23rd Colloquium Lecture, School of Mathematics
Faculty of Mathematics and Physics

Andrew Mathas

University Sydney

Monday, November 13, 2017, 13:30, Lecture hall K6

Sokolovská 83, Praha 8 – Karlín

The Representation Theory
of the Symmetric Groups

Abstract

I will give a self-contained survey of the representation theory of the symmetric groups starting from the classical theory, which is very well understood, and culminating with some recent very exciting advances and open questions.

About the speaker

Andrew Mathas is Professor at the School of Mathematics and Statistics, University of Sydney. Recently he is a guest at the Hausdorff Institute, University of Bonn, taking part in trimester programme „Symplectic Geometry and Representation Theory". He obtained his PhD in 1993 from the University of Illinois, Chicago, he also spent longer periods of time at the University Notre Dame, Imperial College London and University Bielefeld.

He mainly works in algebra, especially in the representation theory of the symmetric groups, Hecke algebras and quantum groups. He focuses to the graduated version of the classical theory, stemming from the work of *Brundan-Kleshchev, Invent. Math., 2009*. This work enables mathematicians to prove richer structural results in the theory of representations, using modern methods. This method will be introduced in the presented colloquium lecture.

Professor Mathas is author of the monograph "Iwahori-Hecke algebras and Schur algebras of the symmetric group" (*Univ. Lect. Series 15, AMS, Providence, 1999*) and of about 50 papers in leading scientific journals (a.o. *Adv. Math., Bull, J. and Proc. LMS, J. Reine Angew. Math., Math. Z.*). He is not a guest to the MFF UK for the first time: during the winter semester 2013/4 he gave here a series of lectures "The graded representation theory of the symmetric groups", supported by the Fond Mobility.

Further information
http://msekce.karlin.mff.cuni.cz/colloquia