

BOURGET Olivier

Facultad de Matemáticas
Pontificia Universidad Católica de Chile
Vicuña Mackenna 4860, Macul
SANTIAGO, CHILE

MORE PERSONAL DATA

Current position	Assistent professor
E-mail	bourget@mat.puc.cl
Phone	(56 2) 3544509
Fax	(56 2) 5525916
Birth	December 8, 1974. Nantes (France)
Citizenship	French

EDUCATION

2002	PhD in Mathematical Physics (University of Grenoble, France) Thesis title: On the Stability of some Quantum Dynamical Systems Advisors: Pr. Alain Joye (Institut Fourier, Grenoble) Pr. Joachim Asch (CPT, Marseille, France)
1998	M.Sc. in Mathematics (University of Grenoble)
1997	Engineering Degree in Physics (Ecole Nationale Supérieure de Physique de Grenoble)
1992	Baccalauréat (High School Diploma) in Mathematics and Physics

PROFESSIONAL EXPERIENCE

Since 04/2006	Assistent Professor, Department of Mathematics, Pontificia Universidad Católica (PUC), Santiago, Chile. Teachings include both undergraduate and graduate level courses such as: Calculus, Real Analysis, Functional Analysis, Topology . . .
03/2003 - 03/2006	Postdoctoral Fellowships, Department of Mathematics, PUC, Santiago, Chile. Supported by the ECOS-Conicyt proposal C00E01 until February 2004, and then by the MECESUP proposal PUC0103.

- 09/2002 - 02/2003 Teaching Assistant at the University of Grenoble I (ATER) Calculus and Linear Algebra for first and second year undergraduate students in Sciences.
- 10/1998 - 08/2002 Preparation of my PhD at the University of Grenoble. Teaching Assistant at the University of Grenoble II (Moniteur). Both activities were interrupted between September 2000 and June 2001 in order to do my military service.
- 07/1999 Research visit at the University of Virginia (Charlottesville, VA, USA). Collaboration with James Howland, Professor at the University of Virginia.
- 03/1997 - 06/1997 Engineering Professional Project: "Numerical Coupling of a model of thermodynamical and mechanical properties of the snow with a model of atmospheric circulation", Laboratoire de Glaciologie et Géophysique de l'Environnement (Grenoble). Part of my third year engineering curriculum.
- 06/1996 - 08/1996 Engineering and Technical Work: "Thermomechanical Properties of Two Ternary Thixotropic Alloys", Laboratoire de Génie Physique et Mécanique des Matériaux (GPM2, Grenoble) in the framework of the international program I.T.E.R.. Part of my second year engineering curriculum.

PUBLICATIONS

Remarks on Sojourn Time Estimates for periodic time-dependent Quantum Systems in Spectral Analysis of Quantum Hamiltonians, Benguria R., Mantoiu M., Raikov G., eds. (2012) Birkhäuser, accepted for publication, joint work with Asch J., Cortes V., Fernández C.

Localization Properties of the Chalker-Coddington Model, Ann. Henri Poincaré 11 (2010), 1341-1373, joint work with Asch J. and Joye A.

Absence of singular continuous spectrum for some time-periodic magnetic Schrödinger operators in Spectral and Scattering Theory for Quantum Magnetic Systems, Briet P., Germinet F., Raikov G., eds. (2009) Contemporary Mathematics 500, p. 25-32, joint work with Fernández C.

Absence of point spectrum for unitary operators, J. of Differential Equations 244 (2008), no. 2, 229-241, written with Astaburuaga M.A., Cortés V.H., Fernández C.

Floquet operators without singular continuous spectrum, J. Funct. Anal. 238 (2006), no. 2, 489-517, written with Astaburuaga M.A., Cortés V.H., Fernández C.

Singular continuous Floquet operator for periodic quantum systems, J. Math. Anal. Appl. 301 (2005), no. 1, 65-83.

Spectral analysis of unitary band matrices, Comm. Math. Phys. 234 (2003), no. 2,

191–227, written with Howland J.S., Joye A.

Singular continuous Floquet operator for systems with increasing gaps, J. Math. Anal. Appl. 276 (2002), no. 1, 28–39. *Corrigendum: "Singular continuous Floquet operator for systems with increasing gaps"*, J. Math. Anal. Appl. 289 (2004), no. 2, 722–723.

MEMBERSHIP IN RESEARCH PROGRAMS

- | | |
|-----------|--|
| 2010-2013 | Franco-Chilean ECOS-Conicyt Proposal C10E01
"Spectral and Dynamical Properties of Unitary Operators"
Associate investigator. |
| 2009-2012 | Chilean Milenio Grant ICM P07-027-F. Young investigator. |
| 2008-2011 | Chilean Fondecyt Grant 1080675. Principal investigator. |
| 2008-2011 | Chilean Fondecyt Grant 1080455. Associate investigator. |
| 2007-2009 | Chilean Anillo Grant PBCT-ACT13. Associate investigator. |
| 2005-2007 | Chilean Fondecyt Grant 1050899. Principal investigator. |

COMPLEMENTARY SCIENTIFIC ACTIVITIES

Master Theses Advising

- | | |
|------|--|
| 2010 | Felipe Enrique Poblete Grandon: <i>Absence of Eigenvalues in the Spectrum of Two Families of Operators</i> , Master Thesis in Mathematics, |
| 2010 | Angélica María Vega Moreno: <i>On the Regularity of the Eigenvectors of a Unitary Operator</i> , Master Thesis in Mathematics. |

PhD Thesis Advising

- | | |
|------------|---|
| Since 2008 | Julio Roberto Rincón Cristancho is preparing his PhD Thesis under the supervision of Pr. Rafael Benguria and myself on the theme of Universal inequalities and Lieb-Thirring inequalities |
|------------|---|

International Conference Organization

- | | |
|------|---|
| 2010 | Member of the organizing comitee of the Conference "Spectral Days", Santiago, Chile, September 20-24. |
|------|---|

Communications in International Conferences

- July 2008 *Absence of singular continuous spectrum for some time-periodic magnetic Schrödinger operators*, with C. Fernandez, Spectral and Scattering Theory for Quantum Magnetic Systems, CIRM, Marseille-Luminy, France.
- September 2007 *Spectral analysis and long-time behaviour for the solution of the Schrödinger equation*, Second workshop on elliptic and parabolic PDE's, Santiago, Chile.
- November 2005 *Commutators and Unitary operators*, LXXVII Encuentro de la Sociedad de Matemática de Chile, Chile.
- August 2003 *Periodically kicked quantum systems and spectral properties of their Floquet operators*, COMCA 2003, Antofagasta, Chile.
- January 2002 *Spectre d'opérateurs de Floquet aléatoires*, Mathematics and Quantum Physics Colloquium, Bordeaux, France.

ADMINISTRATIVE ACTIVITIES

Since 2010 Elected member of the council of the Faculty of Mathematics (PUC).

LANGUAGES

- | | |
|--------------------|-----------------|
| - French | native language |
| - English, Spanish | fluent |
| - German | notions |