

Personal Data

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Date of Birth: 1981-10-18
Place of Birth: Kuala Lumpur, Malaysia
Nationality: French

Research Interests

- Geometric analysis, pseudodifferential calculus, spectral geometry
- Noncommutative geometry, spectral triples, index theory

Positions

- 2009–2011 Postdoctoral position at University of Copenhagen, Denmark, Department of Mathematical Sciences.
- 2006–2009 Allocataire de recherche (Research fellowship) from the French Ministry for Higher Education and Research (MENRT) at the University Aix-Marseille I.

Education

- 2006–2009 Ph.D. at the Centre de Physique Théorique (University Aix-Marseille I) in Mathematical physics. Advisor: Professor Bruno Iochum. Thesis: *Global pseudodifferential calculus and spectral action in noncommutative geometry*. Thesis defended in June 2009.
- 2005–2006 Master in Mathematical physics at the École Normale Supérieure de Lyon. Thesis: *Moyal planes are symplectic spectral triples*. Graduated in September 2006.
- 2002–2005 Engineering school École Supérieure d'Electricité (Supelec), graduated in September 2005. Licence in pure mathematics at the University Paris 6, graduated in September 2003.
- 2000–2002 Preparatory classes at the Lycée Hoche, Versailles.

Research works

- *Local index formula for group C^* -algebras* (with E. Ortega), In preparation.
- *Spectral action for torsion with and without boundaries* (with B. Iochum and D. Vassilevich), preprint (2010).
- *Pseudodifferential operators on manifolds with linearization*, preprint (2009).
- *Spectral triples and manifolds with boundary* (with B. Iochum), Journal of Functional Analysis **260** (2011), 117–134.
- *Tadpoles and commutative spectral triples* (with B. Iochum), Journal of Noncommutative Geometry, In press.
- *Spectral action on $SU_q(2)$* (with B. Iochum and A. Sitarz), Communications in Mathematical Physics **289** (2009), 107–155.
- *Spectral action on noncommutative torus* (with D. Essouabri, B. Iochum and A. Sitarz), Journal of Noncommutative Geometry **2** (2008), 53–123.
- *Spectral action in noncommutative geometry and global pseudodifferential calculus*, PhD Thesis, University of Provence, 2009.

Teaching Experience

- 2010–2011 Introduction to differential geometry (Tutorials) at the University of Copenhagen, master level, 9 weeks, 4 hours/week. Professor of the course: Henrik Schlichtkrull.
- 2009–2010 Course in Riemannian geometry (Lectures) at the University of Copenhagen, master level, 9 weeks, 5 hours/week.
- 2009–2010 Differential geometry (Tutorials) at the University of Copenhagen, master level, 9 weeks, 4 hours/week. Professor of the course: Hans Plesner Jakobsen.
- 2006–2008 Tutorat (teaching at the University during a Ph.D.): first year of mathematics cursus at the University Aix-Marseille I, Calculus and Newtonian mechanics.

Languages

- French and English
- Spanish and German (basic)

Talks

- École Normale Supérieure de Lyon, *Noncommutative Geometry and quantization: the Moyal planes*, June 2006.
- Centre de Physique Théorique, Marseille, *Quantization of Moyal planes*, July 2006.
- University of Vienna, *Spectral action on noncommutative torus*, November 2007.
- Sissa (International School for Advanced Studies), Trieste, *Spectral action on $SU_q(2)$* , April 2008.
- University of Clermont-Ferrand, *Pseudodifferential operators on manifolds with linearization*, November 2008.
- University of Copenhagen, *Spectral action on noncommutative torus and global pseudodifferential calculus*, January 2009.
- Laboratoire de Mathématiques et Applications de Metz, *Chamseddine–Connes spectral action: the case of the noncommutative torus*, February 2009.
- Institut Mathématique de Bourgogne, Dijon, *Quantization and global pseudodifferential calculus*, April 2009.
- University of Copenhagen, *Quantum groups, $SU_q(2)$ and their associated spectral triples*, November 2009.
- University of Aalborg, *On the construction of some spectral triples*, Mars 2010.
- University of Copenhagen, *Boundary pseudodifferential calculus*, April 2010.
- Institut Camille Jordan, Lyon, *Manifolds with boundary and noncommutative geometry*, May 2010.
- University of Clermont-Ferrand, *Spectral triples and manifolds with boundary*, November 2010.
- Laboratoire J.A. Dieudonné, Nice, *Boutet de Monvel calculus and spectral action*, December 2010.
- Dublin Institute for Advanced Studies, *Noncommutative integral and spectral triples*, March 2011.
- Laboratoire de Mathématiques et Applications de Metz, *Spectral triples and manifolds with boundary*, April 2011.