TCC: GOALS AND SCHEDULE

April 29th, 2020

LINK: **HTTPS://WWW.LINUX.IME.USP.BR/~MLAURENTYS/MAC0499/**

Work proposal: While Coelho and I are following a direction with our studies, we have not yet set our minds everything we want to accomplish. We, on the other hand, agreed on a schedule, which follows this introduction, that we both find adequate. We will focus on the study of temperature in combinatorial games. We hope that, amidst this process, we will find a more precise goal later.

Combinatorial Game Theory or the study of Mathematical Plays is a rich field that has, as some of its ingredients, number theory, algebra and combinatorics. One of the aspects of this study is the evaluation of positions in a game, that is "Whose player is ahead in the game?". Another key aspect of this study is the classification of games based on their ruleset.

SSo far, the class of games we have been focusing our attention is the so-called *partizan games*. In this category, a position may offer to each player a different set of moves. In some games of this class there are very special positions, called *hot games*. For those positions, the player having the next move can gain great advantage. The process of assign values to measure the advantage gain is called temperature of these special position is called *temperature*. At the moment me are in the middle of our study of temperature, and consider moving forward continuing this focus.

To provide a more concrete plan of our intentions we offer the following schedule till July:

Activity	Start Date	End Date
Implement a game that has hot positions	27 / 03	27 / 05
Implement position evaluator for Domineering	28 / 03	27 / 05
Implement partial numerical library	01 / 05	30 / 06
Implement partial temperature evaluation	30 / 06	07 / 07
Browse open problems	01 / 07	30 / 07
Monography: Write sample to establish style	15 / 04	10 / 05

Matheus