

2010 Workshop on Algebraic Geometry and Physics

DEFORMATION, QUANTIZATION AND ALGEBRAIC INDEX THEOREMS

Saint Jean de Monts, France, June 7 to 11, 2010

Organizing institutions:

MATPYL (Mathématiques en Pays de la Loire)
LAREMA (Laboratoire Angevin de Recherche en Mathématiques)
Mathematical Physics and Geometry Group of SISSA (Trieste)

Programme

Monday 7 June

- 9:10-10:00 Damien Calaque, Duflo's isomorphism and Căldăraru's conjecture (I)
10:00-11:00 Anton Alekseev, Deformation quantization and flat connections
11:00-11:30 Coffee break
11:30-12:20 Andrea D'Agnolo, D-modules and (deformation-)quantization (I)
12:20-12:50 Michael Pevzner, Spectral approach to composition formulas
13:00 **Lunch**
14:30-15:30 Paul Bressler, Formality for algebroids
15:30-16:30 Xu Ping, TBA
16:30-17:00 Coffee break
17:00-18:00 Gilles Halbout, Dunkl operator and quantization of \mathbb{Z}_2 -singularity
19:30 **Dinner**

Tuesday 8 June

- 9:00-9:50 Damien Calaque, Duflo's isomorphism and Căldăraru's conjecture (II)
9:50-10:50 Thomas Ströbl, TBA
10:50-11:10 Coffee break
11:10-12:00 Andrea D'Agnolo, D-modules and (deformation-)quantization (II)
12:00-12:30 Tu Junwu, Matrix factorizations via Koszul duality
12:30-13:00 Vladimir Salnikov, (Twisted) Poisson sigma model and equivariant cohomology
13:00 **Lunch**
14:30-15:30 Giuseppe Dito, Wave maps and quantization
15:30-16:30 Benjamin Enriquez, Elliptic associators
16:30-17:00 Coffee break
17:00-18:00 Boris Fedosov, On a spectral theorem for deformation quantization
18:00-18:30 Dmitri Vassilevich, Covariant star-products
19:30 **Dinner**

Wednesday 9 June

- 9:10-10:00 Damien Calaque, Duflo's isomorphism and Căldăraru's conjecture (III)
10:00-11:00 Frank Ferrari, TBA
11:00-11:30 Coffee break
11:30-12:30 Giovanni Landi, Dimensional reduction over the quantum sphere and non-abelian q -vortices
12:30-13:00 Artur Serdyukov, Generalized Stäckel transform: an integrability-preserving transformation for finite-dimensional dynamical systems
13:00 **Lunch**

FREE AFTERNOON

- 19:30 **Conference cocktail**

Thursday 10 June

- 9:10-10:00 Andrea D'Agnolo, D-modules and (deformation-)quantization (III)
10:00-11:00 Takashi Kimura, On stringy algebraic structures in equivariant K-theory
11:00-11:30 Coffee break
11:30-12:30 Hessel Posthuma, The higher index theorem for orbifolds
12:30-13:00 Sergiu Vacaru, Commutative Ricci flows of Fedosov-Finsler spaces and quantum gravity
13:00 **Lunch**
14:30-15:30 Pierre Schapira, Quantization of Hamiltonian isotopies and application to non-displaceability results in symplectic topology
15:30-16:00 Boris Zhilinskii, Qualitative theory of quantum energy level patterns and their rearrangements
16:00-16:30 Yaël Frégier, Formal geometry approach to homotopy representations and layer cake homotopy algebras
16:30-17:00 Coffee break
17:00-18:00 Martin Schlichenmaier, Berezin-Toeplitz quantization of moduli spaces
18:00-18:30 Pierre Martinetti, Noncommutative geometry distance in the Moyal plane
19:30 **Dinner**

Friday 11 June

- 9:10-10:10 Mathieu Stiénon, TBA
10:10-10:40 Friedrich Wagemann, On Lie group cohomology
10:40-11:10 Christoph Nölle, Deformation and geometric quantization
11:10-11:30 Coffee break
11:30-12:30 Dmitri Gurevich, Braiding geometry arising from a quantization
13:00 **Lunch**