

CURRICULUM VITÆ: Bertrand RÉMY

Civil status

Born 15.II.1973 (Nancy); married, three children: Adrien, Louise and Valérien; French citizen.

Diplomas and positions

- PhD thesis (Nancy 1): *Formes presque déployées des groupes de Kac-Moody sur des corps quelconques* (9.IX.1999).
- Postdoc, Hebrew University of Jerusalem, 2000/2001.
- Maître de conférences at Institut Fourier (Grenoble 1), September 2001-September 2004.
- Habilitation (Grenoble 1): *Sur les propriétés algébriques and géométriques des groupes de Kac-Moody* (10.XII.2003).
- Professor at Lyon 1 since September 2004; first class professor since September 2010.
- Since September 2014: full professor at École polytechnique (on leave from Univ. Lyon 1).

Distinctions

- Institut Universitaire de France, junior member since October 2009.
- Invited speaker at the ICM 2014 (Seoul); section 7: *Lie theory and generalizations*.
- F.W. Bessel Research Award from the Alexander von Humboldt Foundation, October 2014.

Editorial activities

- Editorial board of Journal of Group Theory, January 2012-December 2014.
- Editorial board of Annales de l'Institut Fourier since March 2010.

International cooperations

- French head of the French-Israeli project « Group theory: geometric and probabilistic methods » 2005-2007 (Lille 1, Lyon 1, Orsay and Bar Ilan, Jerusalem, Tel Aviv).
- Vice head (dir. Bernard Leclerc) then head of the French-UK net CNRS/EPSRC GDRE 517 *Representation theory*, 2008-2011.

Supervisions

- Five students from ENS de Lyon and one from ENS de Cachan supervised since 2006.
- Co-organization of a graduate course *Algebraic geometry and algebraic groups*, IMPA Rio de Janeiro (Brazil), 18-31 October 2010.
- Five courses and five master theses at the level M2 (option research).
- One PhD in mathematics supervised in Lyon 1 (Jean Lécureux, 04.XII.09; now assistant professor at Univ. Paris 11); one PhD in philosophy of mathematics co-supervised in Lyon 3 (Christophe Eckès, 05.XII.11; now assistant professor at Univ. Lorraine – Archives Poincaré, Nancy).
- Currently supervising Benoît Loisel's PhD (Bruhat-Tits theory and pseudo-reductive groups).
- Excellency and supervision grant since Fall 2006 (no interruption).

Teachings

Since 2001: teachings at all levels from L1 (maths for physicists) to M2 research and preparation to competition to teach in high schools. See complete version of vita if needed.

Dissemination of scientific culture

- Talks at Lyon Museum, Ampère high school (Lyon), Lalande high school (Bourg-en-Bresse) since 2006.
- Talk for the «Jean Cavallès days» organized by the philosophy department of Univ. Strasbourg (15.XI.2013).

Committees

- PhD committees for P.-E. Caprace (Bruxelles, 20.XII.2005), E. Delanoy (Lyon, 09.XI.2006), R. Richard (Rennes, 19.XI.2009), Th. Barrier (Lyon, 07.XII.2009), R. Coulon (Strasbourg, 14.VI.2010), M. Huruguen (Grenoble, 04.XII.2011), T. Marquis (Louvain, 29.III.2013).
- PhD referee for F. Kassel (Orsay, 25.XI.2009), C. Charignon (Nancy, 02.VII.2010), Th. Haettel (Orsay, 09.XII.2011).
- Habilitation committees for H. Ben Messaoud (Monastir, Tunisia, January 2007), S. Lamy (Lyon, 08.X.2010), B. Klöckner (Grenoble, 03.XII.2012), François Maucourant (Rennes, 02.XII.2014).

Evaluations

- Hiring committee for Université Libre de Bruxelles (21.I.2011).
- Hiring committees for Aix-Marseille 3 (2008, 2009 and 2011), Aix-Marseille 2 (2011), Grenoble (2010), Lyon 1 (2012), Montpellier 2 (2009 and 2012), Saint-Étienne (2012), Lorraine (2013).
- Hiring committees in Lyon: 2004-2007, 2011 and 2014
- Head of hiring committees in Lyon, 2007-2009.
- Responsible for the local committee in charge of hiring committees, local promotions, sabbaticals in Lyon, 2009-2011.
- Member of Conseil National des Universités (= CNU), mathematical section (deciding, among other things, national promotions and sabbaticals) November 2007-May 2011.
- Member of the national committee for the Excellency and Supervision grants, 2012 and 2013.
- Member of the Aix-Marseille committee for the Excellency and Supervision grants, 2014.
- Member of the evaluation committee for the maths department in Amiens (UMR 6140, January 2007).
- Head of the evaluation committee for the maths department in Versailles (UMR 8100, December 2013).

Local and national administration of research

- Member of the scientific committee of the maths department of Lyon 1, April 2005-August 2014.
- Head of the CNRS national net GDR 3066 «Géométrie, Dynamique and Représentations des Groupes» (2007-2010).
- Member of the research committee of the Sciences and Technology Faculty in Lyon 1, 2010-2013.
- Member of the steering committee of the project PALSE (global excellency project for research institutions in Lyon-St Étienne), 2013-2014.

Projects and contracts

- Member of ANR project «Geometry and probabilities in groups» (JCJC 06 149094), 2006-2009.

- Head of the project labex MILYON (1 million euros per year, 3 research units and 350 colleagues), 2011-2015.
- Member of ANR project «Geometry of subgroups» (12-BS01-0003-01), 2012-2015.

Organization of conferences

- Seminar *Tripode*, ENS Lyon-Lyon 1-Grenoble 1 (3 sessions per year) May 2003-August 2014; Seminar *Géométries* in Lyon 1, Fall semester 2009-August 2014.
- Co-organizing the workshop *Introduction to Bruhat-Tits theory*, École polytechnique (2014-2015).
- Conferences: *Géométrie et Représentations*, 8-12.IX.2003, Berder (Morbihan); *Buildings and Curvature*, 9-15.V.2004, MFO (Germany); *Colloque tournant de théorie des représentations*, 13-15.I.2005, Institut Fourier (Grenoble); *Graphs, geometry and totally disconnected groups*, 6-12.V.2007, Blaubeuren (Germany); session parallèle *Groups and representation theory*, premier congrès franco-espagnol (SEMA-SMF), 9-13.VII.2007, Saragosse; conférence *Immeubles des groupes réductifs et généralisations*, 10-12.VI.2009, Institut Élie Cartan, Nancy; conférence *Analysis and geometry in group theory*, 7-11.IX.2009, IHÉS (Bures-sur-Yvette); *Colloque tournant de théorie des représentations*, 3-5.II.2010, Lyon; *Non-positive curvature and geometric structures in Group Theory*, MFO Oberwolfach, 26-30.IV.2010; *États de la recherche* of the French Math. Soc. *Espaces métriques singuliers et théorie des groupes*, 26-28.V.2010, CIRM Luminy; colloque franco-japonais *Symmetries, integrable systems and representations* 13-16.XII.2011, Lyon; *Algebra workshop Lyon-São Paulo*, 22-26.IV.2013, Lyon; conférence *Geometric structures in group theory* 3-7.VI.2013, MFO (Germany); conférence *Dynamics on homogeneous spaces* around doctorate honoris causa for G. Margulis from Univ. Lyon 1, 12-14.VI.2013.; Seminar *Sophus Lie*, 27-29.VI.2013, Lyon; *Algebraic groups and representations*, Univ. Lyon 1, June 2nd-July 11th 2014; *Journées sur la cohomologie L^p et les bords de groupes*, Univ. Lille 1, October 15th-17th 2014.
- Summer school *Géométries à courbure négative ou nulle, groupes discrets et rigidités*, 14.VI-02.VII.2004, Grenoble; spring school *Théorie géométrique et cohomologique des groupes: rigidités et déformations*, 18-22.IV.2006, CIRM Marseilles; workshop *Group theory: geometric and probabilistic methods*, 18-22.X.2006, Ein Gedi (Israel); cours doctoral *Algebraic geometry and algebraic groups*, IMPA Rio de Janeiro, 16-31.X.2010.

Publications

- About twenty papers with new results (Geom. Dedicata $\times 2$, Commentarii Math. Helv., Math. Annalen, GAFA, Ann. Sc. ENS $\times 2$, Inventiones Math., J. Institut Jussieu, Compositio Math.), one book (Astérisque series) and some proceedings. See complete version of vita if needed and/or the list of publications.
- Editor (with A. Parreau and L. Bessières) of the proceedings of the Grenoble 2004 summer school: «Non-positively curved geometries, discrete groups and rigidities» in the SMF series *Seminars and Congrès* # **18** (2010).
- Editor (with K. Iohara and S. Morier-Genoud) of the joint proceedings of «Infinite Analysis 11 Frontier of Integrability» (Univ. Tokyo, 25-29.VII.2011) and of «Symmetries, Integrable Systems and Representations» (Univ. Lyon 1, 13-16.XII.2011), in the series *Springer Proceedings in Mathematics & Statistics* # **40** (2012).

Invitations

Univ. Bielefeld – SFB 343 (15-28.IX.1999, 26/07-02.VIII.2000 and 19-24.VI.2005); ETH Zürich (15-28.XI.1999 and 8-23.VI.2002); University College, London (25/VI-22.VII.2000 – bourse EPSRC); Université Libre de Bruxelles (1-7.III.2003); IAS, Princeton (19-26.XI.2005 – short term visitor); Max-Planck-Institut für Mathematik, Bonn (29/V-09/VI and 03-07.VII.2006); University of Newcastle, Australia (30.XII.2006-18.I.2007); Ohio State University (02-08.IV.2007 and 23-30.IV.2011); MSRI, Berkeley (27.X-11.XI.2007); University of Michigan, Ann Arbor (06-20.IV.2008 and 17-23.IV.2011); Univ. Monastir (15-22.II.2010); Univ. Frankfurt-am-Main (22-26.VIII.2011); Tata Institute of Fundamental Research, Mumbai (16-28.XI.2011); Institut Mittag-Leffler (16-26.II.2012 and 01-15.IV.2012); Park City (UT) USA (01-15.VII.2012); Univ. Tsukuba (26.IX-4.X.2013); Univ. Francfort (17.II-27.III.2015, funded by Bessel research award, Humboldt foundation).

Talks: more than 100, as follows.

- 1999: Gent, Anogia (Greece), Bielefeld, Poitiers.
- 2000: Cambridge, Haifa.
- 2001: Oberwolfach, Lyon 1, ENS de Lyon, Orléans.
- 2002: Würzburg, ETH Zürich, CIRM Luminy, Gdansk, Wroclaw, Amiens, Guwahati (India).
- 2003: Lyon 1, Paris 7, Nancy, Les Diablerets (Switzerland), Basel-Freiburg-Strasbourg, Paris 11, Montpellier 2, Toronto, Bangalore.
- 2004: Montpellier 2, Paris 11, Bedlewo (Poland), Oberwolfach, Nancy 1, Berder.
- 2005: BIRS Banff (Canada), Gent, Bielefeld, IAS Princeton, Bruxelles.
- 2006: Nancy, Paris 11, MPIM Bonn, Ein Gedi (Israel), Darmstadt, Toulouse 3, ETH Zürich.
- 2007: Rennes, Ohio, Geneva, Gent, Varsovie, MSRI (Berkeley), Bourbaki seminar.
- 2008: Oberwolfach, Warwick, Beer Sheva, Aix-Marseilles 1, Besançon, Oberwolfach, Jerusalem.
- 2009: Paris 11, Institut Fourier, ENS de Lyon, Cornell University, Strasbourg 1, ETH Zürich (for the American Institute of Mathematics), Amiens, Paris 6, Poitiers.
- 2010: Oberwolfach, Bourbaki seminar, Institut Fourier, Goa, Bangalore, IMPA (Rio de Janeiro), Toulouse, Pucón (Chile).
- 2011: Lille, Louvain, Bielefeld, Durham, Mumbai.
- 2012: Gent, Institut Mittag-Leffler (Sweden), Saint-Petersburg.
- 2013: BIRS Banff (Canada), Tsukuba, Rennes, São Paulo, Caen, Leiden.
- 2014: Orsay, St Andrews, Kumamoto, Seoul, Oxford, École polytechnique.

Conferences without talks

See complete version of vita if needed.

Colloquia and mini-courses

- Mini-courses: summer school «From geometric topology to arithmetics» Babes-Bolyai U., Cluj (Roumanie), *Discrete subgroups of Lie groups*, 18-30.VIII.2003; École Normale Supérieure de Paris: *Actions de groupes sur les immeubles: théorie and applications* (March 2008); summer school «Affine buildings» U. Münster, *Descent in Bruhat-Tits theory: the example of unitary groups in three variables*, 18-22.VII.2008; summer school «Berkovich spaces» Institut Math. Jussieu, *Bruhat-Tits buildings and analytic geometry*, 5-9.VII.2010 (with A. Thuillier); graduate school «Algebraic geometry and algebraic groups» IMPA Rio de Janeiro, *Introduction to algebraic groups*, 16-31.X.2010; *Kac-Moody buildings and groups*, Ohio State University,

Columbus (OH) USA (April 2011); program «Torsors, Nonassociative Algebras and Cohomological Invariants» Fields Institute, Toronto (Canada), 18-22.IV.2013; program «International Summer School on Contemporary Mathematics I» Tsinghua University, Beijing (China), 22-26.VI.2013; winter school «Bruhat-Tits theory» Imperial college London (UK), 6-9.I.2015; winter school «Young Geometric Group Theory» Spa (Belgium), 12-16.I.2015.

• Colloquia: Ann Arbor 16.IV.2008, Münster 8.V.2008, Nancy 10.III.2009, Rennes 15.III.2010, Strasbourg 24.IX.2010, Grenoble 23.III.2011, Jussieu 24.III.2011, Dijon 24.III.2011, Caen 05.XI.2013.

Local workshops

Since 2001, talks for various workshops in the following fields: Non-arithmetic hyperbolic lattices (after M. Gromov and I. Piatetski-Shapiro), Varieties of representations and cohomological criterion for local rigidity (after A. Weil), Kac-Moody groups, Non-archimedean super-rigidity (after M. Gromov and R. Schoen), Arithmetic groups in positive characteristic, Teichmüller spaces: varieties of representations and rigidities, Strong approximation in semisimple groups, Shimura varieties, Riemannian and Hermitian symmetric spaces, Moduli space of cubic surfaces, Lie groups and diophantine approximation, Fake projective planes, Classification of spherical buildings. Bruhat-Tits theory. See complete version of vita if needed.