SEMINÁRIO DE LÓGICA MATEMÁTICA

Dia 11 de Novembro (sexta-feira), às 15H00, sala 6.2.33

Strong normalization
and bar recursion (2)

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Abstract:

In this talk we present a new method for proving strong normalization for higher type rewrite systems, due to Ulrich Berger, which makes use of a strict continuous domain-theoretic semantics. In order to understand Berger's method we start by showing, using essentially William Tait's method of strong computability, that a λ-calculus formulation of Gödel's T is strongly normalizing. The fact that Gödel's T is strongly normalizing is well-known and extensively studied in the literature.

We give a brief introduction to Clifford Spector's bar recursion and to some domain-theoretic notions and tools necessary to carry out the proof that Gödel's T extended with bar recursors is also strongly normalizing. Finally, we will discuss the possibility of adapting Berger's method to show a strong normalization theorem for an extension with bar recursors of a theory of Fernando Ferreira and Gilda Ferreira.

Local: FCUL, C6 - Piso 2, 6.2.33