Noncommutative Geometry and Representation Theory

Tianyuan Mathematical Institute in Southwest China
School of Mathematics, Sichuan University, Chengdu, China.

May 14-18, 2018

At the exception of May 16 all the talks will take place in Room **W303**. On May 16 the talks will be in Room **E409**.

Lunches and dinners will be served at Kehua Yuan Hotel (141 N. Kehua Rd.).

Monday, May 14 (W303, School of Mathematics)

8:50-9:10   Registration and welcoming remarks.

9:10-10:10: **Nigel Higson** (Penn State University)
Another look at discrete series representations from the point of view of the Dirac operator.

10:40-11:40: **Dmitriy Zanin** (University of New South Wales)
Connes character formula for locally compact spectral triples.

Lunch break.

14:20-15:20: **Fedor Sukochev** (University of New South Wales)
Connes integration formula for the noncommutative plane.

15:40-16:30: **Dapeng Zhou** (East China Normal University)
Higher index theory and quantitative operator K-theory.

16:50-17:40: **Yosuke Kubota** (RIKEN)
Reconstructing the Bost–Connes semigroup actions from K-theory.

Tuesday, May 15 (W303, School of Mathematics)

9:10-10:10: **Tsuyoshi Kato** (Kyoto University)
Higher Nahm transform in noncommutative geometry.

10:40-11:40: **Heath Emerson** (University of Victoria)
Dirac classes, duality, and the irrational rotation algebra.

Lunch break.

14:20-15:20: **Qin Wang** (East China Normal University)
Persistence approximation property for maximal Roe algebras.

15:40-16:30: **Hitoshi Moriyoshi** (Nagoya University)
Fuzzy sphere and the Ginsparg-Wilson index.

16:50-17:40: **Toshikazu Natsume** (Ritsumeikan University)
Ginsparg-Wilson operators and a duality.

Wednesday, May 16 (E409, School of Mathematics)

9:10-10:00: **Shilin Yu** (Texas A&M University)
Orbit method from a new perspective.

10:15-11:05: **Doman Takata** (University of Tokyo)
An analytic index theory for infinite-dimensional manifolds and KK-theory.

11:20-12:10: **Yoshiyasu Fukumoto** (East China Normal University)
G-homotopy invariance of analytic signatures of proper G-manifolds.

Free afternoon.

Thursday, May 17 (W303, School of Mathematics)

9:10-10:10: **Ryszard Nest** (University of Copenhagen)
Determinants and higher group cocycles.

10:40-11:40: **Xianjin Wang** (Chongqing University)
Coarse embedding and the equivariant coarse Baum-Connes conjecture.

Lunch break.

14:20-15:20: **Yasuyuki Kawahigashi** (University of Tokyo)
Conformal field theory and operator algebras.

15:40-16:30: **Guo Chuan Thiang** (University of Adelaide)
Crystallographic T-duality and the bulk-boundary correspondence principle.

16:50-17:40: **Fei Han** (National University of Singapore)
T-duality in an H-flux and exotic twisted equivariant cohomology theories.

Friday, May 18 (W303, School of Mathematics)

9:10-10:10: **Kuok Fai Chao** (Shanghai University)
On the Langlands programme and noncommutative geometry.

10:15-11:05: **Yang Liu** (Max Planck Institute)
Modular curvature and hypergeometric functions.

11:20-12:10: **Yanli Song** (Washington University in St Louis)
Orbital integral and group C*-algebra.

Free afternoon.