



Mês de: Março 2010

SEMINÁRIO DE LÓGICA MATEMÁTICA

Dia 18 de Março (quinta-feira), às 18h, na Sala 3-10

“Slash and completeness”

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Abstract:

Gödel's incompleteness theorems gave a fatal blow in Hilbert's program. Despite this, there were some attempts to salvage the program. One of them, by Hilbert himself, was to add omega-rule (if $A(n)$ is provable for each fixed n , then "for all n , $A(n)$ " is provable) to Peano arithmetic. This rule evades Gödel's incompleteness and gives a complete arithmetical theory.

Proof interpretations are proof-theoretic tools to prove consistency results, conservation results, closure under rules and to extract computational content from proofs. The slash is a very simple toy case of a proof interpretation. However, the omega-rule boosts the slash, resulting in some interesting applications. We will talk about one of them: a very simple proof of the completeness of Peano arithmetic plus omega-rule.

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