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Frontiers

Probability and Analysis at the Highest Degree of Non-commutativity

Dan-Virgil Voiculescu
University of California at Berkeley

Free probability theory is a mathematical theory developed over the last 25 years which describes randomness when non-commutativity is at its highest. Parallel to a large part of classical probability the theory has models in random matrices, operator algebras and combinatorics. Related free analysis mathematical tools have begun appearing.

17.00 Monday 28 June 2010
Wallace Lecture Theatre, Main Building, Cardiff University

The distinguished lecture is aimed at a broad spectrum of scientists interested in the frontiers of mathematical research with applications and roots in theoretical physics and the other sciences. The Founding President of the Society, Professor Sir John Cadogan CBE FRSE PLSW FRS will take the chair. The event is open to anyone, with a tea from 16.15 in the Council Chamber, and a wine reception in the Viriamu Jones Gallery following the lecture. For further information, contact Professor David Evans, EvansDE@cf.ac.uk, Cardiff School of Mathematics.

Professor Voiculescu received the 2004 NAS award in Mathematics from the National Academy of Sciences for "*the theory of free probability, in particular, using random matrices and a new concept of entropy to solve several hitherto intractable problems in von Neumann algebras*." He was elected to the National Academy of Sciences in 2006, and was a plenary speaker at the International Congress of Mathematics in Zürich in 1994.

Frontiers is a lecture series in which distinguished academics are invited to speak about the frontiers of research and to place their own contributions in context.
This lecture is funded by the European Research Training Network in Noncommutative Geometry, and the wine reception is sponsored by Oxford University Press. The event is hosted by the Wales Institute of Mathematical and Computational Sciences at Cardiff University.

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