

Karina Valdivia Delgado

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OBJECTIVE To work in applied research and teaching in areas related to Artificial Intelligence

EDUCATION *University of São Paulo, IME-USP, São Paulo, Brazil*

- Ph.D. Computer Science;
- Period: 2006-2010;
- Advisor: Leliane Nunes de Barros
- Visiting Research at *NICTA 2009, Canberra, Australia*; Advisor: Scott Sanner
- Specialization: Artificial Intelligence – Planning under Uncertainty
- Title Ph.D. thesis: “Factored Markov Decision Processes with Imprecise Probabilities”
- Cumulative GPA: 3.89 / 4.00

University of São Paulo, IME-USP, São Paulo, Brazil

- M.S. Computer Science;
- Period: 2003-2005;
- Advisor: Leliane Nunes de Barros
- Specialization: AI – Diagnosis and Intelligent Tutoring Systems.
- Title M.S. Dissertation: “Model Based Diagnosis in ITS for Programming with Pedagogical Patterns”.
- Cumulative GPA: 3.86 / 4.00

Santa Maria Catholic University, UCSM, Arequipa, Peru

- M.S. System Engineering;
- Period: 1999-2000
- Specialization: Software Engineering

Santa Maria Catholic University, UCSM, Arequipa, Peru

- B.S. in System Engineering;
- Period: 1990-1994
- Revalidated as Computer Science by Federal University of Rio Grande do Sul UFRGS, Brazil.
- 6th highest GPA out of 33 students

Instituto del Sur, Arequipa, Peru

- Technician in Computer and Informatics;
- Period: 1995-1997

ENTERPRISE EXPERIENCE *CERVESUR (beer Peruvian Company), Arequipa, Perú*

- Analyst and Development
- Period: Jun. 1999- Apr. 2000
- Implementing a Geographic Information System for the Distribution Department in ArcView

Corte Superior de Justicia de Arequipa, Arequipa, Peru (Peruvian Court)

- Analyst and Development
- Period: Feb. 1998-Feb. 1999
- Implementing a system for Human Resource area

UNIVERSITY *Professor*

TEACHING

EXPERIENCE *Instituto del Sur, Arequipa, Peru*

- Position: Professor
- Period: 1998 - 2002
- Courses:
 - Programming Languages I
 - Computation II
 - Computation I

San Pablo Catholic University, UCSP, Arequipa, Peru

- Position: Professor
- Period: 2000 - 2002
- Courses:
 - Computation
 - System Analysis
 - Programming Language II (Java)
 - Programming Language I (C, C++)
 - Introduction to Computer Science (Algorithms)

Santa Maria Catholic University, UCSM, Arequipa, Peru

- Position: Lab Instructor
- Period: 2000
- Courses:
 - Software Engineering
 - System Design
 - Informatics

Teaching Assistant

University of São Paulo, EACH, São Paulo, Brazil

- Position: Teaching Assistant
- Period: 2005-2006
- Courses:
 - Solving Problems I
 - Solving Problems II

University of São Paulo, IME-USP, São Paulo, Brazil

- Position: Teaching Assistant
- Courses:
 - 2003 MAC0115 - Introduction to Computer Science
 - 2004 MAC0444 - Knowledge based Systems
 - 2007 MAC02014 – A Laboratory Course for Programming
 - 2009 MAC0425 – Introduction to Artificial Intelligence

OTHER ACTIVITIES *Program Committee*

- *II Simposio Peruano de Inteligencia Artificial (SPIA), 2009.*
- *I Encuentro Científico de Computación (ECCOMP), 2008.*

Poster Evaluator Committee

- *XI Simpósio de Iniciação Científica e Tecnológica da FATEC/SP 2009, São Paulo, Brazil.*
- *16th International Symposium of Undergraduate Research 2008, São*

Paulo, Brazil.

INVITED TALKS *Invited Presentation • Jornada Internacional de Ingeniería de Sistemas 2004, Arequipa, Peru.*

Title: *Diagnóstico Basado en Modelos en un Sistema Tutor Inteligente para Programación con Patrones Pedagógicos.*

Invited Presentation • Jornada Internacional de Ingeniería de Sistemas 1998, Arequipa, Peru.

Title: *Modelo de Red Neuronal para la Reconstrucción de Imágenes Bidimensionales Estáticas.*

- AWARDS**
- *Silver IJAR Young Researcher Award– 2009 granted by the International Journal of Approximate Reasoning (Elsevier) for demonstrating excellence in research on imprecise probabilities*
 - *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). Brazil. Ph.D. Scholarship 2006 – 2009*
 - *9th best M.S. Dissertation in Artificial Intelligence, International joint Conference 2006 - Iberamia/SBIA 2006.*
 - *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). Brazil. M.S. Scholarship 2003 -2005*
 - *Santa María Catholic University • Honor Student at Graduate School 2000.*
 - *Instituto del Sur • Better Student in Computer and Informatics 1997.*

- LANGUAGES**
- *Spanish (first language)*
 - *English (spoken and written: good)*
 - *Portuguese (spoken and written: good)*

- RESEARCH AREAS**
- **Planning**
 - **Markov Decision Process**
 - **Diagnosis**
 - **Intelligent Tutoring System**

- RESEARCH PROJECTS**
- **PROPAT Project: An Eclipse plugin for teaching programming.** *Funded by IBM from 2003 to 2006. Coordinator: Leliane Nunes de Barros.*
 - **Probabilistic Logic Project: Fundamentals and Applications.** *Funded by FAPESP from 2008 to 2013, Process: 2008/03995-5. .Coordinator: Marcelo Finger.*

- PUBLICATIONS**
- **MADCAP: MDP Approximate Dynamic Programming with Affine ADDs.**
SANNER, S.; UTHER W.; DELGADO, K. V.
In Proceedings of the Ninth International Conference on Autonomous Agents and Multiagent Systems (AAMAS-10); to appear. Toronto, Canada.
 - **Efficient Solutions to Factored MDPs with Imprecise Transition**

Probabilities.

DELGADO, K. V. ; SANNER, S.; BARROS, L. N.; COZMAN, F.G.
In Proceedings of 19th International Conference on Automated Planning and Scheduling (ICAPS-09), 2009, Thessaloniki, Greece.

- **Representing and Solving Factored Markov Decision Processes with Imprecise Probabilities.**

DELGADO, K. V. ; BARROS, L. N.; COZMAN, F.G. SHIROTA, R..
In Proceedings of 6th International Symposium on Imprecise Probability: Theories and Applications (ISIPTA-09). 2009, Durham, United Kingdom.

- **Factored Markov Decision Processes with Imprecise Probabilities: a multilinear solution.**

DELGADO, K. V. ; BARROS, L. N.; COZMAN, F.G. .
In Doctoral Consortium of the 18th Conference on Automated Planning and Scheduling (ICAPS-08), 2008, Sydney, Australia .

- **Programming Learning: a Hierarchical Model Based Diagnosis Approach.**

PINHEIRO, W. R.; BARROS, L. N. ; DELGADO, K. V.
In Proceedings of: International Conference Interactive Computer Aided Blended Learning (ICBL-08), 2008, Florianópolis, Brazil.

- **Ontologies and conceptual maps in learning objects discovery and analysis.**

MACHION, A.; BARROS, L. N. ; DELGADO, K. V.
In Proceedings of International Conference Interactive Computer Aided Blended Learning (ICBL-2008), 2008, Florianópolis, Brazil.

- **Diagnostic of Programs for Programming Learning Tools.**

DELGADO, K. V. ; BARROS, L. N. .
In IBERAMIA-SBIA International Joint Conference, 2006, Ribeirão Preto, São Paulo, Brazil. Lecture Notes in Computer Science. Berlin / Heidelberg : Springer, 2006. v. 4140. p. 7-16.

- **Classifying Ontologies.**

KEPLER, F. ; PAZ-TRILLO, C. ; RIANI, J. ; MORETTO-RIBEIRO, M. ; DELGADO, K. V. ; WASSERMANN, R. ; BARROS, L. N. .
In Proceedings of 2nd Workshop on Ontologies and their Applications (WONTO'2006), 2006, Ribeirão Preto, São Paulo, Brazil..

- **Aprendizado de Programação.**

BARROS, L. N. ; DELGADO, K. V. .
In Proceedings of WEI XIV Workshop sobre Educação em Computação, 2006, Campo Grande, MS, Brazil. p. 31-40.

- **Model based Diagnosis of Student Programs.**

BARROS, L. N. ; DELGADO, K. V. .
In Proceedings 3rd Monet Workshop Model-Based Systems (at ECAI), 2006, Riva de Gard, Italy.

- **Model Based Diagnosis in ITS for Programming with Pedagogical Patterns.**

DELGADO, K. V. .
In Proceedings of Workshop WTDIA-CTDIA- V Best MSc. dissertation/

PhD thesis contest (at SBIA), 2006, Riberão Preto.

- **A tool for programming learning with pedagogical patterns.**
BARROS, L. N.; DELGADO, K. V. ; MOTA, A. S. ; MATSUMOTO, P. M.
In Proceedings of OOPSLA workshop on eclipse technology eXchange, 2005, San Diego, California. p. 125-129.
- **ProPAT: A Programming ITS Based on Pedagogical Patterns.**
DELGADO, K. V. ; BARROS, L. N. .
In 7th International Conference Intelligent Tutoring Systems (ITS-04), 2004, Maceió, Alagoas, Brazil. Lecture Notes in Computer Science. Berlin / Heidelberg : Springer-Verlag, 2004. v. 3220. p. 812-814.
- **An ITS for Programming to explore Practical Reasoning.**
BARROS, L. N. ; DELGADO, K. V. ; MACHION, A. .
In Proceedings of Simpósio Brasileiro de Informática na Educação (SBIE-04), 2004, Manaus-Amazonas, Brazil.

- ARTICLE SUBMITTED**
- **Efficient Solutions to Factored MDPs with Imprecise Transition Probabilities.**
DELGADO, K. V. ; SANNER, S.; BARROS, L. N.
Submitted to: Artificial Intelligence Journal. Elsevier. 2009 (reference number aij-4628).