Logic and Computation

Exemplifying Contemporary Formal Mathematics

Maurício Ayala-Rincón
(UNB- Brazil)

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16h30 - 17h10

Math Department- Mini Auditorium

Abstract.

Computer-verified theories are the class of "complete" formalizations mathematicians have aimed for centuries. Theorem's proofs formalized in "proof assistants" provide certificates of their "correctness" and the required grade of granularity to be considered "complete." Such proof's mechanizations also come with tools to be ported by mathematicians and other professionals into robust technological tools independently of mathematical intuition, skills, hierarchy, or folklore. Computational formalizations provide absolutely correct proofs except for remote possibilities of computer failures. In this talk, we will select simple mathematical formalizations developed by the local group members to illustrate how such formalizations are developed in the proof assistant PVS.

This is joint work with Filippo A. E. Nuccio.