SEMINARIO DI MATEMATICA

venerdì 18 giugno 2010
ore 15.00

Scuola Normale Superiore
Pisa
(Aula Mancini)

F. William Lawvere
University of Buffalo

Terrà un seminario dal titolo:

"What is a space"

Abstract:

A space is just an object in a category of spaces!

The implied further question is given a very general answer involving lextensivity, as well as a much more structured answer involving dialectically coupled (cohesive/discrete) pairs of toposes. Examples can be analyzed and constructed using the simple geometric paradigm of figures and incidence relations, by which any lextensive category can be embedded in a Grothendieck topos; more refined subtoposes of the latter are specified by Grothendieck coverings that embody the geometrical equivalent of existential/disjunctive conditions on these extended spaces; a specific example involves a generalization of Maschke means. The extended spaces always include the Hurewicz exponential spaces, for example, spaces of functions and distributions equipped automatically with the ambient sort of cohesion. Examples important for smooth, analytic, and algebraic geometry are infinitesimally generated, pursuing an observation that goes back to Euler. A smooth account of points and components for algebraic geometry over a non-algebraically closed field is achieved by replacing Cantorian abstract sets with a Galois-Barr topos as the discrete aspect. The basic goal is to help make the advances in Algebraic Geometry during the past 50 years more accessible to students and to colleagues in related fields by utilizing the simplifying advances in categorical foundations during the same 50 years, especially guided by proposals made by Grothendieck in 1973.

Tutti gli interessati sono invitati a partecipare.

Classe di Scienze