

Vanderbilt University, Department of Mathematics, Nashville, Tennessee, USA

**THE FIFTH ANNUAL SPRING INSTITUTE ON  
NONCOMMUTATIVE GEOMETRY AND OPERATOR ALGEBRAS**

*May 7 to May 16, 2007*

**Schedule of Talks**

**Monday, May 7, 2007**

**Morning Session Chair – Dietmar Bisch**

9:20 am - 9:30 am *Welcome*  
9:30 am - 10:30 am *Alain Connes I - Noncommutative Geometry and Motives*  
10:30 am - 11:00 am *Coffee Break*  
11:00 am - 12:00 am *Atabey Kaygun/Masoud Khalkhali I- From Cyclic Cohomology to Hopf Cyclic Cohomology*

12:00 pm - 2:00 pm *Lunch Break*

**Afternoon Session Chair – Bruce Hughes**

2:00 pm - 3:00 pm *Christian Kassel I- An Introduction to Quantum Groups*  
3:10 pm - 4:10 pm *Nigel Higson/John Roe I - Dirac Operators and the Baum-Connes Conjecture*  
4:10 pm - 4:40 pm *Coffee Break*  
4:40 pm - 5:40 pm *Atabey Kaygun/Masoud Khalkhali II- From Cyclic Cohomology to Hopf Cyclic Cohomology*  
5:50 pm - 6:40 pm *Ulrich Kraehmer- On Piecewise Trivial Hopf-Galois Extensions*

Round table discussions

**Tuesday, May 8, 2007**

**Morning Session Chair – Guoliang Yu**

9:30 am - 10:30 am *Alain Connes II - Noncommutative Geometry and Motives*  
10:30 am - 11:00 am *Coffee Break*  
11:00 am - 12:00 pm *Atabey Kaygun/Masoud Khalkhali III- From Cyclic Cohomology to Hopf Cyclic Cohomology*

12:00 pm - 2:00 pm *Lunch Break*

**Afternoon Session Chair – Dmitry Matsnev**

2:00 pm - 3:00 pm *Christian Kassel II- An Introduction to Quantum Groups*  
3:10 pm - 4:00 pm *Nigel Higson/John Roe II - Dirac Operators and the Baum-Connes Conjecture*  
4:00 pm - 4:30 pm *Coffee Break*  
4:30 pm - 5:20 pm *Thierry Fack - Commutators in Noncommutative Banach spaces, Dixmier Traces, and the Chern Character of von Neumann Spectral Triples*

Round table discussions

**Wednesday, May 9, 2007**

**Morning Session Chair – Martin Walter**

- 9:30 am - 10:30 am **Alain Connes III** - *Noncommutative Geometry and Motives*  
10:30 am - 11:00 am *Coffee Break*  
11:00 am - 12:00 pm **Atabey Kaygun/Masoud Khalkhali IV**- *From Cyclic Cohomology to Hopf Cyclic Cohomology*  
12:00 pm - 2:00 pm *Lunch Break*

**Afternoon Session Chair – Radu Popescu**

- 2:00 pm - 3:00 pm **Christian Kassel III**- *An Introduction to Quantum Groups*  
3:10 pm - 4:10 pm **Nigel Higson/John Roe III** - *Dirac Operators and the Baum-Connes Conjecture*  
4:10 pm - 4:40 pm *Coffee Break*  
4:40 pm - 5:40 pm **Atabey Kaygun/Masoud Khalkhali V**- *From Cyclic Cohomology to Hopf Cyclic Cohomology*  
5:50 pm – 6:40 pm **Claire Debord** - *On Index Theory for Stratified Pseudomanifolds*  
7:00 pm *Dinner*

**Thursday, May 10, 2007**

**Morning Session Chair – Remus Nicoara**

- 9:30 am - 10:30 am **Alain Connes IV** - *Noncommutative Geometry and Motives*  
10:30 am - 11:00 am *Coffee Break*  
11:00 am - 12:00 am **Atabey Kaygun/Masoud Khalkhali VI**- *From Cyclic Cohomology to Hopf Cyclic Cohomology*

- 12:00 pm - 2:00 pm *Lunch Break*

**Afternoon Session Chair – Robert Yuncken**

- 2:00 pm - 3:00 pm **Christian Kassel IV**- *An Introduction to Quantum Groups*  
3:10 pm - 4:10 pm **Nigel Higson/John Roe IV** - *Dirac Operators and the Baum-Connes Conjecture*  
4:10 pm - 4:40 pm *Coffee Break*  
4:40 pm - 5:40 pm **Atabey Kaygun/Masoud Khalkhali VII**- *From Cyclic Cohomology to Hopf Cyclic Cohomology*  
5:50 pm – 6:40 pm **Ludwik Dabrowski** - *Quantum Groups as Noncommutative Manifolds*  
Round table discussions

**Friday, May 11, 2007**

Day Off

**Saturday, May 12, 2007**

**Morning Session Chair - Pinhas Grossman**

- 9:30 am - 10:30 am **Alain Connes V** - *Noncommutative Geometry and Motives*  
10:30 am - 11:00 am *Coffee Break*  
11:00 am - 12:00 pm **Ryszard Nest/Boris Tsygan I** - *Algebraic Index Theorem*  
12:00 pm - 2:00 pm *Lunch Break*

**Afternoon Session Chair – Shengzhi Xu**

- 2:00 pm - 3:00 pm **Christian Kassel V**- *An Introduction to Quantum Groups*  
3:10 pm - 4:10 pm **Nigel Higson/John Roe V** - *Dirac Operators and the Baum-Connes Conjecture*  
4:10 pm - 4:40 pm *Coffee Break*  
4:40 pm - 5:40 pm **Atabey Kaygun/Masoud Khalkhali VIII**- *From Cyclic Cohomology to Hopf Cyclic Cohomology*

Round table discussions

**Sunday, May 13, 2007**

**Morning Session Chair – Shamindra Ghosh**

9:30 am - 10:30 am **John Phillips** - *APS Boundary Conditions, KK-theory and Spectral Flow in Graph  $C^*$ - Algebras*

10:30 am - 11:00 am *Coffee Break*

11:00 am - 12:00 pm **Ryszard Nest/Boris Tsygan II** - *Algebraic Index Theorem*

12:00 pm - 2:00 pm *Lunch Break*

**Afternoon Session Chair – Raphael Ponge**

2:00 pm - 3:00 pm **Michael Puschnigg I** - *Cyclic Cohomology and the Chern-Connes Character*

3:10 pm - 4:00 pm **Alexander Gorokhovsky** - *Formal Deformations of Gerbes on Smooth Manifolds*

4:00 pm - 4:30 pm *Coffee Break*

4:30 pm - 5:20 pm **Sergey Neshveyev** - *On the Drinfeld Associator in the Real Parameter Case*

5:30 pm - 6:20 pm **Lars Tuset** - *Quantum Groups are Non-commutative Manifolds in Connes' Sense*

Round table discussions

**Monday, May 14, 2007**

**Morning Session Chair – Ben Wieland**

9:30 am - 10:30 am **Shmuel Weinberger** –  $L^2$  *Betti-less Manifolds - the Essentially Commutative Case*

10:30 am - 11:00 am *Coffee Break*

11:00 am - 12:00 pm **Ryszard Nest/Boris Tsygan III** - *Algebraic Index Theorem*

12:00 pm - 2:00 pm *Lunch Break*

**Afternoon Session Chair - Alan Paterson**

2:00 pm - 3:00 pm **Michael Puschnigg II** - *Cyclic Cohomology and the Chern-Connes Character*

3:10 pm - 4:10 pm **Andrzej Sitarz/ Giovanni Landi I** - *An Introduction to Equivariant Spectral Triples*

4:10 pm - 4:40 pm *Coffee Break*

4:40 pm - 5:30 pm **Christian Voigt** - *Towards an Analogue of the Baum-Connes Conjecture for Quantum Groups*

Round table discussions

**Tuesday, May 15, 2007**

**Morning Session Chair – Igor Nikolaev**

9:30 am -10:30 am **Matilde Marcolli** - *Noncommutative Geometry and the Standard Model with Neutrino Mixing*

10:30 am -11:00 am *Coffee Break*

11:00 am -12:00 pm **Ryszard Nest/Boris Tsygan IV** - *Algebraic Index Theorem*

12:00 pm - 2:00 pm *Lunch Break*

**Afternoon Session Chair – Dorin Dumitrescu**

2:00 pm - 3:00 pm **Michael Puschnigg III** - *Cyclic Cohomology and the Chern-Connes Character*

3:10 pm - 4:10 pm **Andrzej Sitarz/ Giovanni Landi II** - *An Introduction to Equivariant Spectral Triples*

4:10 pm - 4:40 pm *Coffee Break*

4:40 pm - 5:30 pm **Bahram Rangipour** - *Hopf Cyclic Cohomology of Connes-Moscovici Hopf Algebras*

5:40 pm – 6:30 pm **Georgy Sharygin** - *Chern Classes of Principal Bundles and Twisting Cochains*

Round table discussions

**Wednesday, May 16, 2007**

**Morning Session Chair – Guoliang Yu**

9:30 am - 10:30 am **Andrzej Sitarz/ Giovanni Landi III** - *An Introduction to Equivariant Spectral Triples*

10:30 am - 11:00 am *Coffee Break*

11:00 am - 12:00 pm **Ryszard Nest/Boris Tsygan V** - *Algebraic Index Theorem*

**End of Conference**