



General Mathematics Seminar (GMS)

of the University of Luxembourg

in cooperation with the Luxembourg Mathematical Society

Tuesday, 18th of September 2018, 4:30 pm

Campus Belval, Maison du Nombre, room MNO 1.040

Dr. David Gepner (University of Melbourne)

David Gepner is working in algebraic topology. He is especially interested in homotopy theory and its interactions with algebraic geometry, algebraic K-theory, and higher category theory.

He obtained his Ph.d at the University of Illinois at Urbana-Champaign in 2006. Dr. Gepner has held postdoctoral positions at Sheffield, UIC, Regensburg and MSRI. He was until recently an associate professor at Purdue University and is now at the University of Melbourne.



M.F.O

K-theory, endomorphisms, and Witt vectors

K-theory is a deep and difficult invariant of algebraic objects such as rings and varieties with numerous applications to number theory and geometry. We will begin with an introduction to K-theory and various related functors, such as Hochschild homology and cyclic K-theory. By a theorem of Almkvist, the cyclic K-theory of a commutative ring is closely related to its ring of Witt vectors (actually a dense subring known as the rational Witt vectors). In addition to the usual Witt vector operations, such as Frobenius and Verschiebung, K-theory allows us to classify all natural operations on rational Witt vectors.

Coffee and cookies: 16:10 on the 6th floor of the MNO, in the kitchen corner of maximal distance to the elevator.

Time and place of the talk: 16:30 (4:30 p.m.) in the Maison du Nombre, MNO 1.040

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