

# Analysis of Scheduling Algorithms on a Parallel Programming

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MAC499 - Trabalho de formatura

## 1 Student Name and Supervisor

**Student:** Peter Ngugi Nyumu.

**Supervisor:** Prof. Alfredo Goldman.

## 2 Subject of the project

With the guideline of Prof. Alfredo, i intend to study various operating system algorithms, then analyze, how they can be adapted in grid computating, specifically in Master/Slave model.

## 3 Brief overview of the project

The computer architecture have advanced, in terms of processing capabilities, storage and mode of exchange of data, nevertheless we still face some challenges of the best way of allocating the scarce resources. Depending on the model of computing we are working in, we look to optimize the performance measures for example minimizing the makespan, or minimizing the number of late jobs, all this having the objective of utilizing the resources the best way possible. Thus in this project am looking forward to studying, analyzing Master/Slave model, how different operating system scheduling algorithm, can be adapted in this model.

## 4 Objective of this work

As i mentioned earlier, this study will focus studying of operating system scheduling algorithm, then see how to apply them in grid computing, also look in related concept which influence scheduling in the model we will look at along this studies. We will see how this algorithm are executed in different situations.

Changes might occur along the studies with the direction given by Professor Alfredo, with the aim of attaining the best results of the project.

## 5 Finished Activities

- studying and analysing classic algorithm like round robin, weighted round robin
- studying articles about parallel task and divisible load research by Prof. Lionel Eyraud Laboratoire, Institut National Polytechnique de Grenoble, France.
- studying various general articles about scheduling algorithm.

## 6 TimeTable

The following is the timetable of the project, some of the thing can change along the way, its good to note that if there will be time i can eventually try to simulate some algorithm but nevertheless even if there will be no time, i have agreed with Professor Alfredo that i can settle that in the future, because i have intention of furthering my studies in the same field.

Table 1: Time table

Activities	June	July	Aug	Sept	Oct	Nov
Studying and Analyzing algorithms	x	x	x	x	x	
Submitting Analysis		x	x	x	x	
Elaborating the Monograph						x
Elaborating the Poster						x

## 7 Expected Monograph

The folowing items are expected in the monograph at the end of the whole year study:

- **Technincal part**

- Introduction, detailing the motivation of this studies.
- The concept learned along the studies
- Results of the studies
- Conclusion of the studies
- Bibliography

- **Non-technical Part**

- The vision of the area of study.
- Challenges encountered while realizing this studies.
- The courses which will be involved in better understanding of the subject am studying.