar; Use of modern techniques of autopsy in the investigation of human diseases (MODAU), Thematic FAPESP 2013/21782-2; Investigation of Neuronal Circuits and Biological Markers Involved in the Obsessive-Compulsive Disorder through Behavioral Paradigms of Fear and Anxiety, Thematic FAPESP 2011/21357-9 and Probabilistic Modelling of the Cerebral Activity, funded by CNPq.

(Applied Mathematics - IME)
R: Department faculty members have several projects from the national funding agencies, in partnership with professors from various institutes. In particular we mention partnerships with: CEPETEC, Petrobras, IPEN, Medicine, Public Health, Department of Health and Butantan Institute.

(Mathematics - IME)
R: The MP-MAT has accredited 6 docents from the other departments of IME. The PPG-MAT has 4 students with cosupervisors from other institutions and a total of 12 accredited foreign professors. Moreover, the PPG-MAT faculty has been giving support to the consolidation of other graduate programs, such as Procad program - with funding from CAPES that helps the scientific development of UFV and UFMG - and the Procad-NF-2009, in collaboration with the UFPA. Through notices of funding agencies of the federal government, funding lines from FAPESP and notices of Pro-rectors of USP, including the PRPG, PPG-MAT has numerous projects in collaboration with other units of USP and especially with other Brazilian and foreign public institutions.

2.8.3.4 Are the Faculty's Graduate Programs prepared to receive international students? What are the initiatives and difficulties faced?

(Computer Science - IME)
R: The selection process of the programs in Computer Science and Bioinformatics offer entrance exam in several countries abroad, including Peru, Colombia, Argentina, Cuba and Egypt. In addition, the programs accept the GRE exams for admission.

(Statistics - IME)
R: It is a recurring practice in the Department, to receive students and professor from different Research Institutes from abroad. Recent agreements, still in force, of academic cooperation to ends of co-orientation of postgraduate students, providing a double titulation have been firmed. For instance the Universitè Du Sud Toulon-Var and Universitè De Provence (Aix-Marseille I), both in France that is encouraged and supported by the Department.

(Applied Mathematics - IME)
R: Yes. The program has attracted foreign students, mostly from Latin America. From 2010 to 2014, 17% of dissertations and theses were from foreign students. Currently 18% of enrolled students are foreign (16 in 89).

(Mathematics - IME)
R: MP-MAT receives few foreigners. The PPG-MAT has a high percentage of foreign students mainly from South America but also from Europe and Africa. The students organize each semester a reception for the new students, where they clarify doubts about the Program and bureaucratic requirements for settle in the country. One difficulty we have is the lack of a secretary in the office of the graduate program who speaks English and Spanish fluently.

2.8.3.5 Does the Faculty promote actions to encourage students to participate in supervised

training programs in Brazil and abroad?

(Computer Science - IME)
R: Graduate students have received funding (some source of PROAP-CAPES) to attend events abroad. In addition, a significant number of doctoral students has made split internship in foreign institutions, with full support of graduate programs.

(Statistics - IME)
R: The program encourages many students in internship projects abroad with the aid of CNPq or FAPESP scholarships.

(Applied Mathematics - IME)
R: Yes. The incentive is done through partnership of guiding professor with research centers in the country and abroad.

(Mathematics - IME)
R: The encouragement occurs indirectly by the internationalization of the PPG-MAT and the members of the program. Many students from the PPG-MAT have done doctoral internships and some students have co-advisors from abroad.

2.8.3.6 Is there an incentive policy encouraging entrepreneurship in the Faculty's Programs? Comment.

(Computer Science - IME)
R: The Centro de Competência em Software Livre (CCSL), ccsl.ime.usp.br, as the Núcleo de Apoio a Pesquisa em Software Livre (NAPSol) of Pro-Rectory of Research, have played an important role in fostering the startups originating from research projects developed by graduate students from our programs.

(Statistics - IME)
R: The post-graduation Programs encourage, either through the creation of new disciplines or through the participations of congresses, the entrepreneurship initiatives, providing support and institutional help.

(Applied Mathematics - IME)
R: N/A

(Mathematics - IME)
R: The students of the MP-MAT are encouraged to become multipliers of knowledge and trainers of other professionals in the area of basic teaching. As it is usual within Pure Mathematics, the PPG-MAT doesn't have any entrepreneurship program.

Research

2.9.1.1 Outline the profile of the Faculty's research activities, describing the main fields, groups and lines of research.

(Computer Science - IME)
R: The Department of Computer Science at USP stands out for its excellence in research. The Department has 39 professors RDIDP, one RTP 1 and one RTC in its faculty members, of which 22 have CNPq grants for productivity in research, nine are Level 1, and thirteen are Level 2. The main areas studied in the department are: Databases; Bioinformatics; Combinatorics and Discrete Optimization; Computer Music; Encryption and Data Security; Parallel Computing; Artificial Intelligence and Logics; Middleware and

Systems; Continuous Optimization, Stochastic decisions and Decentralized Control; Image Processing and Artificial Vision; Theory of Computation, Complexity and Formal Languages.

(Statistics - IME)
R: The research fields of the Department are: Survival Analysis, Improvement of Asymptotic Methods, Acuary, Econometrics and Finance, Bioinformatics, Fundaments in Probability and Statistics, Bayesian Inference, Inference in Stochastic Processes, Modelling of Interacting Complex Systems, Models of Regression and Applications, Generalized Linear Models, Time Series, Reliability Theory.

(Applied Mathematics - IME)
R: The department operates mainly in the areas of Dynamic Systems, Ordinary Differential Equations, Partial Differential Equations, Mathematical Physics, Numerical Analysis and Optimization.

(Mathematics - IME)
R: A great part of the work in research done in the Department is usually classified as "pure research", in the sense of seeking the improvement of mathematical tools and their applicability to other fields. The research activities roughly focus in the following areas::
(1) algebra; (2) mathematical analysis; (3) geometry and topology; (4) logic and foundations; (5) epistemology, didactics and history of mathematics. The main, active research groups are:
* Non-associative algebraic structures, representations, identities and relations.
* Group rings and non-commutative rings.
* Representations of algebras.
* Dynamics of evolution equations.
* Holomorphy in infinite dimensions.
* Theory of generalized functions of Colombeau.
* Qualitative theory of dynamical systems.
* Operator algebras.
* Point set topology and set theory.
* Mathematical teaching, epistemology, didactics.
* Differential geometry.
* Riemannian, sub-Riemannian and semi-Riemannian geometry.
* Geometric analysis.
* Isometric actions and Riemannian foliations.
* Poisson geometry and Lie grupoids.
* Algebraic and geometric topology.
* Logic.

2.9.1.2 Highlight from three to five research activities that best represent your Faculty. Comment on the relative impact of three to five main research products (e.g. manuscripts, patents, and public policies) from the Faculty in the period.

(Computer Science - IME)
R: The department has been highlighted in e-Science activities, Theory of Computation, Artificial Intelligence and Software Systems. Among the main results we can highlight the significant increase in the defense of theses and dissertations as well as the increase in citations in the main repositories of publications, such as Scopus, Web of Science and Google Scholar as illustrated by the graphs in Figure 1a to 1f. Details of these graphics can be found at: http: //www.ime.usp.br/images/arquivos/grad/dcc/Figuras_para_o_relatorio_CPA.pdf. Details of the publications can be found at: http://www.vision.ime.usp.br/creativision/publications_dcc/.

(Statistics - IME)
R: I) Organization of Scientific Events: The following scientific events occurred in recent years had important participation of the Department, either in the Scientific Committee, the Organizing Committee

or even as Invited Conferences: 1) 19th and 20th National Symposium of Probability and Statistics - SINAPE (2010-2012). 2) XIV, XV, and XVI Brazilian School of Probability (2010 to 2012). 3) 1st APSM and 7th Conference on MOA (2010). 4) 2nd Workshop in Stochastic Modeling (2010}. 5) 55" Reunião Anual da RBRAS (2010). 6) 11 Bayesianism: Foundations and Applications (2010). 7) Jormas Razor 2 -Workshop on chains and systems with interactions of variable range (2011). 8) I, II, III, IV and V Seminars of Jurimetrics (2011 to 2015) 9) 5th Brazillian Conference on Statistical Modelling In Insurance and Finance.(2011). 10) 14" School of Time Series and Econometrics - ESTE (2011) 11) 2nd Brazilian Congresso of Item Response Theory (2011). 12) EBEB - Brazilian Meeting in Bayesian Statistics (2012). 13) School of Regression Models - EMR (2012) 14) Mathematical Modelling of Epidemic Processes and Variations (2012) 15) Workshop in Honor of Professor Pedro A. Morettin (2012). 16) 3rd Workshop in Stochastic Modeling (2012). II) Scientific Visits: Thirty two professors of the Department had activities related with participations in congresses and scientific visits abroad (in a total of 120 participations), participation in congresses and scientific visits in Brazil (a total of 143 participations), Participations in evaluation committees of post-graduation or professor selections (total of 47). III) Participation in the editorial board of scientific journals: 1) Brazilian Journal of Probability and Statistics, 2) ALEA, Revista Latino-Americana de Probabilidade e Estatística, 3) Annais of Applied Probability, 4) Journal of Applied Probability, 5) Journal of Statistical Physics, 6) Chilean Journal of Statistics, 7) Journal of the Turkish Statistical Association, 8) Economic Quality Control, 9) Communications in Statistics, 10) Computational Statistics and Data Analysis, 11) Journal of Forecasting, 12) São Paulo Journal of Mathematical Sciences, 3) Estadistica.

(Applied Mathematics - IME)
R: Research conducted in the department are published in high impact journals with international circulation. We highlight below five papers published in the period:
[1] PAS, Caetano, CORDARO, PD (Professor), Gevrey Gevrey solvability and regularity in differential complexes associated to locally integrable structures, Transactions of the American Mathematical Society, vol. 363. 2011.
[2] OLIVA, SM (Professor), Aragão, GS, Delay nonlinear boundary conditions the limit of reactions concentrating in the boundary, Journal of Differential Equations, Vol. 253, 2012
[3] CARVALHO, AS (Professor), T. Hall, Paper folding, Riemann surfaces and convergence of pseudo-Anosov sequences, Geometry & Topology, vol. 16, 2012
[4] Koropecki, A.; TAL, F. A. (Professor). Strictly toral dynamics. Inventiones Mathematicae, vol. 196, p. 339-381, 2013.
[5] PEIXOTO, P. S. (Professor); BARROS, S. R. M. (Professor). On vector field reconstructions for semi-Lagrangian transport methods on geodesic staggered grids. Journal of Computational Physics (Print) v. 273, p. 185-211, 2014.

(Mathematics - IME)
R: By its own nature, the results obtained in subjects of Pure Mathematics, which characterize the main output of the Department, do not have immediate application in other fields. Among the main research activities of the Department, we list:
* Production of original results and publication in periodicals with international circulation and selective editorial policy;
* Organization of regular seminars and events;
* Academic exchange with the main mathematical centers in Brazil and the world.

2.9.1.3 Describe the development of scientific and technological production in the Faculty in the last 5 years (papers, books, patents, curatorship, and expositions, etc.)

(Computer Science - IME)
R: The evolution of the Department´s publications is very significant especially in journals and at conferences. The Figures 2 and 3 give some indications on this evolution. Details can be found at:

http://www.vision.ime.usp.br/creativision/publications_dcc/.

(Statistics - IME)
R: The Program of Post-graduation in Statistics of IME-USP - Master and Doctorate - is consolidated and has international standard. The Program is the most important center of formation of doctors in Statistics of the Latin America. The number of doctor titles has remained high. Between 2010 and 2012, there have been 32 doctoral defenses and 47 masters defenses. In 2013 there have been 7 doctoral defenses and 19 masters defenses. In 2012 the program has reached the mark of 200 defended doctoral theses besides over 300 masters dissertations. 215 doctors were formed until now. Those are indicators of the great quality and vitality of the program, the qualification of the graduated doctors, the number of publication in important journals with arbitration, the awards given to theses, dissertations and students of the program, the publication of the theses of these doctors, the international interchange of researchers, the post-doctorate program, the participation of docents in editorial boards, scientific societies and organization of events and workshops.

(Applied Mathematics - IME)
R: From 2005 to 2009 the department published 109 articles in periodics, while in the period from 2010 to 2014 125 papers were published.

(Mathematics - IME)
R: The scientific production of the Department of Mathematics has remained stable in recent years. As an example, in the table below is listed the number of scientific papers published by professors and post-docs students in the Department in periodicals indexed by MathSciNet between 2010 and 2014.

Year - Number of papers
2010 - 23
2011 - 39
2012 - 38
2013 - 36
2014 - 37

2.9.1.4 What are the indicators used by the Faculty to assess the relevance of scientific and technological production (number of citations received in ISI, SCImago, Scopus, impact of periodicals and others, deposited and licensed patents)? Describe the development of the main indicators in this period.

(Computer Science - IME)
R: The Department has used Scopus, Web of Science and Google Scholar. As the graph in Figure 1, we can see significant growth in the number of citations.
This information can be obtained through datausp, quotes functionality.

(Statistics - IME)
R: The Department uses all the available indicators and have observed that the evolution of those have kept a constant evolution, which might be attested by the evaluation of its docents in various bodies that fund the scientific research.

(Applied Mathematics - IME)
R: The main indicators used for evaluation of scientific production is the impact factor of the journals and the number of citations.

(Mathematics - IME)
R: The Department does not use any kind of indicator to evaluate the relevance of the scientific output of the faculty members. When necessary, the department indicates ad hoc referees to write scientific

reviews. There is no history available about the quality and relevance of scientific production.

2.9.1.5 Describe the development of scientific papers published in the period by the Faculty with the collaboration of International Universities. What is the percentage of these papers in relation to the total number published by the Faculty?

(Computer Science - IME)
R: Scientific articles of the department are published in highly relevant conferences in computing area as well as in prominent journals. About 25% of published work include universities abroad. Details can be found at: http://www.vision.ime.usp.br/creativision/publications_dcc/.

(Statistics - IME)
R: The evolution has kept constant and the most part of the scientific articles submitted and published in journals of international amplitude, been made in co-authorship with external collaborators of the Deparment.

(Applied Mathematics - IME)
R: 15% of the published papers were co-authored by foreign university researchers.

(Mathematics - IME)
R: About two thirds of the articles published by the faculty of the Department is writen jointly with researchers from universities from abroad.

2.9.1.6 What is the Faculty's scientific policy?

(Computer Science - IME)
R: The Department has a preference for scientific projects, as well as the publication in major journals. Concretely, the department has specifically guided its decisions on academic merit.

(Statistics - IME)
R: Improve and develop a larger participation in research of its docentes, in order that the wide majority fullfill the production indicators expect in such activity, providing support an encouragement so that the conditions in the improvement of the level and of the quantity of publications are reached in the excellence scale.

(Applied Mathematics - IME)
R: The indicators are qualitative and there is a great respect for the individual decisions of the faculty members.

(Mathematics - IME)
R: Although it is not formally regulated, the Department has had a consistent and well managed scientific policy in the last five years. Individual faculty and/or research groups take the initiative toward academic projects, and the Department supports these activities. Here are some examples of support provided:
* allowance of short term and long term leaves of absence for academic visits;
* support toward scientific exchange with researchers and research centers in Brazil and abroad;
* secretarial support toward organization of seminars, conferences and meetings.

2.9.2.1 Comment on the Faculty's participation in research networks and academic projects (CEPIDs, INCTs, Thematic Research Groups, Pronex, and CNPq's Integrated Projects, PADCT's

Projects, FINEP, etc.) and the Faculty's interaction with public and private sectors.

(Computer Science - IME)
R: The Department participates in various thematic projects, CEPIDs, Integrated Projects and NAPs as shown in the list of projects for the period 2010-2014. A summary of the projects can be seen in Figure 4. Details can be found at: http://www.vision.ime.usp.br/creativision/publications_dcc/Pj-0.html

(Statistics - IME)
R: The Department has docents as leaders or acting members in all the Academic Projects in the scope of its acting field. The interaction with public and private sectors might be improved.

(Applied Mathematics - IME)
R: Faculty members are enrolled in many thematic projects, Pronex and INCT through its network of collaborators.

(Mathematics - IME)
R: Faculty had coordinated thematical projects with Fapesp as follows:
1. Fapesp 2007/03192-7 - Theory of submanifolds the Morse theory in finite and infinite dimensions - Director: Claudio Gorodski - Period: Nov 2007-Oct 2011
2. Fapesp 2012/24454-8 - Differential, geometric and algebraic topology - Director: Daciberg Lima Gonçalves - Period: Apr 2009-March 2013
3. Fapesp 2007/058146-0 - Representatons of Artin algebras and related topics - Director: Eduardo do Nascimento Marcos - Period: Apr 2008-Mar 2012
4. Fapesp 2009/52665-0 - Groups, rings and algebras: interaction and applications - Director: Francisco César Polcino Milies - Period: Nov 2009-Oct 2014
5. Fapesp 2011/21362-2 - Group actions, submanifold geometry and global analysis in Riemannian and pseudo-Riemannian geometry - Director: Paolo Piccione - Period: Apr 2012-Mar 2017.

Faculty organized academic exachange with research groups abroad, supported by Fapesp, as for instance:
1. Ohio State University, Nov 2013 to Oct 2014, Director: Claudio Gorodski
2. King's College London, Nov 2014 to Oct 2016, Director: Claudio Gorodski

2.9.2.2 Provide information on the Centers linked to the Faculty. What is their contribution to the Faculty's academic development?

(Computer Science - IME)
R: The Department coordinates two cores of research support: E-Science and Web Systems. It also participates in other NAP of Free Software. The CCSL (http://ccsl.ime.usp.br/) is an important center linked to the Department for the spread of free software culture.

(Statistics - IME)
R: Different docents participate in na active way of Centers. Perhaps the most important is NeuroMat - Research Center for Neuromathematics, a CEPID-FAPESP project, coordinated by the Prof. Antonio Galves. There are others (see 2.8.3.3.). The formation of researchers linked to those projects provide solid international networks of research, what helps the quality of the academic projects aimed by the different groups of research active in the Department.

(Applied Mathematics - IME)
R: The Centre for Mathematics and Applied Computing and the Matemateca Center play a key role in the dissemination of research activities in the department, attracting undergraduate and graduate students.

(Mathematics - IME)

R: The Centro de de Difusão e Ensino Matemateca play a key role in the dissemination of research activities in the department, attracting students from undergraduate and graduate.

2.9.2.3 What is the Faculty's fundraising policy? What are the indicators to measure success?

(Computer Science - IME)
R: The fundraising is done through courses and training, besides extension projects. The Department has tried to develop indicators of social impact. This work is at an early stage.

(Statistics - IME)
R: The Department and the Institute can raise resources for infrastructure and computational support, besides funding for scientific activities, through the individual projects of research and groups of research. The various projects in which the Department is engaged are an indicator of the quality of the produced research.

(Applied Mathematics - IME)
R: The department raises funds through projects from individual researchers and research groups.

(Mathematics - IME)
R: There is not a formal fundraising policy of the Department. By its own nature, the activities developed in the Department mainly can count only on financial support originating in funding agencies. Nevertheless, most faculty members have been succesful in applications to those state agencies.

2.9.2.4 What is the Faculty's policy regarding support of core activities (publishing books or chapters, papers, patents, other research publications and the creation of public policies)?

(Computer Science - IME)
R: Substantial material has been produced by professors of the department. The material on introduction to computing is being produced and refined for over 20 years. The latest version is available on the internet at http://www.ime.usp.br/~macmulti/. This material contains Web pages, PDF exercise lists, solved exercises with explanations that use animations and / or computer simulations. This material is freely accessible and has been used in universities in Brazil since its initial release 20 years ago.
In addition, several courses have generated materials that were published as books (one of them even received the Jabuti Award 2007). Other materials are available on the internet.
The absolute majority of undergraduate and graduate courses use our customization of Moodle system (http://paca.ime.usp.br/) to manage the courses. Thus, generated materials (such as exercises, slides, handouts, etc.) can be easily reused in the following offerings of disciplines, creating a living memory of the courses.

(Statistics - IME)
R: The Department supports and encourages all the initiatives of its docents. It participates with a representative in the Editorial Committee of IME and has a docent as a member of the Advisory Council of NUPPS - Center for Research in Public Policies. Various Docents are members of Editorial Councils and authors of renowned books in the editorial world.

(Applied Mathematics - IME)
R: N/A

(Mathematics - IME)
R: Besides providing secretarial support to researchers, The Department has very a generous academic policy of leave of absence for research activities. For instance, short term leave is allowed to faculty members participating in scientific events, even during the teaching period. Moreover, there is a policy of

sabbatical leave which allows one semester every three years. Also, good working conditions are provided for visitors to the Department.

2.9.2.5 Provide information on the number and describe the development of post-doctoral and young researchers supported by funding agencies in the period? Comment on the development in regard to the previous period.

(Computer Science - IME)
R: The number of post-doctoral students, in the country and abroad, has grown and reached stable levels in recent years. The number of new postdoc students with funding agency support, per year, in 2010-2014 period was:
2013: 03 postdocs
2014: 03 postdocs
2015: 02 postdocs (until now)
Total of active postdocs: 08

Aproved postdocs: 14 (entrance before 2013)

The difference between the approved post docs and the active ones is that to be considered approved, they have to deliver the final reports and get the approval of the funding agency at the end of the program . With the closure of the program, they receive certificates of completion of post-doctoral.

(Statistics - IME)
R: In the 2010 to 2014 period 20 post-doctorates were funded by different aid bodies, all supervised by Docents of the Department.

(Applied Mathematics - IME)
R: From 2005 to 2009 the department hosted 21 post-doctoral fellows, 16 with scolarships, and from 2010 to 2014 hosted 17, 14 with scolarships. The data from each year is given below:
2005: 2 with scolarship. Total 3
2006: 3 with scolarship. Total 5
2007: 4 with scolarship. Total 4
2008: 3 with scolarship. Total 4
2009: 4 with scolarship. Total 5
2010: 2 with scolarship. Total 3
2011: 3 with scolarship. Total 4
2012: 2 with scolarship. Total 3
2013: 4 with scolarship. Total 4
2014: 3 with scolarship. Total 3

(Mathematics - IME)
R: Thanks to the strengthening of research groups, there are more and more young researchers coming to work as post-doctoral fellows in the Department. The support of the post-doctoral program is part of the scientific policy of the Department. The table below shows the number of post-doctoral fellows, per year, during 2010-4, working in the Department.

Year Number of post-docs

2010 6
2011 16
2012 11
2013 16

2014 13

2.9.2.6 Analyze the Faculty's post-doctoral activities, or the perspective on implementing it, as well as the impact of post-doctoral scientific publications.

(Computer Science - IME)
R: The department had a significant number of postdocs in this period, and they contributed to improve the quantity and quality of publications of the department. Unfortunately, we do not collect the number of articles made with post-doctoral fellows.

(Statistics - IME)
R: The activities of the post-doctorates are of full and exclusive dedication to research.

(Applied Mathematics - IME)
R: The postdoctoral fellows work exclusively on research.

(Mathematics - IME)
R: Since 2010, the registration in the post-doctoral program at Institute of Mathematics and Statistics is managed by the Research Committee (Comissão de Pesquisa), as the university regulations stipulate. The financial support is provided by the state agencies, and the applications are prepared by the candidates and supervisors; the institute provides infrastructure support. At this moment, there is no specific Department policy that integrates the post-doctoral fellows to the academic life of the Department, although it would be desirable to have one. Some steps have been taken in the sense that the committee on graduate studies have created special, short graduate courses, directed by post-doctoral fellows.

2.9.2.7 In addition to research activities, does the Faculty have policies to include post-doctoral and young researchers in Undergraduate and Graduate teaching activities? Comment on the impact of these activities in the post-doctoral scientific publications.

(Computer Science - IME)
R: All the young hired researchers participate in teaching activities for undergraduate and graduate. Postdocs have the option to participate. We cannot assess immediate impact of educational activities in search results. However, it seems natural that the advanced courses in the professor´s research area have synergy with his research activity, providing new opportunities for innovative ideas arise.

(Statistics - IME)
R: There is not, nowadays, a policy for inclusion of the post-doctorates in didactic activities of the Department.

(Applied Mathematics - IME)
R: N/A

(Mathematics - IME)
R: Up to the present, it has never been considered the possibility of involving post-docs in regular teaching activities. The Graduate Committee stimulated the creation of special graduate courses, with a hour classes, given in short periods by post-docs and visiting professors. This project was very well succeeded, which shows that similar initiatives should be taken in the future.

2.9.2.8 Indicate the main scientific meetings organized by the Faculty.

(Computer Science - IME)

R: http://www.vision.ime.usp.br/creativision/publications_dcc/Eo-0.html

(Statistics - IME)
R: See 2.9.1.2.

(Applied Mathematics - IME)
R: The department has a strong tradition of organizing events. Below we list a few:

Oliva, Sergio M. ; PEREIRA, A. L. ; LOPES, O. ; TERRA, G. ; RAGAZZO, C. ; PICCIONE, P. . 3rd Meeting IST-IME. 2010. (Organização de evento/Congresso).
PEREIRA, C. A. B. ; STERN, J. M. ; LAURETTO, M. S. ; M. Diniz ; POLPO, A. . II Bayesianismo: Fundamentos e Aplicacoes. 2010. (Organização de evento/Congresso).
Garcia, M. V. P. ; Freire Jr. Ricardo dos S. ; GARCIA, S. R. L. ; ODA, E. . Evento em homenagem aos 75 anos de Angelo Barone Netto. 2011. (Organização de evento/Congresso).
Bissacot, Rodrigo ; Albert Fisher ; André de Carvalho ; Clodoaldo Ragazzo ; Edson de Faria ; Edson Vargas ; Eduardo Colli ; Fabio Tal ; Manuel Garcia ; Pedro Salomão ; Salvador Zanata ; FREIRE Jr., R. S. . Programa de Verão 2012 do IME USP - Programa Temático em Sistemas Dinâmicos. 2012. (Organização de evento/Outro).
Bissacot, Rodrigo ; FREIRE JR, R. S. . Ergodic Optimization and Related Fields. 2013. (Organização de evento/Congresso).
Tal, Fábio ; KOCSARD, A. ; de Carvalho, A. ; Koropecki, A. ; Addas-Zanata, S. . Surfaces. 2014. (Organização de evento/Congresso).
TAHZIBI, A. ; Tal, Fábio . I dia da dinâmica paulista. 2014. (Organização de evento/Congresso).
BISSACOT, R. ; CASTILLO, K. ; HAESER, G. ; OISHI, C. ; PEIXOTO, P. S., RAFAELI, F. R. . I Congresso Brasileiro de Jovens Pesquisadores em Matemática Pura e Aplicada. 2014. (Organização de evento/Congresso).
TAHZIBI, A. ; Tal, Fábio . II dia da dinâmica paulista. 2015. (Organização de evento/Congresso).

(Mathematics - IME)
R: Professors of the Mathematics Department who acted as coordinators or members of the Organizing Committee of several scientific events. See list below.
1- Ivan Shestakov (Coord.)
Title: The International Conferences "Groups, Rings, and Group Rings" (Brazil, Ubatuba,
Period: 2010, 2012, 2014, Ubatuba, SP
2- Paolo Piccione (Coord.)
Title: "XVI Escola de Geometria Diferencial" - Place: IME-USP, IO-USP e Anfiteatro Camargo Guarnieri
Period: 12 a 17/07/2010 (Glaucio Terra, org.)
Title: "III Encontro Paulista de Geometria" - Place: IME-USP
Period: 08 a 12/08/2011 (Claudio Gorodski co-coord.)
Title: "7th Nonlinear Differential Equations" - Universidade Federal do Paraíba
Period: 17/09 a 22/09/2012
Title: "GeloSP2013 - International Meeting on Lorentzian Geometry" - Place: USP-SP
Period: 22/07 a 26/07/2013
Title: "VarProb2013 - International Workshop on Variational Problems. PDE´s and Applications" - Place: USP-SP
Period: 02 a 06/09/2013 (Jaime Angulo e Gaetano Siciliano (MAT), org.)
3- Prof. Francisco César (Coord.)
Title: Groups, Rings and Group Ring 2012 - Place: Ubatuba, SP
Period: 23 a 28/07/2012 (Vitor Ferreira (MAT), org.)
Title: Groups, Rings, Algebra and Applications 2010 - Place: Ubatuba, SP
Period: 25 a 28/07/2010
Title: Terceira Escola de Historia Conceitual 2012 - Place: Ubatuba, SP
Period: 09 a 14/04/2012
4- Prof. Jairo Zacarias Gonçalves (Coord.)

Title: Groups Ring and Groups - Place: Ubatuba SP
Period: 21 a 26/07/2014 (Vitor Ferreira, Javier Sanchez e Raul Ferraz (MAT) org.)
5-Profa. Deborah Martins Raphael (Coord.)
Title: "IV Encontro Internacional dos Alunos de Graduação do Instituto de Matemática e Estatística"
Place: IME-USP
Period: 29/08 a 02/09/2011
6-Prof. Antonio Luiz Pereira (Coord.)
Title: "Primeiro Encontro de Egressos do Programa de Pós-Graduação em Matemática do IME-USP"
Place: IME-USP
Period: 19/08 a 22/08/2013
7- Prof. Valentin Ferenczi (Coord.)
Title: "First Brazilian Workshop in Geometry of Banach Spaces - BWB 2014"
Place: Ubatuba, SP
Period: 24/08 a 30/08/2014
8- Profa. Lucia Renato Junqueira (Coord.)
Title: Brazilian Conference on General Topology Set Theory - STW 2013
Period: 12/08 a 16/08/2013
9- Profa. Cristina Cerri (Coord.)
Title: II Workshop de Matemática - 7 e 8 de novembro de 2012 e Mostra do CAEM 2013 - 16 a 19 de outubro de 2013.
Place: IME-USP.
10- Prof. Vyacheslav Futorny (Coord.)
Title: II USP-Lyon Meeting in Algebra
Period: 28/10-1/11 2013
Place: IME-USP.

2.9.2.9 Is there any initiative to improve and expand the Faculty's Scientific Training for Undergraduate Students.

(Computer Science - IME)
R: We have an initiative with several fronts to enhance the commitment of undergraduate students. Among these fronts is the "iniciação científica" (scientific initiation) or IC. Students taking scientific initiation can use their research as part of the coursework (TCC). These students can use the laboratories of the department's research groups.

(Statistics - IME)
R: In the 2010-2014 period we had 8 scholarship fellow students in the program for Undergraduate research.

(Applied Mathematics - IME)
R: The department advises many undergraduate students and students linked to PICME program. We see no reason for an expansion.

(Mathematics - IME)
R: The Undergraduate Research Program (Programa de Iniciação Científica) of the Institute of Mathematics and Statistics is coordinated by the Research Committee (Comissão de Pesquisa) of the Institute. The Department of Mathematics acts in this program through his representative in the Committee. In recent years, an effort has been made in order to improve the students´ participation in undergraduate research projects. One of the main results of this effort was the creation of a biannual event, the Undergraduate Research Symposium (Simpósio de Iniciação Científica), in which all students participating in some project is invited to give an oral presentation or presenting a poster of their work. A resume of each work presented in the symposium is published in a special volume with the conference proceedings, which makes the participation more attractive to both students and supervisors.

The table below gives the number of students participating in some undergraduate research project with financial support from the CNPq:

year number of projects

2010 4
2011 4
2012 6
2013 6
2014 6

Culture and extension

2.10.1.1 What is the Faculty's Culture and Extension policy?

(Computer Science - IME)
R: Faculty is stimulated to engage in activities related to Culture and "Extension", notably in those activities closely related to their research topics. In particular, the Department and the Institute give institutional support to the organization of public talks and scientific conferences. In addition, the process of leave of absence for the participation in comitees (masters, doctoral) and selection processes. Finally, as a way to spread specialized knowledge to the Brazilian private sector, the Department usually authorizes faculty members to perform consulting, respecting the 8 hours/week limit of the University.

(Statistics - IME)
R: The activities of Culture and Extramural, together with those of research and teaching, form the activities end of the Department. The policy is the fomentation, help and support of the initiatives of its student, docent and technical-administrative bodies, for all the initiatives that coordinated by the Committee of Culture and Extramural, according to the current norms of the Pro-Rectory of Culture and Extramural, which fit this scope

(Applied Mathematics - IME)
R: Because it is a department focused on basic science, initiatives in this area are punctual, but have all the support of the Department. The main extension fronts are scientific dissemination, extension courses and consulting and advisory services.
Even teachers whose central research is in pure mathematics have some experience working with applied areas. In this case, one does research and extension at the same time.

(Mathematics - IME)
R: The Department of Mathematics (MAT) has encouraged and supported activities in Culture and Extension developed by their professors, mainly through the Centro de Aperfeiçoamento do Ensino de Matemática "João Afonso Pascarelli" - CAEM (Center for the Improvement of the Teaching of Mathematics "John Afonso Pascarelli" - CAEM), the Summer School and the Centro de Difusão e Ensino MATEMATECA (Center for the dissemination and Education MATEMATECA), which is a project that involves professors of the two departments: the Department of Mathematics and the Department of Applied Mathematics (MAP).

CAEM was created in 1985. It is a division of the Department of Mathematics directed by 4 professors and currently has 4 educators on its staff. CAEM provides assistance to a large number of school teachers, especially those who work in public schools, besides it offers courses, workshops and lectures. CAEM participates in projects of continuing education for mathematics teachers in partnership with the State Department of Education. The services of CAEM are provided by IME professors, educators hired by USP and invited expert professionals.
Summer School extends for about 6 weeks in January and February and offers disciplines of cultural dissemination to the external community, as well as subjects of post-graduate that are also used in the

selection process of freshman students in the Master degree program. The disciplines of dissemination have, as a target audience, graduate students and graduates of both USP and other institutions, interested in an improvement in Mathematics.
MATEMATECA is a division of the Board of Directors of IME whose objective is the provision of services relating to the dissemination of Mathematics to the general public and, in particular, for students of all levels of education. Two professors of MAT are part of its Board of Directors. MATEMATECA exposes its collections in several Brazilian cities, is often contacted by public and private schools and has cooperation projects to assist in the formation of other collections in Brazilian universities. It also participates in cooperation projects with similar institutions outside of Brazil, for example, the "Imaginary of Oberwolfach" (Germany) and the "Maison des Mathematiques et de l'Informatique de Lyon (France).

2.10.1.2 Describe the main activities of the Faculty's Culture and Extension programs and projects and how these have developed in the last 5 years.

(Computer Science - IME)
R: Department faculty members logged the following number of participations in comittees: (i) 58 participations in master´s defense comitees and 51 PhD defense comitees in Universities other than USP; (ii) 35 participations in selection comitees for faculty admissions outside USP. Faculty members; (iii) 156 participations in program comitees for scientific events, (iv) 45 participations in organizing comitees for scientific events (including 20 international events). Additionally they taught 27 short-term courses outside USP, (a more detailed list can be found in http://www.vision.ime.usp.br/creativision/publications_dcc/Eo-0.html). One of the highlights in Culture and Outside Reach´s activites was the completion of the building of the Center for Free Software Competence (Centro de Competência em Software Livre - CCSL) in 2011. This Center, dedicated to the development of free sofware in Brazil, sponsors research, talks and training. In the 2010-2014 period there were 50 talks and 10 courses in which the Center was involved either financing or providing the venue. Finally the department regularly participates in the Summer Course of the IME-USP. In the 2010-2014 period the courses Web Interfaces using HTML, CSS and Javascript, Introduction to Programming, Algorithms in Java and Basic Linux, Authorship in Intractie Activites on Moodle with iTarefa and iGeom, Introduction to the Use of Interactive Tools to Faciliate the Learning of Mathematics, Laboratory for Teaching Mathematics, Interactive Geometric Constructions for Teaching Mathematics, Distance Learning for Math Teachers, had a total of 1898 students enrolled.

(Statistics - IME)
R: Traditionally, the Department of Statistics develops activities two segments: Applied Statistics Center's activities (CEA) and Continuing Education.
The main activities of the Applied Statistics Center relate to the development of statistical analysis of research projects and statistical support to researchers from USP and other centers in the planning of new projects involving the collection and analysis of data. In both cases, the CEA has served mostly to researchers at USP itself, but occasionally collaborates with researchers from other universities (public or private) as well as private and public companies. In recent years the CEA has collaborated with several units of USP, including the Faculty of Medicine, Heart Institute (InCor), Institute of Biosciences, Faculty of Education, Faculty of Economics and Administration, Polytechnic School. Projects were also developed jointly with Institute of Nuclear Energy (IPEN) researchers, Institute Technology Research (IPT), CEAGESP, Institute of Tropical Medicine (IMTSP), City of Iperó City Hall. Among rivate institutions, the Center has developed activities with the following associations: Juvenile Diabetes Association (ADJ), Paulista Clinic of Heart Diseases (FGM), Support Group for Adolescents and Children with Cancer (GRAAC) , Albert Einstein Hospital, Pontifical Catholic University of Sao Paulo (PUC), Brazilian Society of Public Law (SBDP). Joint ventures were maintained with the Department of Health of the State of São Paulo and Universidade Estadual Paulista (UNESP) and generated resources directly or Indirectly to IME, through the Foundation University of São Paulo (FUSP).
Among the extension courses, we highlight the improvement in statistics that aim to complete the training of graduates, teachers or not, as well as assist those who are destined to graduate. Students are studying

disciplines modules totaling 180 hours, selected the cast of graduation courses offered by the Department of Statistics. The improvement in Statistics has been much sought after and the end of the program, the student is entitled to a certificate.
The department also annually offers summer courses within the Summer Program of IME-USP. Some undergraduate courses may be routed by students of the 3rd age, after receiving guidance from a teacher of the department.

(Applied Mathematics - IME)
R: Matemateca: active participation of two teachers in Matemateca, which has now become official as the Centro de Difusão e Ensino Matemateca, of interdepartmental character.
Summer Courses: Teachers of the Department offer courses to the general public and high school students, as well as additional courses to undergraduate students.
Applied Research: Research collaborations with extension character as computational fluid dynamics with Petrobras and the CPTEC / INPE, or epidemiology with the City and the School of Public Health.
The activities have been of individual initiative, conciliated with the academic interests of teachers.

(Mathematics - IME)
R: 1 CAEM
CAEM offered an average of 25 workshops and 5 lectures a year on various topics for math teachers of primary and secondary schools and IME's students (from Licenciatura). Also 8 short courses were offered, without registration fee and approved by SEESP - State Department of Education SP. Since 2012, the CAEM annually promotes the "Summer in the CAEM," an event without registration fee that lasts one week in January.
Participation in projects and events:
- Semana da Licenciatura (IME-USP), in 2010, 2012 and 2014.
- Support Project for the Improvement of Mathematics Teaching in Public Schools in 2010 and 2011.
- Jornada de Matemática at UFSCar, in 2012 and 2014.
- I Virada Científica (Scientific All-Day Event) at USP in 2014.
- VII Biennial of Mathematics at UFAL in 2014.
From 2012, CAEM coordinate the "Support Project for Improving Mathematics Teaching in Public Schools". The project brings together annually, on Saturdays, students and public school teachers.
In 2012, CAEM gave advice to CGEB-SEESP accomplishing two Technical Guidelines at 182 Pedagogical Centers Coordinators Teachers of Mathematics (PCNP) of the State of São Paulo and supported the second Math Workshop of SEESP held at the IME.
In 2013, CAEM promoted the "Mostra do CAEM 2013" , an event aimed at teachers of primary and secondary schools and students of IME.
Other activities:
- "LABEM - Mathematics Education Laboratory", a continuing education project of the CAEM, which began in 2000.
- New publication: "Statistics for All - Activities for the classroom," Lisbeth Kaiserlian Cordani ISBN: 978-85-88697-25-6.
The event Mostra do CAEM 2013, the Workshops and Refresher Courses of CAEM for Math Teachers - 2014 and the Support Project for Improving Mathematics Teaching in Public Schools - 2013 and 2014 were considered Highlights of Cultural Activities Extension to Pro Rectory for Culture and Extension.

2. SUMMER SCHOOL
Between 2010 and 2014 the Department has offered broadcasting courses for graduate and undergraduate students. The courses and the vacancies opening annually are: Linear Algebra, 200 vacancies; Metric spaces, 60 vacancies; Calculation in R ^ n, 100 vacancies; History of Mathematics, 100 vacancies; Problem Solving and Creativity, 60 vacancies; Topics in Algebra history, 30 vacancies (from 2012). Also it was offered "Euclidean geometries Not" and "Analytic Functions", once to meet a specific demand.

3. MATEMATECA

The MATEMATECA began in 2004 and was institutionalized in 2014 when it became a center. Its collection has steadily increased aiming to consolidate a permanent exhibition for public viewing. It is currently the largest and most complete collection of mathematical objects of Brazil and is a benchmark for other institutions.

2.10.1.3 Does the Faculty use indicators to assess the Culture and Extension activities?

(Computer Science - IME)
R: Currently, the department does not keep detailed records of the activities in this area. As a consequence, some of the numbers in this report are undervalued.

(Statistics - IME)
R: The activities of the Department are linked in the most part of its initiatives to the programs coordinated and proposed by the Pro-Rectory of Culture and Extramural, which provides evaluations, indicators and goals to be reached. The Committee of Culture and Extramural of the Department acts in a synchronized way with the guidelines and programs of the Rectory USP.

(Applied Mathematics - IME)
R: No. It is up to teachers to engage and do the best in every situation.

(Mathematics - IME)
R: Annual reports of CAEM activities are produced, evaluated and approved by internal organs of IME. All workshops and courses are evaluated through questionnaires completed by the participants. Such instruments have helped the Center to improve their activities. The reports of courses follow the Pró Reitoria de Cultura e Extensão - PRCEU standard.
The Summer School submits annual reports to the Commission of Culture and Extension of the IME.
MATEMATECA submits annual reports to the Commission of Culture and Extension of the IME as well as to the IME Board of Directors.

2.10.1.4 Indicate the impact of the Culture and Extension activities performed within the Faculty in terms of effective or potential benefits.

(Computer Science - IME)
R: The biggest impact of the department in this area, is in terms of providing expert knowledge to other public and private organizations and in the organization of scientific events. On the first aspect (providing expert knowledge) we can single out the various participation thesis, dissertation and faculty selection committees for other institutions. On the second aspect, faculty members routinely participate in organizing committees and in program committees for national and international conferences. The summer achool has a significant impact on the outside community, attracting and average of 380 students each year.

(Statistics - IME)
R: The activities developed at CEA have important impact in the development of projects of various research institutes USP, generating joint work of researchers from various field of knowledge and from the Statistical Department, with the production of articles published in journals of specific areas where the methodologies are employed. Moreover, such projects often are important sources of methodological research in Statistics, stimulating the development of master's and doctoral topics of students from de Department of Statistics, generating publications in renowned Statistical journals. The data used from the projects are stored and made available for scientific use and teaching, enriching thus the three pillars that support the academic life (teaching, research and extension).
The training courses in Statistics have an important role in improving the knowledge of students heading to the Master's program in Statistics and that did not attend the Bachelor of Statistics at IME-USP. Several

students have successfully been accepted into the Master's program after they attended such disciplines.

(Applied Mathematics - IME)
R: Participations in events dedicated to the dissemination of mathematics or aspects of mathematics to elementary school students and undergraduate students benefit from attracting students to the Department as well as the awareness of the importance of mathematics. Partnerships with companies and external institutions of public utility directly benefit the general public and provide subsidies for research in application areas.

(Mathematics - IME)
R: Over the past 30 years of existence, there were many contributions from CAEM to improve the practice and training of Mathematics teachers. There were many activities offered to teachers of Mathematics, such as courses, workshops, lectures, seminars and study groups. Effectively, the contribution is evident when we look at the many citations of CAEM publications in textbooks, and references in programs and exams for math teachers. The courses received certification of Secretaria de Educação do Estado de SP - SEESP, with whom the Center had, over the years, various partnerships. CAEM is a reference in the state of Sao Paulo and in Brazil as regards the activities focused on a continuing education of teachers.

During its 43 editions, the Summer Program of IME-USP reciprocates the public investment through the deepening of the knowledge of academic and non-academic professionals from areas where Mathematics is either a tool or an end in itself. This is obtained through various courses offered at different levels, serving students in undergraduate, graduate, post-graduate degrees from other areas and even onlookers from all over the country and even from abroad. Many of these students develop an interest in Mathematics during the program and end up looking for continuing their studies attending new disciplines in the following years or looking for our undergraduate and graduate courses.

Attending fairs and events and even promoting its own exhibitions, MATEMATECA reaches quite a number of visitors and is known among teachers of all levels. Its team receives weekly requests for assistance with projects and invitations to participate in exhibitions. The next objective of MATEMATECA is to have a suitable space and definitive to maintain a permanent exhibition, a situation that would reach a greater number of students.

2.10.1.5 Does the Faculty have a policy designed to encourage valuing culture and extension activities in considering the faculty's activities? Comment.

(Computer Science - IME)
R: There is no specific policy to foster these activities, but the department tries to facilitate consulting agreements in the area and regularly allow absence of leaves for faculty members.

(Statistics - IME)
R: The activities of Culture and Extramural are included in the diverse records produced by the students and docents, as part of the evaluation for eventual progressions in their career.

(Applied Mathematics - IME)
R: As the teaching work is valued for its entirety, this is automatic as far as research activity. This is the progress of science, on all fronts.

(Mathematics - IME)
R: The Mathematics Department is in the midst of a severe crisis of shortage of professors. As a result, teaching activities dedicated to extension are not computed by the department.
A few years ago, the disciplines of the Summer School were taught by professors of MAT that, in addition to the experience and qualification, could offer a wider variety of disciplines, which were computed by the Department. Currently, invited or retired professors are in charge of teaching at the summer program,

offering a lower amount and scope of subjects, since the Department may not deduct the hours of classes taught in the summer program from the total annual hours that each professor should teach.
Even so, the Department recognizes the value of these activities, gives support to the initiatives, and grants grants clearances in case of trip for lectures, exhibitions and events related to these activities.

2.10.2.1 Report the main professional training and continuous education activities, the number of issues and participants (report amounts in the context of fundraising):

a) Specialization Courses

(Computer Science - IME)
R: Nothing to declare.

(Statistics - IME)
R: There is not.

(Applied Mathematics - IME)
R: None.

(Mathematics - IME)
R: As explained in the previous report, until 2009 it was offered training and specialization courses towards teachers of Mathematics. After a long period of discussion, it was decided to create, in replacement, the Professional Master's Degree in Mathematic Teaching to better serve the teachers.

b) Training Courses

(Computer Science - IME)
R: Nothing to declare.

(Statistics - IME)
R: Improvement in Topics of Statistics has an average of 20 students per semester placed in various diverse disciplines in the program of bachelor in Statistics.

(Applied Mathematics - IME)
R: None.

(Mathematics - IME)
R: As explained in the previous report, until 2009 it was offered training courses and specialization facing teachers of Mathematics. After a long period of discussion, it was decided to create, in replacement, the Professional Master's Degree in Mathematic Teaching to better serve the teachers.

c) Updating Courses

(Computer Science - IME)
R: Nothing to declare.

(Statistics - IME)
R: In the Summer Program of IME-USP different update courses are responsibility of the Department.

(Applied Mathematics - IME)

R: None.

(Mathematics - IME)
R: From 2010 to 2014 the following courses were offered by the CAEM:

****
* | Title | | *
* 1 | Funções e Modelagem | 21/08/2010 a 12/11/2010 | Classroom *
* 2 | Funções e Modelagem | 19/03/2011 a 18/06/2011 | Classroom *
* 3 | Números: por quê e para quê? | 24/09/2011 a 05/11/2011 | Distance *
* 4 | Funções e Modelagem | 13/04/2012 a 13/07/2012 | Classroom *
* 5 | Uma abordagem de geometria para as séries iniciais | 03/09/2012 a 26/11/2012 | Classroom *
* 6 | Tópicos de Matemática para Professores | 21/01/2013 a 24/01/2013 | Classroom *
* 7 | Uma abordagem de geometria para as séries iniciais | 23/03/2013 a 29/06/2013 | Classroom *
* 8 | Uma abordagem de aritmética para séries iniciais | 14/09/2013 a 23/11/2013 | Classroom *
* 9 | Tópicos de Matemática para Professores 2014 | 20/01/2014 a 24/01/2014 | Classroom *
*10 |Uma abordagem do pensamento algébrico | 15/03/2014 a 31/05/2014 | Classroom *
*11 | Transição do 5° para o 6° ano | 15/03/2014 a 31/05/2014 | Classroom *
*12 | Transição do 5° para o 6° ano | 13/09/2014 a 08/11/2014 | Classroom *
*13 | Atividades para desenvolver o raciocínio lógico | 06/09/2014 a 29/11/2014 | Classroom *
****

d) Residence Activity

(Computer Science - IME)
R: Nothing to declare.

(Statistics - IME)
R: There is not.

(Applied Mathematics - IME)
R: None.

(Mathematics - IME)
R: There is not.

e) Vocational Practice

(Computer Science - IME)
R: Nothing to declare.

(Statistics - IME)
R: The Department has a Post-Graduation program for Professional Master in Mathematic Teaching and considers the activities of the CEA as a laboratory for the activities demanded of the professional in Statistics.

(Applied Mathematics - IME)
R: None.

(Mathematics - IME)
R: Since 2010, MAT offers the course "Internship Projects: Learning Mathematics with Projects", as a professionalizing practice for teachers of Mathematics.

Every six months CAEM offers several workshops, with a minimum duration of 3, 6 or 12 hours, at several choices of periods, including evening, aiming to discuss and improve teaching practices in the classroom. The public is made up of basic education teachers, students of the degree course in Mathematics of IME-USP and, to a lesser extent, Pedagogy students from the FE-USP.

It was organised by CAEM:
in 2010: 22 workshops, 479 participants;
in 2011: 28 workshops, 404 participants;
in 2012: 24 workshops, 324 participants;
in 2013 : 25 workshops, 341 participants;
in 2014 : 27 workshops, 329 participants.

2.10.2.2 What is the importance of and what are the consequences/impact of the Faculty's participation in advising, consulting, and the delivery of specialized services to public and private institutions, scientific entities and other organizations in society? List the agreements and contracts managed by the Faculty in recent years (with scope, timing and amount).

(Computer Science - IME)
R: In this period, three agreements of cooperation were implemented with private companies: (i) The GOLD agreement with Hewlett Packard, working with the flexible jobshop for a problem of the printer industry (Value, R$786.600,00), (ii) The BAILE agreement with Hewlett Packard with the goal of studying WEB services configurations (approximate value R$500.000,00); (iii) Agreement with Hitachi company (value, USD$90.000,00). Departmental faculty members were also involved in consulting for the private sector and the public one. In the private sector the companies were: Hewlett-Packard, ITMarqueting, Boticário, Scilopus.com, IPMED, Playlax.com, A.C. Camargo Hospital, IBOPE and ARAMAX. Public institutions were: National Institutes of Health (USA), CBTE (linked to the Brazilian Ministry of Science and Technology), Laboratorio Nacional de Computação Científica (LNCC).

(Statistics - IME)
R: The daily activities developed at CEA have mainly helped researchers from a variety of Science fields with the development of their academic work, trough the application of sophisticated statistical analysis on their master's and doctoral projects. We have been providing assistance from planning (including sample design and setting up databases) to full statistical analysis. In addition, other researchers have been assisted with analyses that where an important contribution to their findings, that are published in leading journals on medical, dentistry, psychology fields, to mention a few, all of international spectrum. Researchers from government agencies have also received advisory services from CEA to improve products and services. For example, we may mention the development of the food chain supply analysis methodologies (CEAGESP), application of new techniques for the diagnosis and clinical assessment (Albert Einstein Hospital and Heart Institute - InCor), policies of public services (Municipal Government of Iperó), development tools to audit the report of number of Intensive Care Unit infections by hospitals in the state of São Paulo (Epidemiological Surveillance Center).

(Applied Mathematics - IME)
R: The agreements and contracts that use the authorization for simultaneous activity are not managed by the Department. Even so, the Department supports these activities, because if they are not exactly research, at least they are retroactive to research, learning and knowledge generation.

(Mathematics - IME)
R: CAEM is a reference in state and national sphere as regards the training of teachers, with several participations of the center in other public and private institutions events. The materials produced in CAEM for workshops and courses are often used by teachers in their practice. The various partnerships with the State Education Secretary of São Paulo show the importance and relevance of the work of CAEM.

Hundreds of teachers attend the facilities of CAEM seeking assistance of educators. Many students of the Teaching Degree look for books, handouts already held, workshops or works of educational projects of our collection. The service to the public CAEM also offers consulting and advisory services to the school community in relation to the specific content of Mathematics and teaching methodology through direct service (in person, by letter, phone, fax or email) to interested parties, are they teachers of elementary school students or Teaching Degree in Mathematics and Pedagogy; loan materials for registered users: books, journals, articles, lectures, games and other learning materials; visits monitoring teacher groups, to publicize the extension service, resources and CAEM activities.
The collection of MATEMATECA and explanatory texts have served as a parameter for making collections counterparts in other public institutions. On an ongoing basis, the Matemateca team has provided the design and manufacture of details so that replicas of its collection are made to the Federal University of Pará and, more sparsely, offers to help public school teachers who come to us.

2.10.2.3 What is the production of the Faculty's faculty in regard to educational activities and dissemination of scientific, artistic, cultural, technical or technological knowledge, reporting the number of issues and participants:

a) Outreach Courses (e.g. workshops, lectures, etc.)

(Computer Science - IME)
R: In this regard, the participation of the docents focuses on Summer School. During the 2010-2014 period we offered the following courses (enrollment numbers detailed in parenthesis):
Algorithms in Java (2010=58, 2011=35, 2012=60, 2013=41, 2014=48)
Web Interfaces with HTML, CSS and JavaScript I (2013=162, 2014=185)
Introduction to Programming (2010=109, 2011=117, 2012=147, 2013=139, 2014=94)
Basic Linux (2010=24, 2011=23, 2012=24, 2013=17)

(Statistics - IME)
R: The Department participates of the summer Program of IME-USP and systematically offers courses of Diffusion, and also the preparation for candidates to the Post-graduation program.

(Applied Mathematics - IME)
R: The diffusion courses of the Department are offered in the summer program of the Institute. There are courses for students of basic education and for undergraduate students, from inside or outside the University of Sao Paulo.

(Mathematics - IME)
R: 1- Linear algebra (200 vacancies each year):
*
* Year * Applicants * Undergraduate *Graduate * Graduate Degree * Not informed*
* 2010 * 194 * 65 * 66 * 16 * 47 *
* 2011 * 162 * 77 * 40 * 14 * 31 *
* 2012 * 159 * 79 * 44 * 18 * 18 *
* 2013 * 161 * 76 * 55 * 15 * 15 *
* 2014 * 148 * 62 * 53 * 19 * 14 *
*
2- Metric Spaces, (60 vagas por ano):
*
* Year * Applicants*Undergraduate* Graduate *Graduate Degree* Not informed*
* 2010 * 30 * 10 * 15 * 5 * 0 *
* 2011 * 38 * 16 * 15 * 5 * 2 *
* 2012 * 30 * 17 * 9 * 2 * 2 *

* 2013 * 34 * 18 * 11 * 5 * 0 *
* 2014 * 28 * 12 * 8 * 4 * 4 *
*
3- Calculus in R^n (100 a year):
*
* Year * Applicants * Undergraduate * Graduate * Graduate Degree * Not informed*
* 2010 * 87 * 30 * 34 * 14 * 9 *
* 2011 * 95 * 34 * 28 * 18 * 5 *
* 2012 * 94 * 45 * 31 * 14 * 4 *
* 2013 * 81 * 38 * 29 * 10 * 4 *
* 2014 * 88 * 45 * 29 * 11 * 3 *
*
4- History of Mathematics (100 vacancies per year):
*
* Year * Applicants * Undergraduate * Graduate * Graduate Degree * Not informed*
* 2010 * 70 * 23 * 29 * 8 * 10 *
* 2011 * 44 * 10 * 24 * 2 * 8 *
* 2012 * 60 * 21 * 25 * 9 * 5 *
* 2013 * 39 * 17 * 12 * 4 * 6 *
* 2014 * 55 * 15 * 29 * 4 * 7 *
*
5- Problem Solving and Creativity (60 vacancies per year):
*
* Year * Applicants * Undergraduate * Graduate * Graduate Degree * Not informed*
* 2010 * 57 * 25 * 22 * 5 * 5 *
* 2011 * 48 * 20 * 14 * 6 * 8 *
* 2012 * 57 * 22 * 25 * 7 * 3 *
* 2013 * 59 * 20 * 29 * 5 * 5 *
* 2014 * 56 * 18 * 31 * 1 * 6 *
*
6- Topics in History of Algebra (from 2012, 30 vacancies).
*
* Year * Applicants * Undergraduate * Graduate * Graduate degree* Not informed*
* 2012 * 23 * 12 * 6 * 5 * 0 *
* 2013 * 24 * 11 * 7 * 5 * 1 *
* 2014 * 25 * 12 * 8 * 5 * 0 *

b) Professional Continuing Education

(Computer Science - IME)
R: Nothing to declare.

(Statistics - IME)
R: The Department participates of the summer Program of IME-USP and systematically offers Update couses, and also the preparation for candidates to the Post-graduation program.

(Applied Mathematics - IME)
R: None.

(Mathematics - IME)
R: CAEM offers courses elaborated by educators and professors of IME. They create texts and activities specially for each course. From 2010 to 2014, the following refresher courses were offered:

* | Title | Period | Type *
* 1 | Funções e Modelagem | 21/08/2010 a 12/11/2010 | Presential *
* 2 | Funções e Modelagem | 19/03/2011 a 18/06/2011 | Presential *
* 3 | Números: por quê e para quê? | 24/09/2011 a 05/11/2011 | From distance *
* 4 | Funções e Modelagem | 13/04/2012 a 13/07/2012 | Presential *
* 5 | Uma abordagem de geometria para as séries iniciais| 03/09/2012 a 26/11/2012 | Presential *
* 6 | Tópicos de Matemática para Professores | 21/01/2013 a 24/01/2013 | Presential *
* 7 | Uma abordagem de geometria para as séries iniciais| 23/03/2013 a 29/06/2013 | Presential *
* 8 | Uma abordagem de aritmética para séries iniciais | 14/09/2013 a 23/11/2013 | Presential *
* 9 | Tópicos de Matemática para Professores 2014 | 20/01/2014 a 24/01/2014 | Presential *
* 10|Uma abordagem do pensamento algébrico | 15/03/2014 a 31/05/2014 | Presential *
* 11| Transição do 5° para o 6° ano | 15/03/2014 a 31/05/2014 | Presential *
* 12| Transição do 5° para o 6° ano | 13/09/2014 a 08/11/2014 | Presential *
* 13| Atividades para desenvolver o raciocínio lógico | 06/09/2014 a 29/11/2014 | Presential *

c) Projects directed to basic education

(Computer Science - IME)
R: Nothing to declare.

(Statistics - IME)
R: Diverse initiatives about Teaching of Statistics, including methodologies and practices for the primary and secondary school, are developed by docents of the Department and seminars of discussion are made. There are docents who collaborate actively at OBMEP - Brazilian Olympics of Mathematics in the Public School.

(Applied Mathematics - IME)
R: None.

(Mathematics - IME)
R: CAEM activities are aimed at the updating and the improvement of basic education math teacher, and its mission is to contribute to improving the teaching of mathematics. In particular, it highlights the "Projeto de Apoio para Melhoria do Ensino de Matemática nas Escolas Públicas" (Support Project for Improving Mathematics Teaching in Public Schools), where students and public school teachers have the opportunity to participate in different approaches to teaching and learning mathematics, guided by CAEM staff and faculty of IME. As already mentioned, CAEM has participated in projects related to continuing education of teachers, as the Projeto USP-Escola (USP-School Project), supported by CAPES, in the Programa Novos Talentos (New Talent Program).

d) Exhibitions and fairs

(Computer Science - IME)
R: Nothing to declare.

(Statistics - IME)
R: Participation in the Monitored Visit to IME-USP and Profession Fair, inside the USP Program and the professions of the Pro-Rectory of Culture and Extramural. Such events happen once a year and in each one of them there was always the participation of one or two docents of the department.
Conference performed by a docent of the deportment in the event "Virada Científica (Scientific "Night out")", in October 2014.

(Applied Mathematics - IME)

R: Two teachers of the Department have a fundamental role in Matemateca, which is an exhibition collection of interactive objects to motivate and spread mathematics. This collection is used in the University events: welcome to newcoming students, guided tour for high school students, professions' fair, 'Virada Científica", National Week of Science and Technology etc.

(Mathematics - IME)
R: MATEMATECA has participated in all editions of "Feira de Profissões na USP" and events "USP e as profissões". It also participated in the organization of exhibitions with scheduled school visits.
In 2013, CAEM took part in the first "Virada Científica da USP", offering a workshop called "A pipa tetraédrica de Graham Bell", which lasted 3 hours and had 25 participants.

e) Texts, teaching material or other products directed to the community.

(Computer Science - IME)
R: Faculty members were involved in the writing of 42 book chapters and in the writing and/or editing of 15 books.

(Statistics - IME)
R: Some of the basic texts of Statistics, used in almost all the introductory courses of the main Brazilian universities are written by docents of the Department.

(Applied Mathematics - IME)
R: There is no constant activity in this area.

(Mathematics - IME)
R: The experience accumulated over the years, teaching workshops and courses for teachers, allowed CAEM to have some published texts. Currently, there are seven volumes aimed at pre-school and elementary school, a publication for high school teachers, a book of activities and the newest publication regarding the education of Statistics. For its qualities, these publications are recognized in the country and often have been reference in teacher training courses and public examinations for teachers.
In all activities of the CMEA, whether courses or workshops are designed handouts that are provided to participating teachers. The material produced is available to students and teachers for consultation.

Publications of CAEM:
1- O uso de quadriculados no ensino de geometria - Fusako H. Ochi, Rosa M. Paulo, Joana H. Yoshida e João K. Ikegami -ISBN: 978-85-88697-16-4
2- Materiais didáticos para as quatro operações - Virginia C. Cardoso - ISBN: 978-85-88697-17-1
3- O conceito de ângulo no ensino de geometria - Maria Ignez de S.V. Diniz e Kátia Cristina S. Smole - ISBN: 978-85-88697-18-8
4- Era uma vez na matemática: uma conexão com a literatura infantil - Kátia Cristina S.Smole, Glauce H.R. Rocha, Patrícia Terezinha Cândido e Renata Stancanelli - ISBN: 978-85-88697-19-5
5- Álgebra: das variáveis às equações e funções - Eliane Reame de Souza e Maria Ignez de S.V. Diniz - ISBN: 978-85-88697-15-7
6- Jogos e Resolução de Problemas: uma estratégia para as aulas de matemática - Júlia Borin - ISBN: 978-85-88697-20-1
7- A matemática das sete peças do tangram - Eliane R. de Souza, Maria Ignez de S.V. Diniz, Rosa M. Paulo e Fusako H. Ochi - ISBN: 978-85-88697-21-8
8- Atividades de Laboratório de Matemática - Elza Furtado Gomide e Janice Cássia Rocha - ISBN: 978-85-88697-04-1 (esgotado, em revisão)
9- Funções elementares, equações e inequações: uma abordagem utilizando microcomputador - Maria Cristina B. Barufi e Maira Mendias Lauro - ISBN: 978-85-88697-01-7
10- Estatística para todos - Atividades para sala de aula - Lisbeth Kaiserlian Cordani - ISBN: 978-85-

88697-25-6

2.10.2.4 What is the participation of Graduate and Undergraduate students in the Faculty's extension programs?

(Computer Science - IME)
R: No records are kept.

(Statistics - IME)
R: The students of the fourth year of the Bachelor in Statistics participate actively in the works done by CEA.

(Applied Mathematics - IME)
R: In Matemateca they participate in exhibitions with tutoring and internships. In Computer Lab they manage the network and provide network administration courses.

(Mathematics - IME)
R: CAEM has always offered trainee positions for students of Teaching Degree in Mathematics (Licenciatura) of IME. By 2013 the center had two undergraduate students as interns. In 2014, for lack of resources, now has only one trainee.
In each workshop offered by CAEM are reserved 5 seats for students of Degree in Mathematics.
CAEM coordinates, since 2012, the "Projeto de Apoio para Melhoria do Ensino de Matemática" (Support Project for Mathematics Education Improvement). In the last three years, 36 monitors participated, mostly of Teaching Degree and two graduate studants. Such activities promote contact with the reality of public school, as each monitor comes with supports for teachers and a class of 30 students.
Students of Teaching Degree (Licenciatura) who participate in CAEM activities workshops, courses or projects receive credits for AACC - Atividades Acadêmico-científico-culturais (Academic and scientific-cultural activities).
Undergraduates and graduate students are monitors of MATEMATECA. Also, two undergraduate students participate as trainees.

2.10.2.5 Report on the culture and extension centers linked to the Faculty and their contribution to academic development.

(Computer Science - IME)
R: Nothing to declare.

(Statistics - IME)
R: The CEA - Center of Applied Statistics that works as a previous reference to which the student will face with challenges after the conclusion of their studies. Situations in which they may develop a team work practice in various ambients.

(Applied Mathematics - IME)
R: Centro de Difusão e Ensino Matemateca
CEMCAP - Centro de Matemática e Computação Aplicadas (inactive, at this moment)

(Mathematics - IME)
R: 1- Center for the Improvement of Mathematics Teaching "João Afonso Pascarelli" - CAEM, is a division exclusively linked to the Department of Mathematics (MAT). The members of CAEM study ways of teaching topics of mathematics with varied approaches, write notes, and participate in seminars and meetings, showing the resulting study to mathematics teachers or professors who work with continuing education of mathematics teachers. It is important to mention that two educators of CAEM are studying

for a professional master's degree at IME and one is studying for Phd in Math Education at PUC-Pontifical Catholic University.

2- Center for Dissemination and Teaching MATEMATECA is attached to the Department of Mathematics through (mandatory) participation of professors from that department in its board of directors. The same bond exists with the Department of Applied Mathematics. The area of scientific dissemination is still incipient in Brazil and the MATEMATECA is the largest national collection of its kind, constituting a reference and a stimulus for the research in the area (either from the museological and museographic point of view, or the scientific communication point of view).

Internationalization

2.11.1 Analyze the internationalization of core activities and its impact on the Faculty's performance in the last 5 years.

(Computer Science - IME)
R: The Department of Computer Science has always developed activities devoted to internationalization, ensuring its presence in the specialised international community. These activities have been shaped with research cooperation agreements, mobility programmes and hosting of post-doc researchers. The Institute of Mathematics and Statistics has created, in May 2011, the International Relations Office, which organised and structured all activities and information related to internationalization, contributing to the growth of all activities that were already under development. The results of this expansion can be observed by the growing acknowledgment of the Department of Computer Science by the specialised international community, as well as by increasingly positive positioning of the Department and of the University as a whole in international rankings of academic assessment.

(Statistics - IME)
R: The Department always had a strong presence in the activities of internationalization, either receiving or sending students/researchers abroad. It is a common practice, the organization and participation in international events. Recently two docents coordinated projects with international cooperation (Chile and Italy) and one cooperated in an international project (USA, France, Italy, Russia, Argentina and Chile). Yet, in this period, 17 docents of universities from EUA, Russia, England, Netherlands, France, Chile and Argentina have visited the Department.
Six post-graduation students participated of interchange or doctorate abroad (USA, Germany, Canada, France and Italy). In this period, we have received over 35 foreign students in the post-graduation in Statistics program, mainly from countries in Latin America.
Six undergraduate students took interchanges to Portugal, Spain, United States, United Kingdom and Hungary. We received seven undergraduate students from France, Germany, Portugal, Venezuela and Colombia, besides three interchange students from other institutes at USP who took disciplines at IME.

(Applied Mathematics - IME)
R: The Department has always encouraged sabbatics, collaborations and international tours. It has focused on public notices in English and the wide dissemination for hiring foreigners. It also has a long tradition admitting foreign graduate students. And it has expanded exchanges at undergraduate level with the program Science without Borders. International collaboration between researchers is also a tradition in the Department, where almost everyone did a doctorate or post-doctorate outside the country. The Department is also an important part of the partnership between the IME and the Instituto Superior Técnico in Lisbon, marked by periodic events here and there. After several years with this practice results are remarkable by the increase in visitors and new foreign teachers.

(Mathematics - IME)
R: The activities developed by the rector of USP through the old CCInt, after VRERI and currently AUCANI, has been important to strengthen and validate an international cooperation culture, always present at the

university.

The Department has always developed activities related to internationalization. With greater emphasis the teaching activities and some small participation of undergraduate students. In May 2011 was created in the IME an international relations office, which has contributed to structure, organize and encourage these activities, allowing the growth of student mobility. Thus the department and the USP as a whole have been able to expand its international recognition , which can be seen, among other means, by their good results in international academic rankings.

To achieve high quality service to their academic goals MAT has sought to act in line with the general University policy in this area, as follows analyze.

2.11.2 Indicate and analyze the student, faculty and administrative modalities.

(Computer Science - IME)
R: The concrete results of the internationalization can be appraised from the table below:

UNDERGRADUATE STUDENTS EXCHANGE
Year: Incoming Outgoing

2010

0

0

2011

0

0

2012 3

8

2013

2

15

2014

2

6

MSC STUDENTS EXCHANGE

Year:	Incoming	Outgoing
2010	10	0
2011	2	0
2012	5	0
2013	6	0
2014	6	0

PHD STUDENTS EXCHANGE

Year:	Outgoing - with scholarship	Incoming
2010	0	5
2011		

3

3

2012

5

7

2013

4

3

2014

14

3

POST DOC RESEARCHERS EXCHANGE
Year: Outgoing Incoming

2010

0

3

2011

1

7

2012

1

3

2013

0

6

2014

1

4

FUNDED INTERNATIONAL RESEARCH PROJECTS
Year: Outgoing Incoming

2010

0

0

2011

2

0

2012

2

0

2013

2

0

2014

2

0

(Statistics - IME)
R: Projects: 1. Modelling in Statistical Methods and Reverse Problems USP/UNICAMP/UFRN, 2. Time series, analysis of the dependence and generalized models USP/PUC-Rio/UFLa, 3. Agricultural insurance;

statistical modelling and pricing USP/UFMG/UFLa, 4. Center for Convergence of the Sciences of Life, Physics and Engineering for the Innovation in Diagnostics and therapies, Center of Support to Research (NAPs), 5. Title: Integrated Network of Genomic and Proteomic Studies for Identification and Validation of Candidate Genes to the Arterial Hypertension, Project CNPq, Public Notice MCT/CNPq/CT-AGRO/CT-BIOTEC at 42/2009 - GENOPROT Network, 6. Title: Cardiovascular Genomics: biomarkers & new therapies - CVGen, Thematic Project FAPESP (Process 2013/05067-6), 7. Stochastic modelling of the cortical plasticity. Applications in the traumatic avulsion of the brachial plexus and its surgical reconstruction CAPES/NUFFIC 038/12, Visits to the program (201D-I3) The program received around 300 visits by more than 250 researchers, 155 from abroad, and a few over 150 from Brazil. Seminars/Lectures: The group of Probability has two major projects of research, these are: Stochastic modelling of Interacting Systems, NeuroMat both funded by FAPESP. There is a weekly seminar counting to an average of 40 seminars a year, in total 120 seminars in the triennial. A third of those seminars are given by guests from abroad. The other research groups also have seminars, though with less frequency and often focused on the projects of doctoral theses and masters dissertations of those groups.

(Applied Mathematics - IME)
R: The answers have been given in the previous question. In administrative mode there is no initiative related to internationalization.

(Mathematics - IME)
R: There is a steady increase in the number of international publications.
2010 - 23
2011 - 39
2012 - 38
2013 - 36
2014 - 37

The number of visiting researchers has also grown over the past 5 years
2010 - 62
2011 - 60
2012 - 59
2013 - 40
2014 - 39

The number of foreign postdoctoral students has grown in the last five years.
2010 - 06
2011 - 16
2012 - 11
2013 - 16
2014 - 13

The MAT has significant participation in international actions carried out by the IME. We can cite the IME/IST meetings (Technological Institute of Lisbon) and the meeting that is to take place between IME and OHIO University.

Even the National Meeting of Young Researchers in Mathematics owned an international character and played an important role in the MAT.

As part of the graduation the number of students who participate in mobility programs is significant when compared with the size of Departament.

We sent 15 students abroad Merit Scholarship Program and the Santander Scholarship between 2010-2014 and 9 students in the Science Without Borders program.

The Institute has an office of international relations, and this takes care of the activities all departments. Thus the administrative part for this sector is together and the clerk of the common office participated in several events and even participated study abroad to improve the English language; (Inglês Liverpool School .2014). To enhance their training and performance, Secretary attends the Senate Portal - International Relations: Theory and History and she is studying MBA Strategic Management at the University of São Paulo.

2.11.3 Identify the repercussions of international initiatives (workshops, missions, the involvement of students and professors in national and international scholarly exchanges, agreements).

(Computer Science - IME)
R: Faculty members in the Department of Computer Science have participated actively in their international research communities. Among the activities developed by these researchers we have the organization of international conferences and workshops, and the establishment of research agreements and international mobility programmes. Many of the results reported in the previous sections of this document result from the individual effort of faculty members. Since 2011, these actions have been supported and put forward by the Institute of Mathematics and Statistics, through the International Relations Office.

(Statistics - IME)
R: Title: Externalities and Economic Behavior FAPESP /USP/Hebrew Unlverslty of Jerusalem, 2. Estimating Global Individual Ancestry Using Principal Component for Pedigree Data Mayo Clinic, 3. Stochastic Systems with interaction of variable reach USP/COFECUB - 2009.1.820.45.8, 4. Stochastic Structure of Large Interacting Systems MATH AmSud/CAPES - CAPES/STIC-AmSud 009/10. Visits to the program (2010-13): The program has received around 300 visits by more than 250 researchers, 155 from abroad and few over 150 from Brazil. Seminars/Lecures: A third of these seminars is given by guests from abroad. Post-doctorates (2010-13): There were more than 20 post-doctorate projects (with varying duration of 1 and 4 years) funded by the agencies CAPES, CNPq and FAPESP.

(Applied Mathematics - IME)
R: In the field of institutional initiatives, we highlight the partnership IST / IME, with events between the IME and the Instituto Superior Técnico in Lisbon, where MAP actively participates; and the partnership USP / Université de Lyon, whose last workshop had the joint exhibition between Matemateca and the Maison des Mathématiques et de l'Informatique de Lyon.

(Mathematics - IME)
R: Recent workshops for cooperation between the University of São Paulo and University of Lyon brought the strengthening of ties between the two institutions. In the case of MAT, the areas involved were Algebra and Matemateca. Algebra already possess links with Lyon and these were increased and was even made two specific meetings in the area, one in France other in São Paulo. New meetings are scheduled.

The Matemateca held joint exhibition with the Maison des Mathematiques Lyon in November 2014 in Sao Paulo and new joint actions are planned.

The MAT is growing in action in the Undergraduate Program Internaconal (PLI) of CAPES, with increased interest from Licenciatura students to have international character formation.

2.11.4 Identify international strategies.

(Computer Science - IME)

R: The strategy for a growing international presence of the Department of Computer Science is to intensify and strengthen the activities already under development.

(Statistics - IME)
R: The program of post-graduation in Statistics of USP has a webpage in Portuguese and English: http:/fwww.ime.usp.br/maetpos. The available information are: subscription and admission, scholarships and grants, docent body, cast and time schedule of disciplines, concluded masters and doctorates (including the composition of the evaluation committees), scheduled defenses, norms, events and seminars. The doctoral theses and masters dissertations defended in recent year are available in their digital version. Docents of the program organize workshops in and outside IME, receiving logistical and financial support of the program of post-graduation in Statistics, through the resources of CAPES/PROEX. These activities are widely disseminated in the Brazilian scientific community. Every major national academic and scientific event of the field of Probability and Statistics received some kind of support from the program of post-graduation through the resources of CAPES/PROEX. Such supports are recognized in the posters, booklets and webpages of these events. The projects involving the researcher of the program of post-graduation in Statistics are a mirror of our role of leadership. At the moment we have 11 ongoing projects, 5 of large size involving groups from the country and abroad. Researchers of the program organized twenty congresses that attracted other researchers from Brazil and abroad and also masters and doctorate students from our program and other programs of post-graduation of Brazil. A total of thirteen international journals have researchers from our programs as associate editors. From 2015 on our selection process will count on online procedures and publication of notices in researchers networks from some countries in Europe and also advertising in specialized journals.

(Applied Mathematics - IME)
R: International strategies are: (i) encourage the output of faculty and graduate students; (ii) opening for the entry of professors and graduate students from other countries; (iii) admission of foreign postdocs (some of them end up settling in Brazil); (iv) teachers of the Visiting Foreign Professor Program.

(Mathematics - IME)
R: The Department ever since its creation in 1970 prioritized the international integration of the work of their professors.
In the 70s, and early 80s, many teachers were sent to doctorate abroad. More recently, a large number of professors who studied PhD abroad, many foreign, were hired. These professionals are a key contributor to the departament. Currently, despite the crisis of shortage of professors, the Department seeks to facilitate the exit of professors to conferences and research internships besides the organization of international events at IME. The "atmosphere" of MAT is highly internationalized. We also believe that the Commission of International Relations of IME will continue the work started in 2011, and this will be beneficial to the department and the entire institution. Also, there is a support strategy for undergraduate students participate in different mobility programs abroad.

2.11.5 Identify the main management and infrastructure demands related to meeting the Faculty's internationalization strategies.

(Computer Science - IME)
R: Despite the acknowledgment from the Department of Computer Science of the importance to ensure and broaden the international presence, as well as the acknowledgment of the importance of the support from the International Relations Office to pursue these actions and goals, this Office has not been included by the institution as part of its formal and organizational structure. An important request to ensure that the activities of the International Relations Office can be developed is to include it formally in the structure of the Institute, so that it can have its own budget and administrative autonomy to act more effectively.

(Statistics - IME)

R: Besides providing support for visitors and people interested in visiting centers of research abroad, one of the main demands is to place the information, norms, regulation and so on in an organized and bilingual structure, which offer support for the interaction. The Pro-Rectory of International Relations of USP has done an expressive work with this purpose.

(Applied Mathematics - IME)
R: The main difficulties concern the excessive bureaucracy and the allocation of rooms for visitors and postdocs. And the great difficulty in hiring foreigners, because the bureaucracy assumes that the newcomer can spend several months in Brazil without receiving anything, waiting to be hired.

(Mathematics - IME)
R: The rectory of USP by AUCANI, provides all the infrastructure and internationalization strategies. The Department or IME dos not have its own budget or autonomy to set their missions. We received much support and many missions, headed by the rector, such as English, French, Portuguese, American and Japanese missions. And at every visit we always establish relationships and agreements.
We believe that the rectory will give more support to CRInts, either through the training of employees, improving the system Mundus or by the help with administrative procedures towards the reception of foreign visitors in Brazil and at USP. The bureaucracy in the sector remains very heavy, endangering international cooperation actions and happens internally (USP) and externally (Bank of Brazil, federal police, embassies).

INSTITUTIONAL PLAN (GOALS AND ACTIONS)

Institutional Plan (Goals and Actions)

3.1.1 Relate and comment on the primary goals and actions proposed by the Faculty for the medium and long terms (5 and 10 years) concerning:

a) Management;

(Computer Science - IME)
R: In line with our ambition to put ourselves among the top 50 departments of Computer Science in the world, we intend to improve the efficiency of our service courses (courses for other USP units), increasing the number of undergraduate and graduate students in Computer Science, increase our scientific-technological production, and expand our interaction with the productive sector. Therefore, we elected the following aims as priorities:
1- Increasing the academic efficiency of the department. Prerequisites: deployment of support platforms, enabling the automation of activities such as automatic correction of tests in courses that display educational advantages in this activity; creation of out-of-classroom support materials; approval of use for these innovations in undergraduate and postgraduate courses offered to the USP community.
2- Efficiency of the Bachelors in Computer Science (BCC): decrease dropout rate and graduation time and increase the number of entry places. Prerequisites: improvement in entry (vestibular) sensitivity in selecting students with the right profile for our course; availability of teaching staff, either by hiring or increased academic efficiency; existence of adequate infrastructure (laboratories and classrooms).
3- Expanding our graduate program and research activity, receiving a greater number of qualified students, from Brazil and abroad, and expanding the number of disciplines offered. Prerequisites: increased number of entry places for BCC; availability of finantial support.
4- Expanding our exchange with the national and international productive sector in highly complex problems. Prerequisites: reducing bureaucracy in the establishment of national and international agreements.
5- Promoting the creation of startups by our undergraduate and graduate students as they finish their courses.

These strategic actions should allow us to approach the defined aims. The investment in modern technology for education will reduce the basic workload of our professors, which will then enable an increased investment of time in advanced teaching and research in Computer Science. The expansion of the undergraduate course will provide the qualified expansion of the graduate program, which should intensify our scientific and technological production. The interaction with the productive sector will be intensified by the large visibility of online courses, by the national and international interactions and the development of startups.
The interactions with the productive sector should also contribute to increasing the resources for research and retain graduate students in the university, which it is currently a major challenge. In particular, the international consultancies offer additional advantages, such as bringing foreign research funding into the country and exposing our researchers to cutting-edge technological problems.

(Statistics - IME)
R: The recent Institutional Program for Voluntary Demission reduced from 6 to 3 the number of the technical-administrative employees placed in the Department. A gradual reposition and a policy of computational maintenance just as an expansion of the physical space for docents and students must be a goal to be reached in the short term. In the medium and long term, an increase in the vacancies for the bachelor in Statistics would require new hiring for Docents, which might include, the repositions to the expected retirements to happen in the short term.

(Applied Mathematics - IME)
R: The Department already had a newly established internal evaluation commission when the introduction of the current process took place. Our goal for the coming years is that this committee will become permanent and will assist the department in identifying the major internal difficulties, and think solutions to these. In addition, the committee will also assist in identifying new areas of activity in education and extension.

The development of new activities and the solution of the existing problems involves a large administrative workload, something difficult to be managed within a relatively small department. To make this process possible, we will seek to identify disparities in the distribution of administrative workload and other relevant activities as advicing students of every level or organizing and developing large projects, and try to find, respecting the individual responsibilities of the members, a more equitable distribution of the burden. We should also take advantage of the recent increase in the number of faculty members.

(Mathematics - IME)
R: The Department of Mathematics believes that its performance in recent years have been in perfect accordance to its vocations and goals. On the one hand, it is a department in which research is a essential part of day-to-day work and, on the other hand, given its charachteristics, MAT is a department with a strong emphasis in the provision of services within and outside the USP community. It's necessary to emphasize the high number of enrollments in charge of MAT annually and also the workload spent in disciplines to other courses in USP. In addition, mainly though the CAEM(Center of Improvement of the Teaching in Mathematics) and more recently along MAT's Educator Licensure, MAT has acted strongly in the formation of mathematics teachers, contributing this way to the improvement of teaching in its many degrees. More precisely, MAT is responsible for the undergraduate, Bachelor Degree and Educator Licensure in Mathematics course(daytime and evening), its exact sciences course given to 10 institutes in USP represent 60% of the undergraduate teaching and approximately 15,000 enrollments a year, divided in more or less 170 classes. Post-graduation offers Mestrado Profissional em Ensino de Matemática (Professional Masters in the Teaching of Mathematics)(53 students/2015) and academic masters and doctorate(126 students/2014), the latter received a grade 6 from CAPES(Coordination of Improvement of Personnel of Higher Level). The research groups of the MAT are very active in the scientific production of the highest level, from which has attracted a good number of visiting professors and postdoctoral students, in its majority, foreigners. About 60% of our researchers receive grants for productivity from CNPq(National Council of Scientific and Technological Development). CAEM attends a large number of public school teachers, offering courses, workshops and lectures, with an average number of 400

participants a year. In recent years, MAT have been facing a drastic reduction on its staff and the replacement of at least 15 professors haven't yet been made by USP rectory.
Our main goals are:
1-Continuous replacement of vacant posts due to retirements and contract rescissions, all in RDIDP(teaching and research staff regulation);
2-Gradual elimination the classroom overcrowding;
3-To offer, semiannually, initial disciplines (other disciplines requirements) which present high levels of retention;
4-Recognize, in conformity with USP norms, the orientation work as part of the teaching responsibilities of the professor;
5-Give continuity, and if possible expand, the removal policy of research traineeship;
6-Encourage even more visits from professors and scientific exchange with other institutions;
7-Encourage the participation of the professors in the activities of CAEM;
8-Improve the facilities in its entirety
A historical reducement of its staff combined with the increase of the tasks requires urgent and qualitative replacement of 20 professors.

b) Infrastructure;

(Computer Science - IME)
R: The increase in the number of undergraduate and graduate students requires more physical space for classrooms and laboratories. We intend to increase the number of undergraduate students from 50 to 80 or 100. This requires two more classrooms and two laboratories. The expansion of the graduate course requires more space in the research labs, namely two new laboratories. As in cutting-edge research centers, we would like that the library of IME and the research labs to be open 24/7. The attraction of students and the establishment of students at USP is greatly impaired by environmental conditions of São Paulo (such as cost, violence, travel time, etc.). Therefore, we recommend that the rectory invest in university residence for students. The laboratories will continue to be equipped with the resources of our research projects.

In short, we must have an infrastructure compatible and similar to the ones in the best Computer Science research institutions in the world.

(Statistics - IME)
R: There is a shortage of physical space, for both the docents and alumni, which must be sorted out in the short term so that the work conditions do not suffer damages. A reform in the building of the Block B must be realized in a short space of time, in order to solve the poor conditions (limited electricity, leaking, lack of a food court, etc.)

(Applied Mathematics - IME)
R: We intend that, in 10 years, our physical space will allow all serving faculty members to have individual offices, as well as allowing to better accommodate post- docs and PhD students in a way as to provide a quality study enviroment. We also intend to double the rooms studies for undergraduate and graduate students, and have some coffee shop or another option for feeding the students, who also is open to serve the students of the night shift.

(Mathematics - IME)
R: The physical space available to the Department of Mathematics (MAT) is not adequate. For instance, the rooms destined to professors and visiting professors are inadequate in number and quality. Many of them are being shared by two professors in our department. Professors with offices at the Block B of the Institute often complain of the bad work conditions. The physical space can also be considered not inadequate taking into consideration the number of students that MAT has under its responsibility. With the cutback of MAT's staff in recent years and its lack of replacement, the number of students per

classroom has increased considerably, which brings real loss in the learning process. It is guaranteed to say that there is a lack of rooms for classes and lectures and many of the ones available have structural problems. The available physical space in IME for post-graduation students (an average of 130 students a year) have not been expanded in recent year, leading to overcrowding. IME has little space for convivence and leisure in general. The restaurant once situated in block B was closed many years ago. CAEM, center under the responsibility of MAT that does a good job of great social importance is not adequately installed, what prevents, among other things, its expansion. The Library of IME attends all of its four departments. Its collection is among the two best in the field of mathematics in Brazil, however, it is worth mentioning that its physical space is gradually getting inadequate to its better functioning, making it not possible to receive large donations of books and magazines, etc.
Our main goals are:
1- The increasing of classrooms;
2- The increasing of the physical space destined to the docents, visiting professors and postgraduate students;
3- An adequate physical space for CAEM;
4- The increasing of the physical space for MATEMATECA;
5- The increasing of the physical space of the Library.
Our actions are:
1- For the good development of the research and teaching, the Department has requested to the director of IME an effective and continuous action towards Central Administration for the improvements in the physical space;
2- Promote the creation of new convivence spaces and open a snack bar.

c) Technical and administrative employees;

(Computer Science - IME)
R: As has been reported in the media, non-teaching staff at USP, in general, have salaries compatible to the best of the market; simultaneously with the reduction of State resources to the university, we understand that we must prepare ourselves in the future to have just a few very well-qualified employees. Therefore, we emphasize the importance of the rigorous selection of the new hires in order to ensure the quality. We currently lack two good of Computer Science technicians for the infrastructure of our research laboratories. Additionally, we need resources so that at least one of our department´s secretary be intensively trained in English.

Finally, it is desirable that raises in salaries and progression in the carreer be exclusively based on the performance of the employee and not on how long ago the employee has been hired. In the same way, employees that do not fulfill their obligations and present a very poor performance should be dismissed from the university.

(Statistics - IME)
R: The reposition of 3 technical-administrative employees that recently joined the PIDV - Institutional Program for Voluntary Demission, must be solved so that in the medium term the activities do not suffer any harm in their continuity. Retirements must be expected in advance for an efficient management.

(Applied Mathematics - IME)
R: We intend to increase the number of employees in order to replace the staff that left after the PIDV. We also intend to sustain the current level of commitment from the staff and the good work enviroment.

(Mathematics - IME)
R: The recruitment of administrative and technical workers of the Department is determined by the Institute, however, the leadership and the departmental secretary is always alert to the good professional relationship and improvement of its employees. This is measured, for instance, through programs and/or trainings offered by the Institute administration or by the central administration of USP. Such programs

include courses such as English, informatics, writing, etc. Because of the new Program of Incentive to Voluntary Resignation, this year we lost one of our best secretaries in the Department.
Our main goals are:
1- Replacement of workers;
2- Promotion of the improvement of our workers including English and Spanish courses.
Our actions are:
1- The update and improvement of the internal computer system;
2- The constant training of the non docent employees.

d) Faculty;

(Computer Science - IME)
R: We believe that the number of department faculty members is sufficient for the proposed project, but cannot decrease. It is therefore essential that all replacements of retired docents already requested do occur as well as the replacement of other retirements or dismissals that may occur. We recognize that we need a constant effort to maintain and improve the technical quality of the professors, which should be achieved by setting ambitious and clear aims for the entire department and for the new hires and renewals of the faculty. We have had selective processes with many candidates, which led to excellent hiring and we will strive for this to continue happening.

(Statistics - IME)
R: A policy of replacement of docents that aim to retire, thinking that for the next two years, two of them will be compulsory, must be implement so that the Department may keep its workload according to the current regime, to maintain and manage to evolve in the search for its activities end. New hiring of docents and opening of job contests for an evolution in the career must be planned and executed in the short term.

(Applied Mathematics - IME)
R: Over the next five years , at least one faculty member will be compulsorily retired, and other 6 members will reach the requirements to be entitled to retirement. Even with the current financial situation of the university, the department expects at least to be able to replace the retirements that are realized.

We intend to maintain the current procurement policy, allowing tests in English and improving international dissemination of vacancies to try to attract the best possible candidates. In the event that any of the current research areas becomes depleted, the department may also direct the vacancies to meet this difficulty.

(Mathematics - IME)
R: From the 1990s on and because of the lack of replacement of vacant posts due to retirements and rescissions, the Department faced a drastic reduction of its staff what coincided with the significative expansion of its activities in various areas. Due to this issue, the workload of its docents has increased greatly and the Department was obliged to adopt measures that led up to some distortions. Many classes have become exaggeratedly numerous; cuts on disciplines and on reofferings of disciplines (from 2001 on, the opening of those classes was stopped due to the lack of professors, even with the constant demand from many institutes). If just to follow up the expansion in the above mentioned period, and also considering the significative increase on the orientation in many fields, the Department should have received, at least, 15 new professors in RDIDP. However, our staff has remained practically unchanged. In the period between 1995 to 2015 the number are:
105,96,97,80,81,81,81,73,73,79,85,85,87,87,87,87,85,89,89,89,87,85. Due to this reduction of the staff, the issue of the teaching workload has worsened critically in the last 2 years. It is not surprising that the average teaching workload in a classroom for a professor of MAT is one of the highest in USP. This year the average number of credits by docent will be above 15, even with the help of the Department of Applied Mathematics and retired professors. Despite of such difficulties, because of the enormous

dedication of its staff, the Department has been well evaluated in the disciplines it offers, it forms a growing number of masters and doctors and its research groups cover a very wide range of sub-fields with significant scientific production, recognized internationally; ts extramurals activities, specially those linked to the teaching and promotion of mathematics have been nationally highlighted . It is worthy to point out that up till 2017 it shall count, probably, with only 64 professors, due to the possible retirements during this period.
Our main goals are:
1- Emergencial replacement of 8 professors in RDIDP, corresponding to the retirements and rescissions ocurred in 2013 and 2014;
2- Concession of the 3 "claros" work posts in RDIDP that has been request due to the implementation of the Professional Masters.
Our actions are:
1- Emergencial replacement of 8 docents in RDIDP, regarding the retirements and rescissions ocurred in 2013 and 2014;
2- Granting 2 claros work posts in RDIDP that had been agreed upon the expansion of vacancies at Escola Politécnica;
3- Presenting, in the month of April/2015 to the Central Bodies of USP, a document that describes a history and more detailed analysis of our critical lack of professors;
4- Scheduling of a meeting with the Dean of USP in order to inform and find solutions to overcome the difficulties that the Department is facing.

e) Teaching and learning processes;

(Computer Science - IME)
R: For basic courses at IME and service courses (at other units of USP), we will intensify the construction and use of modern technologies for education. As far as possible, we will extend this action to all undergraduate and graduate courses.

(Statistics - IME)
R: So the current available jornal subscritions in the library do not suffer discontinuity and the collection keep being updated through a systematic and uninterrupted policy of acquisitions. Innovations and availability of new didactic material must be implemented with the due planning and Institutional support.

(Applied Mathematics - IME)
R: Our new bachelor now already have more than ten years of creation. We will proceed with a complete reassessment of them, identifying the actual results and the differences observed with the initial project. We will seek to track how the final thesis work is in accordance with the objectives initially proposed, and integrate our undergraduate training with the expectations of ours and other relevant graduate programs.

(Mathematics - IME)
R: In the Department of Mathematics, it is not possible to say that there are established teaching and learning procedures, since our professors have great liberty of action in the classroom. In the Bachelor in Mathematics course, the syllabi of the disciplines and and a certain established tradition are indeed coherent enough with the expected profile of the student. In the Licensure course, with the Programs for the Formation of Teachers of USP and the Program of Curricular Internship, the MAT offers, to the mathematics teacher in public schools, yearly extension courses (60 hours) realized concomitantly with the mandatory undergraduate discipline, MAT1500 - Projects of Internship. In this courses, it is discussed the teaching through its projects and groups formed by teachers of public schools and the students of Licensure, projects or didactical sequences are encouraged to be elaborated to be applied in the classroom, with the help of the students as interns. Work Plans between schools and IME are formulated every year, establishing a partnership that guarantees the internships for the students and also the continuous formation of teachers (via CAEM).This program is innovative and is representing a very rich internship experience, providing a positive contact with the reality of public school to the students. In the

Master course there are disciplines focused in the development of didactical projects, assessment methods and in the learning of new technologies.
Our main goals are:
1- Resume the hiring of professors with professional profile compatible to the initial and continuous formation of teachers in elementary and secondary school;
2- Keep the current good levels in the Bachelor and the Post graduation programs;
3- Strengthen the Professional Master in Mathematics Teaching;
5- Strengthen the CAEM.
Our actions are:
1- Recently opened vacancies of 4 posts for professors with professional profile compatible with initial and continuous formation of teachers in elementary and secondary school;
2- Intensify and perfect the specialization courses offered by CAEM;
3- Improvement of the physical space, expansion of the didactical materials and of informatics

f) Student body;

(Computer Science - IME)
R: Despite the quality of the student body formed in an effort to reduce evasion and improve the technical quality of graduates, we note that there are two problems relating to the attraction and retention of undergraduate students:
1- USP "vestibular" (admission exam) has been increasingly less effective in attracting students with a more appropriate profile with a strong foundation in Mathematics, which is very important for our course;
2- We have a hard time keeping our students full-time at the university during the course due to early and intensive job offers made by companies for our students.

These two factors affect the dropout rate, completion time and technical quality of the graduates in Computer Science. As for the "vestibular" (admission exam), we are in favor of tests with a higher degree of selectivity, since we have maintained a good candidate/vacancy ratio in the admission exam. We hope the Math test be more comprehensive and with progressive difficulty, as in the first tests of FUVEST, almost 40 years ago. Currently, we are developing more restrictive policies for internships, aiming that this activity does not adversely influence the academic performance of the student. With the creation of new prizes for students, we aim to encourage students to seek higher grades in the course. Today, 38% of our students come from public schools, so it is necessary to think in resourceful ways to keep them in college full time.

(Statistics - IME)
R: Increase the access of the computational structure made available by the Institute. A wider flexibility of available schedule for the access to the Library. Policies of permanence for students with financial difficulties must be implemented, concomitantly with the recent policies of ingression through bonus and through ENEM/SISU, so that the Department may be able to reduce the evasion rates to acceptable levels.

(Applied Mathematics - IME)
R: Our projects for the student body are described with our projects for the undergraduate programs.

(Mathematics - IME)
R: MAT is responsible for two undergraduate courses: Bachelor in Mathematics (BM) and Licensure in Mathematics (Lic, which is offered daytime and evening). The syllabus of the discplines in BM and Lic are very coherent with the expected profile of the students. There is more difficulties in the evening course of Lic, since the vast majority of students work during the day and has little time for studying outside classes. Few are the students of evening classes that are able to finish the course in due time. In general, our undergraduate students actively participate of international mobility programs. the Undergraduate Research is part of the curriculum of the BM. The orientation work of such students is voluntary and not

all professors participate. Our students in post graduation are well positioned nationally and internationally. A great part of them are from abroad. One of the difficulties we have nowadays is the lack of workers in the secretary of post graduation who speak English and Spanish fluently. The evasion rate of our students in the undergraduate (Lic/20%, BM/30%) and post graduation (32%) programs in the previous quinquennium has been very high. We believe that in the case of post graduation the reason is linked in the increase of the offer of grants and scholarships in the post graduation programs in Brazil linked with the high cost of living in the city of São Paulo.
Our main goals are:
1- Avoid the high evasion of students;
2- Attract talented students;
3- Expand the physical space for students;
4- Consolidate the international mobility programs;
5- Institutionalize the follow-up systems for our new students.
Our actions are:
1- Stimulate the participation of students in activities of internship and programs such as PAE(Program for Improvement of Teaching);
2- Encourage the participation of the Department in the programs USP and the Professions, Professions Fair, events that attract thousands of students to the USP campus;
3- Remain looking for more scholarships and grants for post graduation students.

g) Undergraduate Program;

(Computer Science - IME)
R: The Bachelors in Computer Science underwent a major reform crafted for over two years and recently completed. In the coming years, we will be implementing and perfecting the new courses grid subject to the availability of additional workforce. The new program innovates, compared to other courses in the country in at least two points. First, we have a small core of mandatory disciplines, allowing students to shape the elective courses according to their interests. Second, we provide coherent suggested tracks of elective courses to guide students in some areas in which the department has excellence in research: theory, systems, artificial intelligence, e-Science, among others. The implementation of this reform will be monitored by the course committee and has awakened the interest of the Brazilian community, having received the highlight award in the Brazilian Symposium on Education in Computer Science.

(Statistics - IME)
R: The Department of Statistics is responsible for a bachelor in Statistics (40 vacancies a year). Also, the department offers courses of basic statistics for around 3800 students from 20 institutes at USP in the exact, biological and humanities sciences fields. Docents of the program have been engaging in orientations of Undergraduate Research (IC) along undergraduate students. The main extramural activity of the department of Statistics is the consultancy through the Center of Applied Statistics (CEA) and involves directly students from the bachelor. Docents and students provide assistance for the other university bodies, for other public and private institutions and even to people in general. It is usual the works of CEA give birth to theoretical and methodological problems, encouraging the development of research. CEA has a strong presence in the formation of the bachelor in Statistics students, once all of its activities involve the students. CEA does work in the form of consultations and projects for statistical advisory. The projects involve a complete planning and/or statistical analysis of data. Statistical advisory provided by the Center of Applied Statistics (CEA) with the cooperation of 21 docents of the Department of Statistics of IME-USP, of which great part is member of the PPG, and 28 students of the bachelor in Statistics, with 28 works of researchers of various institutes of USP, besides 27 interviews for data analysis and planning. Also were realized 10 lectures as part of the activities of the disciplines MAE413 and MAE 423 (Applied Statistics 1 and 2), come of which with interest for the PG, and supported by PPG.

(Applied Mathematics - IME)

R: In addition to the objectives described for our student body we will also seek a greater involvement of faculty with undergraduate students and the final course thesis. Also, we intend to implement a specific exact sciences modality with all courses given at night.

(Mathematics - IME)
R: The DM is responsible for 2 undergraduate courses: Bachelor in Mathematics (BM) and Licensure in Mathematics (Lic), the latter offered daytime and evening. It is also in charge of a great number of disciplines that serves other institutes, representing 60% of the teaching workload of the undergraduate studies, which annually implies in an average of 15.000 enrollments and offering of 260 classes. MAT has a pressing necessity to hire new professors so that it may continue to offer its already known good services. During the years 2013-2014 we have solicited 8 work posts to replace retired professors and rescissions, none of them were conceded. Throughout this year we had 3 new cases of retirement and the prediction of another 3 until the end of the year. The staff has decreased constantly, from 110 in 1990 to 85 in 2014. Nowadays the classes are very big (for instance, in Escola Politécnica, there are 84 classes with an average of 80 students per class) and there are no conditions to re offer disciplines with a great number of failure. Both problems are not limited to the service disciplines and, throughout 10 years, solve them have been part of the goals of the department.
Our main goals are:
1- Follow up the alterations occurred in the undergraduate courses under responsibility of MAT, evaluate in detail the courses and promote the necessary adjustments in the next years. Reduce even more the number of evasion and the permanence in the course which is still high.
2- Continue to encourage initiatives in distance education and in use of new technologies in education, and following up their performance. There are projects to expand the offer of distance education to other disciplines and students of other Institutes at USP.
3- Improve the quality of the undergraduate teaching by assembling classes with fewer students, aiming to achieve the goal of 60 students per class.
4- Follow up more closely the new students. The indicators point out that the evasion is linked with the low performance in the initial disciplines of the course, we wish to provide a bigger support to those students. For this, it is important to encourage the programs of monitorship and tutoring.
5- Resume the reoffer of disciplines in order to prevent the evasion in the first years.
Our actions are:
1- In order to achieve various goals it's urgent the expansion of the staff of professors to acceptable levels. Such goal, however, can only be achieved with the collaboration of the central bodies at USP;
2- In order to continue the evaluation of the undergraduate courses, the comissions will remain realizing general meetings with students and professors;
3- Funds for hiring more monitors per discipline, particularly for the initial ones which may contribute to the diminishing of the students difficulties;
4- Encourage the professor to take part in orientation activities for the undergraduate students in the program fo Undergraduate Research and papers through the end of the course.

h) Graduate Program;

(Computer Science - IME)
R: As in the undergraduate course, a crucial step in our graduate degree is attracting a larger number of well qualified students capable of producing original research results. We see some ways to address the problem: expanding the bachelors program; expanding advertising in the country, e.g., with lectures across the country and abroad, through our website, for publicizing successful startups linked to the program and the success of graduates in general; increasing internationalization. Regarding the internationalization, we intend to start offering courses in English by our professors or international guests.

(Statistics - IME)

R: Many students of The Program of Post-Graduation participate semiannually of the Program for Improvement of Teaching - PAE, which consists of activities regarding the undergraduate disciplines. This program is mandatory for scholarship fellow students from the doctorate of CAPES and an increase of vacancies must be sought. An effective increase of study rooms is a pressing necessity and must be solved in the short term for the current number is insufficient for the needs of the Department.

(Applied Mathematics - IME)
R: Among the main objectives of the department for years to come, we want the majority of our PhD students to perform some kind of internship abroad during their training . Also relevant to the education of students, we intend to encourage greater participation in congresses and national and international events.

The department is looking for ways to increase the dissemination of the program so as to be able to recruit more exceptional students, We intendo to further foment the new policy of offering especially focused disciplines to good graduate students.

With the recently hired faculty and the marked increased scientific production by the current body of advisors, we believe that the next evaluation will retake the 5 concept from CAPES, and we want in the next ten years to progress to 6.

(Mathematics - IME)
R: The professors at MAT have taken an active part in the programs of post graduation of IME, being responsible for the greatest share of orientation in Masters degree and Doctorate in Mathematics and of the Professional Masters in the Teaching of Mathematics. Our programs have an acknowledged quality and form a growing number of masters and doctors, nevertheless, it is clear that the lack of replacement of the professor staff has led to an overload of work, and the average number of disciplined has decreased, falling from 32 per year to something around 25, in the last 2 years. We have been receiving students in a systematic way from various parts in the country and a growing number of students from various Latin American countries, in recent years there was a growth in enrollments of about 10%.
Our main goals are:
1- Recognize, in conformity with USP norms, the orientation work as part of the didactical workload of the docent;
2- Diversify the offers of post graduation disciplines in the summer program, offering in particular disciplines in the doctorate level;
3- Support necessary actions to change our grade mark of six in CAPES, increase it to the full mark grade of seven, which is not a difficult task due to our number of docents today;
4- Encourage internationalization;
5- Increase the physical space for students;
6- Increase our funds fonts, in particular, the number of grants and scholarships for the Doctorate and the Professional Masters in Teaching of Mathematics.
Our actions:
1- Hire new docents;
2- Request the increase of the number of grants and scholarships of masters and doctorate towards the funding agencies;
3- Increase the relation between the teaching workload of the post graduation and the whole of the teaching work load of MAT which is today of 9%;
4- Strengthening of the Professional Master in Teaching of Mathematics;
5- Constant improvement of the physical space and of its collection.

i) Research;

(Computer Science - IME)
R: Our research deals with the application of computer science to other areas, with a strong multidisciplinary interaction. After the consolidation of the course of Computational Biology, we are now treading paths in the areas of e-Science and Digital Humanities, including computer applications to Linguistics, the Law, the Social Sciences, among others.
The cutting-edge research requires continualy qualified researchers, resources, international interaction and qualified students. We work continuously for national and international resource encouragements agencies and businesses. The funds raised from international companies, as well as support the research, bring foreign exchange to the country, are taxed in a manner not feasible (45%, amounting deducted from USP and the federation, plus other fees depending on the use of the funds in question), which makes us uncompetitive in the international market and discourages researchers to do this activity. We hope USP actions to mitigate this problem, in case of direct investment in research.
We have an ongoing program to increase the visibility of our department research results by organizing national and international academic events in São Paulo and, when it is possible, within the own campus and the department.
We intend to continue expanding the quality of our research on new hires.

(Statistics - IME)
R: Implement a policy of license for docents to visit centers of excellence abroad, also foment a program of visiting professors, aiming the creation of an international research network and with that, set forward the quality of the current research in development.

(Applied Mathematics - IME)
R: The department wants the scientific work of its faculty to continue to grow in quantity and quality, with greater emphasis in the second feature . We would like to maintain the recent trend were most articles are published in leading journals of their respective specialties. With the expansion of the faculty researching computational aspects, we plan to increase the representation and participation of the department in the national production area.

We will also mantain or increase the current level of international research cooperation with other institutions. To do so, we will mantain our current policy of providing, whenever possible, regular paid sabbatical leaves for the faculty provided they are tied to research projects.

(Mathematics - IME)
R: Our Department is one of the most active in research in Latin America and has international recognition.The scientific policy nowadays might be summarized in the constant support to scientific interchange with pairs from other universities in Brazil and abroad. Its research groups contemplate a wide range of sub-fields with significative scientific production. Because of that, for more than 10 years our program of Post Graduation in Mathematics has a grade mark 6 in the CAPES evaluation; 2/3 of our recent production are in international journals of high standard (A1, A2, B1) according to qualis-Capes; around 60% of our researchers have grants of productivity CNPQ. Aiming the strengthening and growth of the research groups, MAT has nowadays a policy for long and short period removals that allow the active researchers to keep constant academical contact with other groups. MAT has received a large number of researchers in program of post doctorate; in recent years we acknowledge that 2/3 of them are from abroad and many are granted with FAPESP scholarships.
Our main goals are:
1- the strengthening of its already consolidated research groups;
2- the maintenance of the quality standard of its post graduation;
3- encourage even more the growth of the average number of publications by the professors who are part of the post graduation program of MAT;
5- the increase of the researchers staff of the Department.
Our Actions:

1- continue, and if possible expand, the policy of removal in research internship;
2- to remain supporting the coming of visiting professors, post doctorate students and scientific interchange with other institutions.
3- stimulate the organization of congresses of international kind in and/or outside IME-USP, and the participation in scientific congresses and scientific visits;
4- encourage the participation of its docents in the programs of Scientific Research and post graduation;
5- encourage the increasing of financial supports in response to projects (in the style of project 1 of the Pro-rectory of Research of USP);
6- improvement of the physical space (rooms) for researchers, professors, post graduation students and post-doctorate students;
7- improvement of the physical space of the LIbrary and financial support to the constant renovation and perfectioning of its collection;
8- stimulate our docents to take part of projects of thematic kind and/or Pronex, as well as in achieving of support scholarships and grants to research (CNPq or FAPESP);
9- remain encouraging the establishment of new agreements in academical cooperation;
10- increase even more the quality of the scientific articles published in "São Paulo Journal of Mathematical Sciences", that is edited by IME and published by Springer, in order to increase the international visibility of IME.

j) Culture and extension;

(Computer Science - IME)
R: On the culture and extension areas, we intend to increase the activities of the Centro de Competência em Software Livre (Competence Center for Free Software), with the development of applications of interest to the community. In this way, the various activities involving free software production as well as the participation in the activities of NapSoL (Núcleo de Apoio ao Software Livre - core support for free software) and other Naps in effect, has guided our activity.
Our interactions with the national and the international productive sector have come about in free software production scope and the advice, guidance and management of the development of specific applications in the areas of expertise of the department faculty.
In addition, the activities of innovation and generation of startups is being promoted by the department, many of them driven by the creation and use of free software.

(Statistics - IME)
R: Disseminate and maintain the current activities of which the Department is committed, providing encouragement and support to the interested Docents.

(Applied Mathematics - IME)
R: The department wants the current exhibition "Matemateca" to obtain a fixed space for a permanent exhibition, significantly increasing the volume of students who will have contact with less known aspect of mathematics.

We also intend to continue to encourage the participation of faculty members in projects outside the university, understanding this role as an important way to spread the knowledge generated inside, with benefits for future research lines.

(Mathematics - IME)
R: The extramural activities of MAT are developed mainly through the CAEM activities, Improvement courses, Summer courses and through the Matemateca, which is a interdepartmental project involving docents of the Department. CAEM attends a large number of teachers of primary and secondary school, specially the ones who work in public school, offering courses, workshops and lectures. It is part, along with the Licensure in Mathematics, of the supervised curriculum internships to teachers of public school of state and city control, besides projects of continued education of teachers in partnership with local city

governments and the Secretary of Education of the State. It is worth mentioning that in 2014 the workshops and courses offered by CAEM were Highlights of Culture and Extramural by PRCEU(Pro-rectory of Culture and Extramural of USP). The Summer Program offers disciplines of diffusion, as well as disciplines of post graduation that also are used in the process of selection of students in the Masters course. Nowadays these disciplines, in smaller numbers and coverage, are given by external guest professors or retired professors, since the department cannot afford to compute the class hours given in the summer course in its annual teaching workload. Matemateca has in its staff, professors of the Mathematics and the Applied Mathematics departments.Throughout the last 10 years, Matemateca has built the biggest collection of promotion material of the mathematics in Brazil. Matemateca exposes its collection in many Brazilian cities and in public and private schools, besides this, it has projects of collaboration with similar entities outside Brazil, such as the Imaginary from Oberwolfach(Germany) and the Maison des Mathématiques et de l'Informatique from Lyon(France).
Our main goals:
1-Hire 3 new educators for CAEM, aiming the expansion of the activities offered as well as the orientation of the supervised internships of the Licensure;
2-Recognize the hours used in the courses offered by CAEM as part of the teaching workload;
3-Expansion of the virtual communication in order to reach a larger public;
4-Expansion of the number of published titles by CAEM;
5-Recognize the hours used by the docents of MAT in the summer courses as part of the teaching workload.
6-More physical space for CAEM and permanent exposition of the Matemateca.
Our Actions:
1-Encourage the participation of the docents in the extramural activities, specially the ones in CAEM, making possible the offer of more Update Courses;
2-Invest in the improvement of the physical space, in the expansion of the didactical material and hardware for the CAEM;
3-Encourage the offer of courses and disciplines of post graduation and diffusion in the Summer Program;

4-Invest in the expansion of the collection of the Matemateca and encourage the use of hardware in its expositions;
5-Encourage the participation of docents in projects for the improvement of the teaching of mathematics in Public Schools.

k) Internationalization.

(Computer Science - IME)
R: We have a program of sabbatical periods for docents abroad. The amount of professors that have spent seasons in prominent universities abroad has increased (Cornell, UC-Irvine, U. Paris, Technion, etc) and we intend to make this kind of output part of the routine of the program's researchers.
We also intend to take advantage of the existence of "Ciência Sem Fronteiras" (Science Without Borders) program to send newly-docs, graduate students and also for undergraduate internships abroad.
Finally, as a result of these trips abroad, the return of members to Brazil intend to attract foreign post-doctoral and graduate students. We already have a well-organized student community of the Andean America that allow absorb newcomers and we would like to extend this network to students of other nationalities.

(Statistics - IME)
R: Present useful information about the various activities of the Department, in bilingual form, and in wide and systematic way. Offer undergraduate and post-graduation courses in English aiming to attract a larger number of candidates to our programs. Support and encourage travels to centers of excellence in Statistics for the alumni, also supporting visits from talented candidates from abroad that search for a

solid formation in Probability and Statistics.

(Applied Mathematics - IME)
R: We intend to maintain current policies, encouraging medium and long-term visits of renowned researchers, facilitating the participation of foreigners in selection process of new faculty, organizing international conferences as well as bi-university meetings, and keeping dual degrees programs and international exchange for undergraduate students. We will also keep the current policy of helping, as far as possible, department's faculty to regularly do research internships abroad.

In addition, our plan is to try to make better use of existing outreach activities to capture more effectively top talent for our courses.

(Mathematics - IME)
R: MAT has always prioritized, since its creation in 1970, the international insertion of the work of its professors, even if it had never explicitated this strategy. In the last 15 years, a large number of foreign professors with formation in Brazil or abroad have been hired in the appointment selections. Such professionals contribute in a fundamental way with the Department. Even with the crisis of the lack of professors, MAT tries to facilitate the absence of professors that will attend congresses and research internships, as well as the realization of international events at IME. We can say that the "atmosphere" at MAT is highly international. The Commission for International Relationships of IME, created in 2011, has been very beneficial to the Department and the Institution in general. The Dean of USP through the AUCANI(USP Agency for National and International Academic Cooperation) provides all the infrastructure and strategies of internationalization. The MAT and IME have no autonomy of funds to establish its missions. We receive, through the rectory, English, French, Portuguese, American and Japanese missions among others. In recent years we've had an average of 50 foreign visiting professors and visiting post doctorate students, most of them financed by agencies such as FAPESP, CNPq and CAPES. Within the undergraduate course the number of students that participate of the mobility program is expressive. We sent 15 students abroad via Merit Scholarship Program and Santander Scholarship and 9 students in the Science Without Border Program of the Federal Government.
Our main goals are:
1- Encourage and consolidate our participation in the student/professor/administrative international mobility;
2- Encourage and consolidate the participation of our students in the Program of International Licensures (PLI);
3- Consolidate the internationalization of the MATEMATECA.
Our actions are:
1- Encourage the realization of international encounters;
2- Encourage more the participation of students in the programs of mobility and in the PLI;
3- Expansion of the virtual communication of our programs of mobility;
4- Improve the capacitation of the current worker and improve the system MUNDUS;
5- Improve the administrative procedures of the receptions of foreign students in Brazil and at USP;
6- Request to the rectory the minimization of the internal (USP) and the external (Banco do Brasil, Polícia Federal, Embassies) bureaucracies in order to facilitate the actions of international cooperation.

3.2 Explain the main indicators to be used for monitoring goals and actions proposed by the Faculty.

(Computer Science - IME)
R: In general, we would like that international placement of our department follow the placement of USP compared to other universities in the world, as reported in the media, it has achieved positions of great expression.
Regarding the specific indicators, according to the proposals made above, we would suggest:
a) In undergraduate, we would like to get a reduction of evasion, of the duration of the course and an

increase in the percentage of students who complete the course in four years.
b) In graduate degree, an increase in the number of graduates and in attracting international students.
c) For the graduate program, we would like to consolidate the position "level 6" of CAPES, targeting the improvement of this level, both of the program and docents, to increase the impact of our research on the international scene.

(Statistics - IME)
R: The physical space - offices for students and laboratories for computers - remain a setter of limits to our post-graduation programs. Few years ago IME made available new rooms, and some post-graduate students used the facilities of NUMEC. The computational infrastructure, even though wide, is yet insufficient, much because of the problem of space. Resources from CAPES, through the PRONEX, for hard and software have been used regularly to keep the functionality and update status of the system. Something we are used to experience is related to the period of titulation of the master. A share of our masters students have a profession and therefore are not available for full dedication to the studies. It is important to mention that in the city of São Paulo there is plenty of work for bachelors and maters in Statistics. Also, the values of the scholarship grants are lower than the salaries offered in the work market. To diminish the effect of this characteristic, we have increased the level of acceptance, limiting the number of vacancies; we also made small adjustments in the syllabi, reduced the number of demanded credits, slightly increased the number of scholarships and finally limited the period of masters to 3 years. The result is that today the great majority fulfills their projects successfully in 24 months. This situation is very rare in the doctorate program.

(Applied Mathematics - IME)
R: The main vehicle for monitoring the goals will be the standing committee of internal evaluation mentioned in item 3.1.1 a). It will be also responsible for suggesting to the department what are the qualitative and quantitative parameters more suitable for evaluation of the evolution of the proposed goals.

(Mathematics - IME)
R: 1- Undergraduate: one of our goals is the reduction of the number of students per class and consequently the improvement of the conditions of teaching and learning, one of the indicators is the size of our classes in undergraduate disciplines. It's necessary to follow up, along with it, the index of achievement of the students in our disciplines. For that we will invest in forms of evaluation of the disciplines offered by MAT. One indicator of the evasion is the number of graduates per year in our courses and the number of active students.
Besides that, a follow up policy of the egress must be installed and serve as indicator for the improvement of the courses.

2- Post graduation: the main indicators are: the peer evaluation (for instance, the CAPES evaluation), qualification of the body of orientation, academic-scientific performance of the research groups, increase of the number of graduates in the master and doctorate , an indicator of evasion, increase of the internationalization of the program, increase of the number of grants and scholarships from the agencies of fomentation; and recognition of the orientation as part of the teaching work load of the docent.

3- Research: the recognition by the academic-scientific community of the quality of the work developed is the main goal to be seeked by the Department of Mathematics and this can be partially measured by use of the following indicators: continuous scientific production in renowned international journals, formation of researchers, participation in national and international congresses, organization of national and international congresses, effective interchange with other research groups, increase of visiting professors and post doctorate students.

4- Culture and Extramural: the number of attendance in the workshops and courses of CAEM is an indicator that this extramural service is fulfilling its social function. The increase of new disciplines in the Summer Program and the participation of our docents, giving classes that are counted in the teaching

workload, a larger participation of the docents in the activities of CAEM and the recognition of the ours employed in such courses as a share of the teaching workload.

5- An expressive increase of the professor staff of MAT.

6- The Department of Mathematics considers that what matter is a global and continuous analysis, made by its peers, of the quality of its work in the three great fields it has acted upon: teaching, research and extramural.

OTHER COMMENTS

Other comments and final considerations regarding the Faculty's 2010-2014 Institutional Assessment

(Computer Science - IME)
R: The institutional evaluation, as well as all the USP management process, would be greatly benefited by a computer system that would allow the continuous inclusion and analysis of data on the activities of USP. Another important element to improve the quality of decisions in USP would be to create intermediary "Colegiados das Grandes Áreas" (Collegiate Boards of large areas) (i.e., human, exact and biological sciences) in a category between the Institutes and Colegiados Centrais (Central Boards). Complex issues that affect everyone (such as vestibular - admission exam) could be treated in more depth in a structure that would allow increase more smoothly the entropy of interests and vision of the process (Department, Institute, Large Areas, Central Boards).

(Statistics - IME)
R: The Department of Statistics has a history of excellence, built by its alumni, docents and technical-administrative employees. We intend to keep this way. The current Docents that compose its structure have heterogeneous approaches on the different activities, and this diversity is a reason for pride. All are committed with the undergraduate teaching. A policy of differentiated goals in the activities end might come to promote fair evolutions in their career, based on merit, aiming a maximization of the individual and group abilities and competences. We consider that people are different in their acts, and this is a quality in our Department, for it is the collective work what also moves us. A recent horizontal progression was not a success, far from that, and we believe that an appreciation of the capacity and of the individual work, in a fair and transparent way, should be promoted and supported. We are Professors, Researchers and act in the Culture and Extramural, some more than others, but aim to commit with the citizens we form.

(Applied Mathematics - IME)
R: We find it important to mention that the atmosphere in our department is of fellowship and collaboration and is exceptionally friendly. Decisions are based not only on the needs of the department, but also on the needs and preferences of the faculty. This process is participatory and non-bureaucratic and is mostly based on conversations between professors and members of various committees. This is possible in part due to the small size of the department, but it is also due to a tradition of goodwill and cooperation which we cherish greatly.

(Mathematics - IME)
R: The Department of Mathematics (MAT) of IME-USP acts in a very relevant field in what concerns a social point of view, since that the improvement and scientific and technological development in Brazil depends a lot of this basic science and our Institute has a leadership role in the country and is recognized internationaly for its high leve research. Despite the difficulties that MAT is facing in recent years in the reduced number of preofessors, our goal was and is being achieved in what concerns the quality of the formation of our students and the quality of the job done by the members of the undergraduate and post-graduation programs; its extramural activities, specially the ones linked to the teaching and promotion of

mathematics have been expanded. However, it is clear that such development is being kept by a large work overload and will be inevitably compromised if the current situation of the reduction of staff at MAT persist. Nowadays the number of professors of the department is 87 with the possibility to be reduced in the next 3 years to 64 professors, due to the possible retirements in the period. The Department has achieved the goal of the creation of the Professional Master in Teaching of Mathematics (2012), an old demand of the society to the Department. Nowadays the program has 53 students enrolled. The program has 15 professors of MAT, of which 3 of them are near retirement, and has the contribution of 6 retired professors and other departments. Our master and doctorate courses had in the period of 2009 to 2013 a growth of enrollments of about 10%. Nowadays we have 130 students, of which 85 are doctorate. The number of orientators of the Department is about 55, of which 50 are in the level of masters and 40 in level of doctorate. Regarding research, MAT has kept, within its possibilities, its development policies. Our program has grade mnark 6 in the CAPES evaluation, about 60% of our researchers have scholarships and grants of productiviy CNPq. Because of its good international reputation, we have a great number of visiting professors and post-doctorate students, with 24 post-doctorates, of which 2/3 are from abroad. However, the lack of professors have been making difficult the growth of the groups of research. The hiring of renowned researchers, that could work at MAT is in jeopardy in face of the high teaching workload. Our extramural activities are developed mainly through CAEM, which is directed by for professors of MAT and has the services of 4 educators. Its attendance to teacher of primary and secondary school that work on public schools is of national recognition. Since 2007 CAEM requests the hiring of another 3 educators. We wish to note that the problems of MAT remain the same as pointed out in our previous evaluation, but they have been worsening in what concerns the number of professor and the number of students in classroom.