

Eirini Chavli

Curriculum Vitae

Institut für Algebra und Zahlentheorie,
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Personal Information

BIRTH 23/09/1985 (Athens)
NATIONALITY Greek
FAMILY Married

Education

2012–2016 **Ph.D. in Pure Mathematics**, Université Paris Diderot.
Title: *The Broué-Malle-Rouquier conjecture for the exceptional groups of rank 2*
Supervisor: Ivan Marin
Examiners: P. Etingof, L. Funar
Jury: F. Digne, L. Funar, N. Jacon, G. Malle, I. Marin, G. Pfeiffer
2011–2012 **Master 2 de Mathématiques Fondamentales**, Université Paris Diderot.
2007–2010 **MSc in Pure Mathematics**, University of Athens.
2003–2007 **Bachelor in Mathematics**, University of Athens.
2000–2003 **High school diploma**, High school of Glyka Nera, Athens.

Professional Situation

2016–today **Postdoctoral researcher and teaching assistant**, Universität Stuttgart.
2015–2016 **Temporary lecturer (Attaché Temporaire d’Enseignement et de Recherche)**, Université de Picardie Jules Verne.
2012–2015 **Teaching assistant**, Université Paris Diderot.
2007–2010 **Teaching assistant**, University of Athens.

Teaching Activities

2018–2019 **Universität Stuttgart.**
“Lineare Algebra und Analytische Geometrie II”, 1st year (Maths)
“Lineare Algebra und Analytische Geometrie I”, 1st year (Maths)
2017–2018 **Universität Stuttgart.**
“Algebra und Zahlentheorie für das Lehramt”, 2nd year (Maths)
“Algebra”, 2nd year (Maths)
2016–2017 **Universität Stuttgart.**
“Höhere Mathematik 3”, 2nd year (Engineering)
“Höhere Mathematik 3”, 1st year (Engineering)
2015–2016 **Université de Picardie Jules Verne.**
“Théorie de Galois”, Master 1 (Maths)
“Algèbre linéaire II”, 2nd year (Maths)
“Topologie”, 2nd year (Maths)
“Algèbre linéaire I”, 1st year (Informatics, Maths)
“Outils Mathématiques”, 1st year (Informatics)
“Probabilités et Statistique”, 1st year (Biology)
2014–2015 **Université Paris Diderot.**
2013–2014 “Algèbre et Analyse élémentaires II”, 1st year (Physics)
2012–2013
2010–2009 **University of Athens.**
2008–2009 “Basic Algebra”, 2nd year (Maths).
2008–2009

2007 **1st experimental High school in Athens (Gennadios).**

Trainee-ship on Algebra

2004–2010 **Private Tutor on Mathematics.**

High School students from public and private schools (International Baccalaureate, American College of Greece, Greek-German School)

Administration Activities

- ★ Referee for the peer-reviewed journals “Journal of Algebra” and “Journal of Symbolic Computation”.
- ★ Co-organizer of the conference “2-day meeting on Computational Lie theory”, <http://eirinichavli.com/computational-lie-theory.html>

Research Activities

Research interests

Hecke algebras, braid groups, finite Coxeter groups, Complex reflection groups, decomposition matrices, Hochschild cohomology, Brauer algebras, representation theory.

Ph.D. thesis

The BMR freeness conjecture for the exceptional groups of rank 2, Université Paris Diderot, Paris 7, 2016 (available in arXiv: 1608.00834).

Publications

1. *Universal deformations of the finite quotients of the braid group on 3 strands*
Journal of Algebra 459 (2016), 238-271.
2. *The BMR freeness conjecture for the first two families of the exceptional groups of rank 2*
Comptes Rendus Mathématique, Académie des Sciences, 355, Ser. 1 (2017), 1-4.
3. *The BMR freeness conjecture for the tetrahedral and octahedral family*
Communications in Algebra 46, no. 1 (2018), 386-464.
4. *Decomposition matrices for the generic Hecke algebras on 3 strands in characteristic zero*
Algebras and Representation theory (2019), DOI: 10.1007/s10468-019-09867-7.
5. *The BMM symmetrising trace conjecture for groups G_4, G_5, G_6, G_7, G_8*
Joint work with Christina Boura, Maria Chlouveraki, and Konstantinos Karvounis.
Journal of Symbolic Computation (2019), DOI: 10.1016/j.jsc.2019.02.012.
6. *The BMM symmetrising trace conjecture for the exceptional 2-reflection groups of rank 2* (2018)
Joint work with Christina Boura and Maria Chlouveraki. (to appear in Journal of Algebra).

Programming

- ★ Creation of programs in SAGE and GAP3 (with C. Boura, M. Chlouveraki et K. Karvounis) for the proof of the Broué-Malle-Michel summetrising trace conjecture for groups G_4, G_5, G_6, G_7, G_8 . The programs are available here: <https://www.eirinichavli.com/BMMsym.html>.
- ★ Creation of a program in SAGE (with C. Boura and M. Chlouveraki) for the proof of the Broué-Malle-Michel summetrising trace conjecture for group G_{13} . The program is available here: <https://www.eirinichavli.com/BMMslym13.html>.

Research visits

Oct 2018 **Karlsruhe Institute of Technology, Germany.**

Invited for a week by J. Torres

Oct 2017 **Université de Versailles- Saint-Quentin-en-Yvelines, France.**

Invited for a week by M. Chlouveraki

Jun 2017 **Université de Versailles- Saint-Quentin-en-Yvelines, France.**

Invited for a week by M. Chlouveraki

Talks in International Conferences

- 8-12-2018 **Nikolaus Conference**, Lehrstuhl D, Aachen.
Two Fundamental Conjectures on the Structure of Hecke Algebras. Part I: The BMR joint talk with Maria Chlouveraki
- 17-9-2018 **SWAN 1**, Universität Stuttgart.
Representation theory for the Hecke algebras on 3 strands
- 21-6-2018 **Workshop on Algebraic Combinatorics**, Université de Reims Champagne-Ardenne.
Modular representation theory for the generic Hecke algebras on 3 strands
- 10-11-2017 **Darstellungstheoretage**, Katholische Universität Eichstätt–Ingolstadt.
Decomposition matrices for the generic Hecke algebras on 3 strands
- 15-6-2017 **Women in Geometry and Topology**, Universität Zürich.
Complex braid groups and generic Hecke algebras
- 3-2-2017 **Colloque Tournant 2017 du GDR TLAG**, Université de Picardie Jules Verne.
Une classification des représentations irréductibles de B_3
- 29-8-2016 **Algebraic Combinatorics in Representation Theory**, CIRM, Luminy.
The BMR freeness conjecture
- 5-7-2016 **Representation theory in Samos**, University of the Aegean Sea.
The irreducible representations of B_3 of small dimension
- 24-2-2016 **Winterbraids VI**, Université de Lille I.
The irreducible representations of B_3 of dimension at most 5
- 27-3-2015 **Rencontre de l'ANR ACORT à Paris**, Université de Reims Champagne-Ardenne.
The irreducible representations of B_3
- 5-12-2014 **Nikolaus Conference**, Lehrstuhl D, Aachen.
The BMR Freeness Conjecture: the Tetrahedral and Octahedral Families
- 17-6-2014 **Summer school**, Institut d'Études Scientifiques de Cargèse.
Affine Nil–Hecke algebras
- 9-6-2014 **Young Algebraists' conference**, EPFL.
The BMR conjecture for the Hecke algebra of the finite quotients of the braid group on n strands
- 9-5-2014 **ARTY 2**, Universität Emmy Noether Zentrum, Nuremberg.
The BMR conjecture for the Hecke algebra of the finite quotients of the braid group on n strands

Talks in Seminars

- 29-3-2019 **Séminaire SPACE Tours**, Université de Tours.
Le centre de l'algèbre de Hecke générique pour la famille tétraédrale
- 13-9-2018 **Séminaire de théorie des groupes**, Université de Picardie Jules Verne.
Les matrices de décomposition des algèbres de Hecke génériques à 3 brins
- 22-2-2018 **Groupe de travail d'Algèbre**, Université Littoral Côte d'Opale.
Sur les conjectures de BMR
- 23-1-2018 **Séminaire d'Algèbre-Géométrie**, Université de Caen.
Sur les conjectures de BMR pour les algèbres de Hecke génériques
- 27-9-2017 **Oberseminar**, Universität Stuttgart.
Representation theory for the finite quotients of the braid group B_3
- 30-5-2017 **Séminaire d'Algèbre-Géométrie**, Université de Versailles - St Quentin.
Les matrices de décomposition des algèbres de Hecke génériques à 3 brins
- 16-8-2016 **Oberseminar**, Universität Stuttgart.
The BMR freeness conjecture: recent work and open cases
- 4-5-2016 **Séminaire de théorie des groupes**, Université de Picardie Jules Verne.
La conjecture de BMR pour les groupes exceptionnels de rang 2
- 21-4-2016 **Seminaire des thésards**, Université de Picardie Jules Verne.
On generic Hecke algebras

- 19-5-2015 **Séminaire d'Algèbre-Géométrie**, Université de Versailles - St Quentin.
The Hecke algebras of the exceptional groups of rank 2
- 5-2-2015 **Seminar Gruppen und Darstellungen**, Technische Universität Kaiserslautern.
The BMR freeness conjecture: the exceptional groups of rank 2
- 26-3-2014 **Seminaire des thésards "Bourbakettes"**, Université Paris Diderot.
Groupe de tresses
- 12-3-2014 **Séminaire de théorie des groupes**, Université de Picardie Jules Verne.
Deformations of the finite quotients of the braid group on 3 strands
- 25-2-2010 **Group theory seminar**, EPFL.
Representation Theory and Young tableaux
- Local Talks**
- Weekly working group**, Universität Stuttgart.
- 23-4-2019 *The double centraliser property*
- 4-12-2018 *Koszul Rings*
- 6-2-2018 *Representation type of Schur Algebras*
- 21-11-2017 *The Kronecker Algebra*
- 27-6-2017 *A talk based on Auslander's Philadelphia Notes*
- 10-1-2017 *On Derivators*
- Groupe de travail sur les groupes de tresses**, Université de Picardie Jules Verne.
- 10-5-2016 *Sur la conjecture de BMR*
- 13-10-2015 *Une application via éléments de Schur aux représentations de basse dimension de B_3 , Partie II*
- 6-10-2015 *Une application via éléments de Schur aux représentations de basse dimension de B_3 , Partie I*
- 29-9-2015 *La conjecture de liberté pour les quotients finis de B_3*
- Groupe de travail de thésards**, Université de Picardie Jules Verne.
- 3-4-2014 *Revêtements, Partie II*
- 17-3-2014 *Revêtements, Partie I*
- 20-2-2014 *La méthode de Van-Kampen*
- Attended conferences**
- Jul 2018 **Algebraic Representation Theory: a workshop in honor of Richard Dipper on the occasion of his retirement**, Universität Stuttgart.
- Jun 2018 **Groupes d'Artin et algèbres de Hecke**, Université de Picardie Jules Verne.
- Jun 2018 **Complex Reflection Groups and their Braid Groups**, Université de Caen.
- May 2018 **GABY 2018**, Università Degli Studi di Milano-Bicocca.
- Feb 2017 **Winterbraids VII**, Université de Caen.
- Dec 2016 **Nikolaus Conference**, Lehrstuhl D, Aachen.
- Sep 2016 **Finite Chevalley groups, reflection groups and braid groups**, EPFL.
- Jun 2016 **Journée mathématique du LAMFA**, Université de Picardie Jules Verne.
- May 2016 **Rencontre de l'ANR ACORT à Amiens**, Université de Reims Champagne-Ardenne.
- Mar 2016 **Journées d'algèbre**, Université de Caen.
- Jul 2015 **Applied Representation Theory**, Université de Picardie Jules Verne.
- Jun 2015 **Journée mathématique du LAMFA**, Université de Picardie Jules Verne.
- Jan 2015 **Perspectives in Lie Theory**, Centro di Ricerca Matematica Ennio De Giorgi, Pisa.
- Nov 2014 **Algèbres et noeuds**, Université de Versailles-St Quentin.
- Apr 2014 **Journée de présentation de SAGE**, Université de Picardie Jules Verne.
- Jan 2014 **Algebra and Computation**, Université Lyon 1.
- Dec 2013 **Darstellungstheoretage**, Lehrstuhl D, Aachen.
- Dec 2013 **Nikolaus Conference**, Lehrstuhl D, Aachen.

- Nov 2013 **Réunion d'utilisateurs de Sage en région parisienne**, *Observatoire de Paris*.
- Jul 2013 **Combin'à Tours**, *Université de Tours*.
- Jun 2013 **Journée mathématique du LAMFA** , *Université de Picardie Jules Verne*.
- Jan 2013 **Combinatoire Algébrique en théorie des Représentations**, *Université de Besançon*.
- Dec 2012 **Nikolaus Conference**, *Lehrstuhl D, Aachen*.
- May 2012 **Théorie de Garside: état de l'art et perspectives**, *Université de Picardie Jules Verne*.
- Sep 2008 **Problems in Analysis**, *University of the Aegean Sea*.

Further scientific activities

- Nov 2018 *Assistant for the Unitag*, Universität Stuttgart.
- Dec 2017 *Effective teaching in English*, Sprachenzentrum, Stuttgart.
- Sep 2017 *Writing Reader Friendly Texts in English*, Sprachenzentrum, Stuttgart.
- Jun 2017 *Using Writing to Improve Student Learning*, HDZ, Stuttgart.
- Jun 2017 *Counting women: the challenges of being a female mathematician*, SwissMap, Zürich.
- May 2015 Tutor in the program *Animath pour collégiens et lycéens*.
- Apr 2015 *The use of Hal in science and bio-medicine*, CFDip, Paris.
- Apr 2015 *Group management*, CFDip, Paris.
- Apr 2015 *Latex in English*, CFDip, Paris.
- Jun 2011 Tutor in the program *Introduction to LaTeX*, University of Athens.
- 2004–2007 Participant in the project *Didactics of Mathematics*, University of Athens.

Fellowships, Scholarships and Awards

- 2017–2019 Postdoctoral Fellowship, Universität Stuttgart.
- 2016–2017 Postdoctoral Fellowship, Universität Stuttgart.
- 2015–2016 ATER, Université de Picardie Jules Verne.
- 2012–2015 Ph.D. scholarship from Université Paris Diderot.
- 2002 2nd place in the National Mathematics Competition “Euclides” of the Hellenic Mathematical Society.

Languages

- GREEK Native proficiency
- ENGLISH Full professional proficiency (Certificate of Proficiency in English, University of Michigan)
- FRENCH Full professional proficiency (Semester-long courses in French language for foreigners (Français Langue Etrangère), level C1, Université Paris Diderot)
- GERMAN Professional working proficiency (B2 Deutsch-Test für Zuwanderer)

Interests

- DANCE Ballet and Modern dance
- PIANO Participated in several concerts
- OTHER Cinema, Music, Cooking, Swimming, Origami, Countryside activities