The Theory of Fusion Systems

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Date: 14 April 2010 (Wednesday)
Time: 10.30 am – 11.30 am
Venue: SPMS-Colloquium Room 1, MAS-05-36
School of Physical and Mathematical Sciences

The classification of finite simple groups is a gem of modern Mathematics. One of the main tools used to achieve it is the p-local analysis of the structure of a group - where p is a prime number - i.e. the study of the invariants of the group related to its Sylow p-subgroups. An axiomatic, and unified, way to present the p-local structures is via the theory of fusion systems. Fusion systems were introduced by Puig and refined by Broto-Levi-Oliver. The theory of fusion systems is at the confluence of the Representation Theory of Finite Groups with the Algebraic Topology. In my talk I will try to explain the bases of this theory and to present the interactions between different area of Algebra that it makes possible.

Speaker Biography

Radu Stancu obtained his doctoral degree in 2002, under the supervision of Professor Jacques Thevenaz at University of Lausanne.
He did his postdoctoral years in Ohio State University (2003 to 2007) and University Copenhagen (2007-2008). He currently holds a Maitre de Conferences position in France, at Universite de Picardie. His main research interests are the p-modular representation of finite groups and its interactions with algebraic topology. In particular he is interested in the study of fusion system and p-local finite groups.
Other research interests include Mackey functors and stable and derived categories.

Host: Prof Frederique Elise Oggier, Division of Mathematical Sciences, School of Physical and Mathematical Sciences

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