Ciências ULisboa

SEMINÁRIO

LÓGICA MATEMÁTICA

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An escape from Vardanyan's Theorem

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ABSTRACT:

Vardanyan's Theorem states that quantified provability logic is Π^0_2-complete, and in particular impossible to recursively axiomatize for consistent theories containing a minimum of arithmetic. However, the proof of this fact cannot be performed in a strictly positive signature.

We define a (decidable) quantified strictly positive logic called QRC_1 and show that it is a provability logic: there is a Solovay-like completeness theorem relating QRC_1 to Peano Arithmetic.

This is joint work with Joost J. Joosten.

CMAF|IO

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