

## ESI Programme on “K-Theory and Quantum Fields”

Organized by: Matthew Ando, Alan Carey, Harald Grosse, Jouko Mickelsson

May 21 - July 27, 2012

Workshop, July 16 - 20

- **Monday, July 16**

**09:30 – 10:30** Michael Joachim

*Classification of twists in equivariant K-theory for proper and discrete actions*

**10:30 – 11:00:** coffee break

**11:00 – 12:00:** Pierre Julg

*The Baum-Connes conjecture with coefficients for simple Lie groups of rank one*

- **Tuesday, July 17**

**09:30 – 10:30:** Richard Szabo

*String orbifolds and differential equivariant K-theory*

**10:30 – 11:00:** coffee break

**11:00 – 12:00:** Snigdhayan Mahanta

*Twisted K-theory and K-homology in a bivariant setting*

- **Wednesday, July 18**

**09:30 – 10:30:** Raimar Wulkenhaar

*Self dual noncommutative  $\phi^4$  - theory in four dimensions is a nonperturbatively solvable and non-trivial quantum field theory*

**10:30 – 11:00:** coffee break

**11:00 – 12:00:** Branimir Cacic

*A reconstruction theorem for (real) almost commutative spectral triples*

**14:00 – 15:00:** Giovanni Landi

*Gauge and Higgs fields over noncommutative spaces*

**15:00 – 16:00:** Alan Lai

*Spectral action for 1-parameter family of Dirac-type operators on  $SU(2)$*

- **Thursday, July 19**

**09:30 – 10:30:** Martin Schlichenmaier

*Toeplitz operators and TQFT*

**10:30 – 11:00:** coffee break

**11:00 – 12:00:** Bram Mesland

*Gauge theory via correspondences in KK-theory*

- **Friday, July 20**

**09:30 – 10:30:** Pedram Hekmati

*Loop group bundles and secondary invariants*

**10:30 – 11:00:** coffee break

**11:00 – 12:00:** Raymond Vozzo

*Bundles gerbes and abelian lifting problems*

**All lectures take place in the ESI Boltzmann Lecture Hall**

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