

Vanderbilt University
Department of Mathematics
Nashville, TN, USA

The Second Annual Spring Institute on

NONCOMMUTATIVE GEOMETRY AND OPERATOR ALGEBRAS

**Saturday, May 15 to
Tuesday, May 25, 2004**



MINI-COURSES:

The meeting will feature several mini-courses by leading experts in noncommutative geometry and its applications.

Alain Connes

Collège de France, IHES & Vanderbilt University
Introduction to Noncommutative Geometry

Nigel Higson & John Roe, Penn State University

The K-Theory Proof of the Classic Atiyah-Singer Index Theorem

Masoud Khalkhali, University of Western Ontario

Hopf Algebras and Cyclic Cohomology

Giovanni Landi, University of Trieste

Noncommutative Geometry and Physics

Matilde Marcolli, Max Planck Institute, Bonn

Noncommutative and Arithmetic Geometry

Henri Moscovici, Ohio State University

Transverse Geometry and Modular Forms

ADDITIONAL TALKS:

Paula Cohen, Texas A&M University

Automorphic Pseudo-differential Operators

Erik Guentner, University of Hawaii

Piotr Hajac, Polish Academy of Sciences

Index Computations for New and Old Quantum Spheres

Xiaodong Hu, University of Toronto

Transversally Elliptic Operators Relative to Compact Lie Group Actions

Jerry Kaminker, IUPUI

Hanfeng Li, University of Toronto

Ralf Meyer, University of Muenster

The Baum-Connes Conjecture via Localization of Categories

Bertrand Monthubert, Université Paul Sabatier,

Toulouse

Sergey Neshveyev, University of Oslo

Quantum Random Walks

Raphael Ponge, Ohio State University

Noncommutative and Pseudo-Differential Methods in Cauchy-Riemann Geometry

Adam Rennie, University of Newcastle

From Spectral Flow to the Local Index Theorem

Marc Rieffel, UC Berkeley

Distances between Non-Commutative Spaces

Andrzej Sitarz, Jagiellonian University, Cracow

Spectral Triples and Beyond

Kroum Tzanev, Université Paul Sabatier, Toulouse

Hecke Algebras in Operator Theory

Erik Van Erp, Penn State University

Mathai Varghese, University of Adelaide

Fractional Analytic Index

Shmuel Weinberger, University of Chicago

Rigidity of Non-Spherical Manifolds

ADDITIONAL INFORMATION:

Director: Alain Connes

Organizers: Dietmar Bisch, Bruce Hughes,
Gennadi Kasparov and Guoliang Yu

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