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Mini-workshop

Dias **30 de Novembro, 2 e 3 de Dezembro de 2010**, das **15h00** às **18h00**, no **Anfiteatro**

"Play mathematics - A Workshop in Combinatorial Game Theory"

Richard Nowakowski

(Dalhousie University)

Abstract: There are three games that can be re-interpreted so as to play with a chess piece on a quarter infinite board where on every move the piece must move closer to the origin and the first player who cannot move is the loser. Wythoff's Nim, an important game in the theory of combinatorial games can be regarded as playing with a single Queen; Two-heap Nim is the same as playing with a Castle; and Wyt Knights is played on the same board except with a Knight. As a warm-up, we will look at the games played with a King and played with a bishop. These games are `impartial' that is both players have the same moves. We will attempt to analyze the partizan games where there is one token on the chessboard but one player moves the piece say as a Bishop and the other moves it as a Knight. There are two levels of analysis: what are the outcome classes (that is "who wins?"); what is the value of a position? This latter is required if there is more than one token on the board. What may seem is surprising is that no-one appears to have succeeded in analyzing these games. Part of the reason is that few people know about the more sophisticated approximation techniques called "Atomic Weight". There will be a short tutorial on this topic and the use of the combinatorial game software package "CGSuite".

Local:

INSTITUTO PARA A INVESTIGAÇÃO INTERDISCIPLINAR
DA UNIVERSIDADE DE LISBOA
Av. Prof. Gama Pinto, 2
1649-003 Lisboa, Portugal

HOSP. SANTA MARIA

Av. Prof. Gama Pinto

Entrada

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