Baptiste Rognerud
Faculty of Mathematics
Bielefeld University
PO Box 100 131
D-33501 Bielefeld

Citizenship : french.
Date of birth : 02 octobre 1986 in Corbie (France).
Languages : French, English, Spanish (learning).

E-mail : `brognerud@math.uni-bielefeld.de`
webpage : `www.math.uni-bielefeld.de/~brognerud/`

Education and professional experience

01/2018- : Research assistant at the University of Bielefeld. Under the direction of Henning Krause.

09/2016-12/2017 : Post-doc IDEX at the University of Strasbourg. Under the direction of Frédéric Chapoton.

09/2015-09/2016 : Post-doc at the UNAM of Morelia. Under the direction of Gerardo Raggi.

12/2013-08/2015 : Post-doc at the EPFL. Under the direction of Jacques Thévenaz.

2010–2013 : PhD in mathematics. Université de Picardie Jules Verne. Under the direction of Serge Bouc.
Subject : *Equivalences between blocks of Mackey algebras.*
Financial support : BDI CNRS - région de Picardie.
Jury :

- Serge Bouc (CNRS Amiens),
- Michel Broué (Paris Diderot),
- Radu Stancu (UPJV Amiens),
- Jacques Thévenaz (EPFL Lausanne),
- Alexander Zimmermann (UPJV Amiens).

External Examiner :

- Markus Linckelmann (City London),
- Peter Symonds (University of Manchester).

2009–2010 : Master of mathematics at Université de Picardie Jules Verne, in collaboration with Université Pierre et Marie Curie in Paris.

2008–2009 : Agrégation de mathématiques.

2007–2008 : First year of master degree at université de Picardie Jules Verne.

2004–2007 : Bachelor Diploma of mathematics at Université de Picardie Jules Verne.

Research interest

- Finite groups and their associated categories of representations. Abelian defect group's conjecture.
- Mackey functors, cohomological Mackey functors and their monoidal structures.
- Biset functors and double Burnside rings.
- Highest-weight categories and quasi-hereditary algebras.
- Representations of symmetric algebras. Brauer tree algebras.
- Representations of finite partially ordered sets and their derived categories.

Publications and prepublications

1. Trace maps for Mackey algebras. J. of Algebra (2015), 288-312.
2. Equivalences between blocks of p-local Mackey algebras. J. Algebra 428 (2015), 205–229.
3. Equivalences between blocks of cohomological Mackey algebras. Math. Z. 280 (2015), no. 1-2, 421–449.
4. Quasi-hereditary property of the double Burnside algebra. C. R. Math. Acad. Sci. Paris 353 (2015), no. 8, 689–693.
5. On Morita and derived equivalences for cohomological Mackey algebras. Joint work with Markus Linckelmann (Accepted for publication in Math. Z.). Available on arXiv : 1609.07870.
6. Around evaluations of biset functors. Accepted for publication in Anmales de l'Institut Fourier. Available on arXiv : 1511.03314.
7. On the wildness of cambrian lattices. Joint work with Frédéric Chapoton. Algebras and Representation Theory mai 2018.
8. Exceptional and modern intervals of the Tamari lattice. Accepted for publication in Séminaire Lotharingien de Combinatoire. Available on arXiv : 1801.04097
9. On derived equivalences for the poset of generalized intervals (submitted January 2018). Joint work with Frédéric Chapoton and Sefi Ladkani. Available on arXiv : 1801.05154
10. The bounded derived categories of the Tamari lattices are fractionally Calabi-Yau (submitted July 2018). Available on arXiv : 1807.08503

Experience

- **2015-now :** I am a reviewer for the AMS.
- **2015 :** I was examiner for the master thesis of the student Karley Cardona at the UNAM of Morelia. Subject : *The global representation ring.*
- **2015 :** I was co-organizer of a conference in honour of Serge Bouc, on his 60th birthday. http ://www.lamfa.u-picardie.fr/stancu/Lausanne2015/
- **2015 :** I was assistant for the course of representations of finite dimensional algebras in the master of the EPFL.
- **2014 :** I supervised the semester project of the student Anthony Goodchild. Subject : *Linear representations of finite groups.*
- **2014 :** I supervised the semester project of the student Prisca Dotti. Subject : *Symmetric groups.*
- **2014 :** I was assistant for the course of linear algebra for mathematicians at the EPFL.
- **Teaching :** During my PhD : 3×64 hours for undergraduate students.
- **Ecos Project :** For the project ECOS M10M01"biset functors", I have spent 5 months at the UNAM in Morelia, Mexico.
- **Master 2 thesis 2010 :** Under the direction of S. Bouc. Subject : *The cohomological Burnside ring.*
- **2009 :** Agrégation de mathématique.
- **Master 1 thesis 2008 :** Under the direction of J.L. Chabert. Subject : *The ABC conjecture.*

Some communications :

- August 2011 : Broué's conjecture for A_5 in characteristic 2 at the UNAM Morelia.
- September 2011 : equivalences between blocks of the p-local Mackey algebras. Seminar of algebra, UNAM Morelia.
- June 2012 : p-local Mackey Algebra of a p-nilpotent group and Broué's conjecture. Seminar of algebra, UNAM Morelia.
- Mai 2013 : Using Mackey functors in representation theory. Two talks. Seminar of algebra, UNAM Morelia.

- October 2013. Equivalences de blocs d'algèbres de Mackey p-locales. Séminaire de théorie des groupes. UPJV Amiens.
- December 2013. Equivalences between blocks of Mackey algebras : the cohomological case. Nikolaus' conference. Aachen.
- January 2014. Equivalences between blocks of Mackey algebras : the symmetric case. Annual meeting of the "GDR théorie de Lie" at Strasbourg.
- April 2014. Equivalences of blocks of Mackey algebras. E.P.F.L.
- December 2014. Symmetry of the Mackey algebra. Nikolaus' Conference. Aachen.
- April 2015. On quasi-hereditary Algebras. E.P.F.L.
- September 2015. On a good use of Thévenaz's matrix. Conference in honour of Jacques Thévenaz's retirement. EPFL
- September 2015 - December 2015. List of 10 lectures on the highest weight structure of the category of biset functors in Humberto Cardenas's seminar.
- December 2015. On double Burnside algebra via evaluations of biset functors. Universidad de Guanajuato.
- Mars 2016. Equivalences between blocks of cohomological Mackey algebras. Algebra seminar, University of Santa Cruz.
- April 2016. Some finite dimensional algebras associated to finite groups. Colloquium of UNAM Morelia.
- June 2016. Highest-weight structure of the category of biset functors. Seminario especializado en algebras casi-hereditarias. UNAM of Morelia.
- October 2016. Morita and derived equivalences for algebras of Yoshida type. Séminaire quantique at the university of Strasbourg.
- December 2016. A Morita theory for permutations modules. Nikolaus' conference. Aachen.
- January 2017. Finite posets and their derived categories. Séminaire de théorie des groupes. UPJV Amiens.

Computer skills :

Gap4, Sage, Matlab, Maple.
I developed a small (personal) package in GAP4 in order to make some computations about the representation of the Mackey algebras and group algebras. Recently, I also developed some algorithms for the representation of the double Burnside ring.