

Faculdade de Ciências da Universidade de Lisboa  
cmafcio@fc.ul.pt Tel. (+351) 21 750 00 27

# SEMINÁRIO DE LÓGICA MATEMÁTICA

Dia 8 de Outubro (segunda-feira), sala 6.2.33 às 16:00

## On the undecidability of type inhabitation for atomic polymorphism

**Clarence Protin**  
(Independent Scholar)

Abstract:

Pawel Urzyczyn has shown how to obtain a syntactic proof of the undecidability of type inhabitation for systems  $\mathcal{F}$  and  $\mathcal{F}_\omega$  by a reduction involving the codification of a certain undecidable  $\forall$ -fragment of intuitionistic predicate calculus and the use of the Curry-Howard isomorphism. We show how this technique can be simplified and used to prove the undecidability of type inhabitation for atomic polymorphism.

*Seminário financiado por Fundos Nacionais através da FCT – Fundação para a Ciência e a Tecnologia  
no âmbito do projeto UID/MAT/04561/2013*