

Fabian Radoux

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Belgian nationality

Date and place of birth : 8 May 1981, Verviers

Education and Qualifications

- 2012–** : Post-doc position in a IAP (Interuniversity Attraction Poles) project entitled “Dynamics, Geometry and Statistical Physic” (network between the Universities of Liège, Bruxelles, Louvain and Leuven).
- 2008–2012** : Researcher (Chargé de Recherches) at the FNRS (Fonds national de la recherche scientifique, Belgium), working at the University of Liège in the research group of Pierre Lecomte.
- 2007–2008** : Post-doc at the University of Luxembourg in the research group of Prof. Norbert Poncin.
- 2003–2007** : Ph.D. in Pure Mathematics (Differential Geometry) defended on 24 November 2006 at the ULg (University of Liège, Belgium) with Pierre Lecomte (ULg) as advisor : ‘Natural and projectively equivariant quantizations’ (PGDF).
- 2003-2005** : D.E.A. in Pure Mathematics (Differential Geometry) at the ULg (University of Liège, Belgium) with Pierre Lecomte (ULg) as advisor : ‘Natural equivariant quantizations’ (PGDF).
- 1999–2003** : Master’s degree in Pure Mathematics, University of Liège (PGDF).

Languages

- **French** : Mother tongue.
- **English** : Written, spoken and read fluently.
- **German** : Basic knowledge.

Scientific Awards

Garnir Prize (Best student among those attending the last two years of the MSc of Mathematics curriculum) : 13 September 2003

Fields of Interest

- Equivariant quantization
- Parabolic geometries
- Representation theory
- Lie (super)algebras
- Foliations
- Singular spaces
- Supergeometry

Published papers

- ‘Second order symmetries of the conformal Laplacian’, with J.-P. Michel and J. Silhan, *SIGMA*, 10, 016, 26 pages, 2014.
- ‘ $\mathfrak{spo}(2|2)$ -equivariant quantizations on the supercircle $S^{1|2}$ ’, with N. Mellouli and A. Nibirantiza, *SIGMA*, 9, 055, 17 pages, 2013.
- ‘Geodesics on a supermanifold and projective equivalence of superconnections’, with T. Leuther and G. Tuynman, *Journal of Geometry and Physics*, 67 :81-96, 2013.
- ‘On $\mathfrak{osp}(p+1, q+1|2r)$ -equivariant quantizations’, with T. Leuther and P. Mathonet, *Journal of Geometry and Physics*, 62 :87-99, 2012.
- ‘Natural and projectively invariant quantizations on supermanifolds’, with T. Leuther, *SIGMA*, 7, 034, 12 pages, 2011.
- ‘Projectively equivariant quantizations over superspaces $\mathbb{R}^{p|q}$ ’, with P. Mathonet, *Letters in Mathematical Physics*, 98 :311-331, 2011.
- ‘Existence of natural and conformally invariant quantizations of arbitrary symbols’, with P. Mathonet, *Journal of Nonlinear Mathematical Physics*, 17 :539-556, 2010.
- ‘Equivariant quantization of orbifolds’, with N. Poncin and R. Wolak, *Journal of Geometry and Physics*, 60(9) :1103–1111, 2010.

- ‘An explicit formula for natural and conformally invariant quantization’, *Letters in Mathematical Physics*, 89 :249–263, 2009.
- ‘A first approximation for quantization of singular spaces’, with N. Poncin and R. Wolak, *Journal of Geometry and Physics*, 59 :503–518, 2009.
- ‘On conformally equivariant quantizations’, with P. Mathonet, *Journal of the London Mathematical Society*, 80 :256–272, 2009.
- ‘Non-uniqueness of natural and projectively equivariant quantization’, *Journal of Geometry and Physics*, 58(2) :253–258, 2008.
- ‘Cartan connections and natural and projectively equivariant quantizations’, with P. Mathonet, *London Mathematical Society*, 76 :87–104, 2007.
- ‘Explicit formula for natural and projectively equivariant quantization’, *Letters in Math. Physics*, 78(2) :173–188, 2006.
- ‘Natural and projectively equivariant quantizations by means of Cartan connections’, with P. Mathonet, *Letters in Math. Physics*, 72(3) :183–196, 2005.

Books

- ‘Quantifications naturelles projectivement équivariantes’, *Editions Universitaires Européennes*, 76 pages, ISBN : 978-613-1-56989-0, 2011.

Conferences, Talks

- Talk at the IAP meeting DYGEST, Bruxelles, Belgium, 10 December 2013 : ‘Higher symmetries of the conformal Laplacian’.
- Seminar at the University of Reims, France, 5 November 2013, talk : ‘Quantifications équivariantes’.
- Seminar at the University of Ghent, Belgium, 30 July 2013, talk : ‘Higher symmetries of the conformal Laplacian’.
- DYGEST Corfu Meeting, Corfu, Greece, 28-31 May 2013, talk : ‘Higher symmetries of the conformal Laplacian’.
- Seminar at the University of Bourgogne, Dijon, France, 15 March 2012, talk : ‘Quantifications équivariantes’.
- Seminar of Geometry at the University of Manchester, 8 December 2011, talk : ‘Equivariant Quantization in Supergeometry’.
- Groupe de contact FNRS, Brussels, 12-13 September 2011, talk : ‘Projectively equivariant quantization over $\mathbb{R}^{p|q}$ ’.

- Workshop on Equivariant Quantization, Luxembourg, 11-13 July 2011, talk : ‘Natural and invariant quantization’.
- Seminar at the LMAM, Metz, France, 15 April 2011, talk : ‘Quantifications équivariantes’.
- Seminar of the team ‘Analyse algébrique’, Paris VI, France, 28 March 2011, talk : ‘Quantifications équivariantes’.
- Seminar of the team GLAH at the IECN, Nancy, France, 27 January 2011, talk : ‘Quantifications équivariantes’.
- Euro–Magreb Conference on Geometry and Lie theory, Monastir, Tunisia, 1–5 November 2010, talk : ‘Projectively equivariant quantizations over the superspace $\mathbb{R}^{p|q}$ ’.
- FNRS contact group, Han-sur-Lesse, 12–14 November 2008, talk : ‘Natural equivariant quantization’.
- Seminar of the Mathematics Institute of Luminy, Marseille, 21 March 2008, talk : ‘Natural and projectively equivariant quantizations’.
- Recent Developments in Conformal Differential Geometry, Workshop, Oberwolfach, Germany, 18–24 November 2007.
- Algebraic Aspects in Geometry, Stefan Banach International Mathematical Center, Poznan, 17–23 October 2007, talk : ‘Natural and projectively equivariant quantizations’.
- Interregional Colloquium of Mathematics, Nancy, 12-13 October 2007, talk : ‘Natural and projectively equivariant quantizations’.
- 8th Conference on the Geometry and Topology of Manifolds (Luxembourg–Poland–Ukraine) : Lie Algebroids, Dynamical Systems and Applications, Przemysl, Poland and Lvov, Ukraine, 30 April to 6 May 2007, talk : ‘Natural and projectively equivariant quantizations’.
- Seminar at the University of Lille 1, 13 February 2007, talk : ‘Natural and projectively equivariant quantizations’.
- FNRS contact group, ULB, Brussels, 25 November 2006, talk : ‘Natural and projectively equivariant quantizations’.
- Seminar at the UHA, Mulhouse, 28 September 2006, talk : ‘Natural and projectively invariant quantizations’.
- Seminar at the ULg, 27 March, 24 April, and 8 May 2006 : ‘Explicit formula for natural and projectively equivariant quantization’.
- Differential Geometry and Physics, Eötvös Lorand University, Budapest, 29 August to 2 September 2005, talk : ‘Natural equivariant quantizations by means of Cartan connections’.
- Poisson Geometry 2004, Luxembourg, 7–11 June 2004.
- Seminar at the ULB, Brussels, 16 and 23 March 2004, talk : ‘Natural and projectively invariant quantizations’.

Teaching

- 2011–2012** : University of Liège, recitation in General Topology for third year students of the Mathematics Department.
- 2009–2011** : University of Liège, lecturer on General Topology for third year students of the Mathematics Department.
: University of Liège, recitation in General Topology for third year students of the Mathematics Department.
- 2008–2009** : University of Liège, recitation in General Topology for third year students of the Mathematics Department.
: University of Liège, recitation in Differential Geometry for third year students of the Mathematics Department.
: University of Liège, recitation in Geometry for first year students of the Faculty of Applied Sciences.
- 2004–2007** : University of Liège, recitation in Geometry for first year students of the Faculty of Applied Sciences.
: University of Liège, recitation in differential geometry for third year students of the Mathematics Department.
: University of Liège, recitation in Geometry/Algebra for first year students of the Physics Department.
- 2003–2004** : University of Liège, recitation in Geometry for first year students of the Faculty of Applied Sciences.
: University of Liège, recitation in Geometry/Algebra for first year students of the Physics Department.
: University of Liège, recitation in Algebra for first year students of the Mathematics Department.

Administrative tasks

- 2009–2013** : Secretary of the Mathematics Department of the University of Liège.

Juries

- 2013** : Secretary in the jury of Elie Zihindula Mushengezi's thesis (ULg) : 'Sur la caractérisation (Lie-)algébrique des fibrés et des variétés différentielles'.
- 2010** : Jury of Mrs Marie Kreuzsch's dissertation (ULg) : 'Lie anti-algebras'.
- 2009** : Jury of Mrs Glorioso Nizigama's thesis (ULg) : ' $\mathfrak{sl}(p+q, \mathbb{R})$ -equivariant quantization'.

Committees

2012 : Committee for filling the post of first Assistant in Discrete Mathematics in the Department of Mathematics of the University of Liège.

2012 : Committee for evaluating the teaching of Samuel Nicolay, from the Department of Mathematics of the University of Liège.

2010 : Committee for filling the post of first Assistant in Statistics in the Department of Mathematics of the University of Liège.

Directed theses

2011- : Co-advisor of Aboubacar Nibirantiza's thesis (ULg) : ' $\mathfrak{spo}(2|n)$ -equivariant quantization on $S^{1|n}$ '.

2006-2013 : Co-advisor of Thomas Leuther's thesis (ULg) : 'Projectively equivariant quantization in supergeometry'.