Louis-Hadrien Robert

Curriculum Vitae

Academic Career

2014–2017	**Postdoc**, *Hamburg University*.
2016	**Juniorprofessor**, *Hamburg University*, replacement.
2014	**Guest researcher**, *Max Planck Institute*, Bonn.
2013–2014	**Postdoc**, *Strasbourg University*, with François Costantino.
2009–2013	**PhD Student**, *University Paris 7 – Denis Diderot*, supervised by Christian Blanchet.

Education

2008–2009	**Research Internships**, Århus (Denmark) with Jørgen Ellegard Andersen and Zurich (Switzerland) with Anna Beliakova.
2007–2008	**Master 2**, *Pure Mathematics*, University Paris 7 – Denis Diderot, Master Thesis supervised by Christian Blanchet.
2006–2007	**Agrégation of mathematics**, *13th.*, (The highest French national competitive for teaching).
2005–2006	**Bachelor and Master 1**, *Mathematics and Computer Sciences*, École Normale Supérieure, Paris.
2005–2009	**Mathematical studies**, *École Normale Supérieure*, Paris.
2002–2005	**Preparatory classes**, Lycée Henri IV, Paris.
2002	**A-level**, *Specialized in Sciences*, Lycée Buffon, Paris.

Teaching Experiences

2014–2017	**As a Postdoc**.	
	○ Seminar **Representation of Finite Groups**	*in German*
	○ Tutorials **Topology**	*in German*
	○ Seminar **Quantum invariants**	*in English*
	○ Tutorials **Hopf Algebra**	*in English*
	○ Tutorials **Mathematics for Physicists**	*in German*
	○ Tutorials **Analysis I**	*in German*
	○ Mini-lecture **Introduction to Categories** for PhD students in physics	*in English*
2014	**Examiner**, *Mathematics*, Competitive exam for Polythechnique and ÉNS, section PSI.	
2013	**Oral examiner**, *Preparation of the Agregation*, ENS Cachan.	
2009–2013	**As a PhD student**.	
	○ Integrated Lecture **Algebra and Analysis 2**	*in French*
	○ Tutorials **Algebra and Analysis 1**	*in French*
	○ Supervision of Professional Projects	*in French*
2005–2008	**In Preparatory Classes**.	
	○ **Oral Examiner**, 1st year, *Lycée Henri IV*.	
	○ **Maple tutorial** 1st year, *Lycée Henri IV*, 2nd year *Lycée Lavoisier*.	

Scientific Production

2017 **A closed formula for the evaluation of $\mathfrak{sl}_N$-foams**, *with Emmanuel Wagner*, `arXiv:1702.04140`, submitted.

2016 **Characterizations of box-totally dual integral polyhedra**, *with Patrick Chervet and Roland Grappe*, submitted.

2016 **Categorification of the colored $\mathfrak{sl}_3$-invariant**, `arXiv:1503.08451`, published in Journal of Knot Theory and its Ramifications 25, 7 (2016).

2015 **A characterization of indecomposable web-modules over Khovanov–Kuperberg algebras**, `arXiv:1309.2793`, published in Algebraic and Geometric Topology 15 (2015).

2015 **Grothendieck groups of the Khovanov–Kuperberg algebras**, `arXiv:1312.1122`, published in Journal of Knot Theory and its Ramifications 24, 14 (2015).

2015 **A new way to evaluate MOY graphs**, `arXiv:1512.02370`, submitted.

2013 **A large family of indecomposable projective modules for the Khovanov–Kuperberg algebras of $\mathfrak{sl}_3$-webs**, `arXiv:1207.6287`, published in Journal of Knot Theory and its Ramifications 22, 11 (2013).

2013 **On edge-colorings of planar bicubic graphs**, `arXiv:1312.0361`.

2012 **Algebras for $\mathfrak{sl}_3$-homology**, Proceedings of 12th Forum des Jeunes Mathématicien-ne-s.

University Theses

2013 **PhD Thesis**, *Sur l'homologie $\mathfrak{sl}_3$ des enchevêtrements; algèbres de Khovanov–Kuperberg*, supervised by Christian Blanchet.

2008 **Magister Thesis**, *Fonction potentielle de Conway et homologie de Heegaard-Floer*, supervised by Christian Blanchet.

2008 **Master Thesis**, *Une construction géométrique de la fonction potentielle de Conway*, supervised by Christian Blanchet.

2006 **M1 Thesis**, *Groupes de tresses et algorithme de réduction des poignées*, with Nicolas Curien supervised by Patrick Dehornoy.

Selected Talks

2017 **An evaluation of $\mathfrak{sl}_N$-foams**, *Workshop Quantum Topology*, Lille.

2017 **An evaluation of $\mathfrak{sl}_N$-foams**, *Winter Braids 7*, Caen.

2015 **Toward the colored $\mathfrak{sl}_n$-homology**, *Annal Meeting of the DMV*, Hamburg.

2015 **The colored $\mathfrak{sl}_3$-homology**, *AMS–EMS–SPM Joint Meeting*, Porto.

2015 **The colored $\mathfrak{sl}_3$-homology**, *Swiss Knots*, Geneva.

2014 **Grothendieck groups of the Khovanov–Kuperberg algebras**, *Winter Braids 4*, Dijon.

2013 **Categorification of the colored $\mathfrak{sl}_3$ invariant**, *Conference Quantum Topology*, Cheliabinsk.

2012 **Algebras for the $\mathfrak{sl}_3$-homology**, *12th Forum des jeunes Mathématicien-ne-s*, IHP, Paris.

Seminar in Århus, Cambridge, Dijon, Grenoble, Hamburg, Lisbon, Montpellier, New York, Paris, Strasbourg, Stuttgart, Toulouse . . .

Complete List: `www.math.uni-hamburg.de/home/robert/talk.html`

Languages

French **Mother Tongue.**
English **Fluent.**
German **Fluent.**

Contributions for the Community

2016–now   **Reporter**, *MathSciNet*.

2011–2013   **Spokesperson of the PhD sudents**, *Scientific council of the Department of Mathematics*, University Paris 7 – Denis Diderot.

2010–2013   **Membre of the "Bureau des Doctorants"**, University Paris 7 – Denis Diderot.

2011–2012   **Organizer**, *Casual seminar Bourbakettes*, University Paris 7 – Denis Diderot.

2009–2010   **Organizer**, *Workshop "Group Cohomology"*, University Paris 7 – Denis Diderot.

Miscellaneous

Programming, *C++, Caml, LATEX, Maple, Python*.

Volunteering.
- Renovation of a school in Magba (Cameron) during summer 2003, with 2 years preparation (fund-raising, logistic).
- Scout leader 2003 – 2009.
- Bike Reparation Help and Training 2013 – 2014.