Center for Mathematical Sciences

Invites you to a Distinguished Lecture Series
supported by the Mallat Family Fund for Research in Mathematics

Professor Michael Larsen
Department of Mathematics, Indiana University

Title of talks: “Linear Groups”

Abstract: A linear group is any group of invertible matrices over a field. Many—perhaps one could even say most—interesting groups can in fact be realized as linear groups, and this is often a useful thing to do, since there are powerful geometric tools for studying matrices. In my first two talks, I will discuss the structure theory of linear groups. A key role is played by linear algebraic groups, which are defined by polynomial equations in the matrix entries. I will discuss a wide range of results which assert, in one way or another, that well behaved groups are not too far from being linear algebraic. These include Jordan’s theorem and its extensions by Nori, Pink, and myself; the Peter-Weyl theorem; Hilbert’s Fifth Problem; the Chevalley-Pink Theorem; and the classification of finite simple groups. In my third talk, I will try to illustrate how these structural results, and more generally, the algebro-geometric point of view on group theory, can be used in applications to finite and finitely generated groups.

Lecture I: Monday, 28 December, 2015 at 15:30
Lecture II: Tuesday, 29 December, 2015 at 15:30
Lecture III: Thursday, 31 December, 2015 at 15:30

All lectures will take place in Auditorium 232, Amado Mathematics Building, Technion

Light refreshments will be given before the talks in the Department of Mathematics’ lounge on the 8th floor.

For administrative information please contact: Yael Stern, Workshop Coordinator
Phone: +972-(0)4-8294276\ Fax: +972-(0)4-8293388 E-mail: cms@math.technion.ac.il