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SEMINÁRIO DE LÓGICA MATEMÁTICA

Dia 6 de janeiro (sexta-feira), às 15H00, sala 6.2.33

Equilibrium Logic (Part 1)

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Abstract:

Here-and-there (HT) logic is a three-valued monotonic logic which is intermediate between classical logic and intuitionistic logic. Equilibrium logic is a non-monotonic formalism whose semantics is given through a minimisation criterion over HT models. It is closely aligned with answer set programming (ASP), which is a relatively new paradigm for declarative programming. To spell it out, equilibrium logic provides a logical foundation for ASP: it captures the answer set semantics of (non-epistemic) ASP, and extends the restricted syntax of answer set programs to more general propositional theories, i.e., finite sets of propositional formulas. The underlying HT logic characterises an important notion of ASP, namely strong equivalence. In this talk, we will give a brief introduction of these formalisms with a focus on equilibrium logic.

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