

Centre de recherches mathématiques
Université de Montréal

Atelier «Aspects mathématiques du chaos quantique»
Du 2 au 6 juin 2008

*Workshop “Mathematical aspects of quantum chaos”
June 2-6, 2008*

HORAIRE / PROGRAM

Conférences : salle 6214
Pauses-café : salle 6245

*Lectures: Room 6214
Coffee Breaks: Room 6245*

Le lundi 2 juin 2008 / *Monday, June 2, 2008*

09:00 - 09:30 Inscription (5345) et café-croissants (6245) (6245) / *Registration (5345) and Coffee & Croissants (6245) (6245)*

09:30 - 09:50 Mots de bienvenue / *Welcoming addresses*

09:50 - 10:40 **Jonathan Keating** (University of Bristol)
“Quantum Ergodicity: Graphs and Resonance Eigenfunctions”

10:50 - 11:10 Café et séance d’affichage / *Coffee and poster session*
 (Salle / *Room* 6245)

11:10 - 12:00 **John A. Toth** (McGill University)
“Counting nodal lines which touch the boundary of an analytic domain”

12:10 - 14:00 Pause déjeuner / *Lunch break*

14:00 - 14:50 **Pär Kurlberg** (KTH)
“Matrix elements for the quantum cat map: fluctuations in short windows”

15:00 - 15:20 Café et séance d’affichage / *Coffee and poster session*
 (Salle / *Room* 6245)

15:20 - 16:10 **Shimon Brooks** (Princeton University)
“Entropy of quantum limits for the 2-torus”

16:20 - 17:10 **Boris Gutkin** (Universität Duisburg-Essen)
“Entropic bounds on semiclassical measures for quantized one-dimensional maps”

17:20 Réception soulignant le début de l’année thématique 2008-2009 du CRM sur les méthodes probabilistes en physique mathématique (6245) / *Reception Marking the Opening of the CRM 2008-2009 Thematic Program on Probabilistic Methods in Mathematical Physics. (6245)*

Le mardi 3 juin 2008 / *Tuesday, June 3, 2008*

09:00 - 09:30 Café croissants (6245) / *Coffee & Croissants (6245)*

09:30 - 10:20 **Sebastian Müller** (University of Bristol)
“Periodic-orbit theory of universal spectral statistics”

10:30 - 10:40 Café et séance d’affichage / *Coffee and poster session*
(Salle / Room 6245)

10:40 - 11:30 **Peter A. Braun** (Universität Duisburg-Essen)
“Transport through chaotic cavities: random matrix theory results reproduced from semiclassics”

11:40 - 12:30 **Dan Mangoubi** (Max-Planck-Institut für Mathematik)
“Tubular Neighborhoods of Nodal Sets”

12:30 - 14:00 Déjeuner (6245) / *Lunch (6245)*

14:00 - 14:50 **Arnd Bäcker** (TU Dresden)
“Dynamical tunneling in systems with a mixed phase space”

15:00 - 15:20 Café et séance d’affichage / *Coffee and poster session*
(Salle / Room 6245)

15:20 - 16:10 **Alex Barnett** (Dartmouth College)
“Numerical study of bouncing-ball mode leakage and migrating scars”

16:20 - 17:10 **Hans Christianson** (Massachusetts Institute of Technology)
“Non-concentration near hyperbolic orbits and applications”

Le mercredi 4 juin 2008 / Wednesday, June 4, 2008

09:00 - 09:30 Café croissants (6245) / *Coffee & Croissants (6245)*

09:30 - 10:20 **Lior Silberman** (University of British Columbia)
“Arithmetic quantum chaos”

10:30 - 10:50 Café et séance d’affichage / *Coffee and poster session*
(Salle / Room 6245)

10:50 - 11:40 **Dubi Kelmer** (Institute for Advanced Study)
“Scarring on invariant manifolds for quantum maps on the torus”

11:50 - 12:10 Photo de groupe / *Group Photo Session*

12:10 - 14:00 Pause déjeuner / *Lunch break*

14:00 - 14:50 **Hamid Hezari** (Johns Hopkins University)
*“Inverse Spectral Problems for Schrödinger Operators and Real Analytic Drums:
Higher Dimensions”*

15:00 - 15:20 Café et séance d’affichage / *Coffee and poster session*
(Salle / Room 6245)

15:20 - 16:10 **Igor Wigman** (Université de Montréal)
“Nodal lines for random eigenfunctions of the Laplacian on the torus”

16:20 - 17:10 **Alexander Strohmaier** (Loughborough University)
“Spectral asymptotics on compact Kaehler manifolds”

Le jeudi 5 juin 2008 / *Thursday, June 5, 2008*

09:00 - 09:40 Café croissants (6245) / *Coffee & Croissants (6245)*

09:40 - 10:30 **Dmitry Jakobson** (McGill University)
“Estimates from below for the spectral function and for the remainder in Weyl’s law on negatively-curved surfaces”

10:40 - 11:00 Café et séance d’affichage / *Coffee and poster session*
(Salle / Room 6245)

11:00 - 11:50 **Maciej Zworski** (University of California at Berkeley)
“Semiclassical Dynamics of Solitons”

12:00 - 14:00 Pause déjeuner / *Lunch break*

14:00 - 14:50 **Frédéric Faure** (Université Joseph Fourier)
“A prequantization approach to quantum chaos”

15:00 - 15:20 Café et séance d’affichage / *Coffee and poster session*
(Salle / Room 6245)

15:20 - 16:10 **Mirko Degli Esposti** (Università di Bologna)
“Weak classical and quantum chaos”

16:20 - 17:10 **Eugène Bogomolny** (Université de Paris-Sud)
“Trace Formula for Dielectric Cavities”

Le vendredi 6 juin 2008 / *Friday, June 6, 2008*

09:00 - 09:30 Café croissants (6245) / *Coffee & Croissants (6245)*

09:30 - 10:20 **Iosif Polterovich** (Université de Montréal)
“Dynamical and universal properties of the spectral function”

10:30 - 10:40 Café et séance d’affichage / *Coffee and poster session*
(Salle / *Room* 6245)

10:40 - 11:30 **Roman Schubert** (University of Bristol)
“Time Evolution Beyond the Ehrenfest Time”

11:40 - 12:30 **Gregor Tanner** (University of Nottingham)
“Wave engineering - using interference as a resource”

12:30 - 14:00 Pause déjeuner / *Lunch break*

14:00 - 14:50 **Jens Bolte** (Royal Holloway, University of London)
“The trace formula for quantum graphs with general self adjoint boundary conditions”

15:00 - 15:20 Café et séance d’affichage / *Coffee and poster session*
(Salle / *Room* 6245)

15:20 - 16:10 **Gregory Berkolaiko** (Texas A&M University)
“A lower bound for nodal count on discrete and metric graphs”