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18:00 - 18:45 hrs



Professor Anton Thalmaier

Brownian motion: from pollen grains in water to global geometry

How does the discovery of botanist Robert Brown in 1828 that dust grains suspended in water perform a rapid and highly irregular motion, and Albert Einstein's prediction of the phenomenon in 1905, unaware of the work of Brown, relate to the modeling of price movements and evaluation of contingent claims in financial markets?

Anton Thalmaier graduated from the University of Regensburg with a PhD in Mathematics in 1989. He habilitated and was given the *Venia legendi* in Mathematics from the University of Bonn in 1999, and full professor qualifications by the *Conseil National des Universités* in France in 2001. Anton Thalmaier has done research and taught at the universities of Austin Texas, Regensburg,

Erlangen-Nuremberg, Bonn, Evry and Poitiers, and since 2006, as Professor in Stochastics at the University of Luxembourg. His research focuses on Stochastic Analysis on manifolds, Stochastic Differential Geometry, Stochastic Riemannian Geometry and Mathematical Finance. Anton Thalmaier is the author of two books and 28 publications.

18:45 - 19:30 hrs



Professor Martin Olbrich

Fourier series and their generalisations: a glimpse of harmonic analysis

The theory of Fourier series has found numerous applications in technology and physics. Named after Joseph Fourier (†1830), the prototype of harmonic analysis was revealed about 200 years ago through investigations of vibrating strings and the discovery that arbitrary periodic functions on the real axis should be representable as infinite sums (Fourier series) of elementary oscillations i.e. sine and cosine functions.

Martin Olbrich graduated from the Humboldt University Berlin with a diploma in mathematics in 1989. In 1995, his doctoral thesis is awarded *summa cum laude*. Martin Olbrich habilitated from the University Göttingen in 2002. His academic employment includes research and teaching positions at the universities Humboldt Berlin, Clausthal and Göttingen, and since 2006, as Professor in Non-commutative

Harmonic Analysis at the University of Luxembourg.

The main mathematical interest of Martin Olbrich lies in the fields of representation theory of real reductive Lie groups, harmonic analysis on globally and locally symmetric spaces, global analysis, and differential geometry. He is the author of one book and 22 articles.

On Tuesday 13 March 2007 at 6PM

Campus Limpertsberg | 162a, avenue de la Faïencerie | Bâtiment des Sciences | room BS 0.03

Welcome by Massimo Malvetti, dean of the Faculty of Sciences, Technology and Communication

Introduction by Martin Schlichenmaier, head of the Mathematics Research Unit

A cocktail will be served after the conference

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