Mês de: FEVEREIRO 2013

SEMINÁRIO DE LÓGICA MATEMÁTICA

(Please note the new time!!!!)

Dia 21 de Fevereiro (quinta-feira), às 16h, na Sala B3-01

Computing with vanishing value oracles

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Abstract:

We study the idea of coupling a Turing machine with an analog device as oracle, thus defining a new class of machines called the analog-digital Turing machines. An example of analog device is the Scatter Machine (SME, proposed by Beggs and Tucker in 2007).

Following studies of different physical experiments led to the conclusion that the analog devices can be cathegorized in one of three different types: two-sided, threshold and vanishing, corresponding to three different oracles to Turing machines. (The SME is an example of two-sided type.)

In a previous talk we addressed threshold oracles and their computational power. However, we found recently that vanishing value devices are unexpectedly powerful, and that the proof techniques they require to establish lower and upper bounds differ from the standard methods.

Joint work with José Félix Costa

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