Main Talks

IV Seminar on Categories and Applications

Bellaterra, 6 to 9 of June of 2007

Marco Grandis, Università di Genova

Directed algebraic topology, categories and higher categories

Abstract: Directed Algebraic Topology is a recent field, deeply linked with Category Theory. A "directed space" has directed homotopies (generally non reversible), directed homology groups (enriched with a preorder) and fundamental n-categories (replacing the fundamental n-groupoids of the classical case). On the other hand, directed homotopy can give geometric models for lax higher categories.
Applications have been mostly developed in the theory of concurrency. Unexpected links with noncommutative geometry and the modelling of biological systems have emerged.
A survey paper on this subject is available at:
http://www.dima.unige.it/ grandis/DAT.Intro.pdf

Contact address: `grandis@dima.unige.it`