# EHUD MEIR

Curriculum Vitae

## CONTACT DETAILS

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## **RESEARCH INTERESTS**

Hopf algebras. Fusion and tensor categories. Representation theory. Invariant theory. Cohomology of groups.

# POSITIONS

2015-present	University of Hamburg
	Department of mathematics
	Postdoc
	Member of the Research Training Group 1670, "Mathematics
	inspired by string theory and quantum field theory"
2012 - 2015	University of Copenhagen
	Centre for Symmetry and Deformation
	Postdoc
2010 - 2012	EPDI fellowship
	The fellowship included stays at the IHES, the Isaac New-
	ton Institute in Cambridge, and the Max Planck Institute in
	Bonn.

#### EDUCATION

2007 - 2010	Technion – Israel Institute of Technology. Ph.D in mathemat-
	ics.
	Thesis supervisors: Prof. Eli Aljadeff and Prof. Shlomo Gelaki.
	Thesis title: On certain cohomological properties of a group
	and their reflection in a finite index subgroup.
2005 - 2006	Technion – Israel Institute of Technology. M.Sc in mathemat-
	ics, Summa Cum Laude.
2001 - 2005	Technion – Israel Institute of Technology. B.A. in mathematics,
	Summa Cum Laude.
	The studies for the B.A. degree were in part via the Technion
	excellence program for high school students, and in part via
	the Technion Chaise Family Excellence Program.

### PUBLICATIONS AND PREPRINTS

- 1. Tyrone Crisp, Ehud Meir and Uri Onn- Principal series for general linear groups over finite commutative rings. ArXiv:1704.05575
- 2. Ehud Meir and Markus Szymik- Adams operations and symmetries of representation categories. ArXiv:1704.03389
- 3. Ehud Meir- Semisimple Hopf algebras via Geometric Invariant Theory. Advances in Mathematics Volume 311, 30 April 2017, Pages 61-90. ArXiv:1506.00314
- 4. Tyrone Crisp, Ehud Meir and Uri Onn- A variant of Harish-Chandra functors. ArXiv:1607.04486. Accepted for publication in the Journal of the Institute of Mathematics of Jussieu.
- 5. Isar Goyvaerts and Ehud Meir- The Witt group of a braided monoidal category. Arxiv: 1412.3417.
- Ehud Meir- Descent, fields of invariants and generic forms via symmetric monoidal categories. Journal of Pure and Applied Algebra 220 (2016), 2077-2111. ArXiv: 1406.6928
- 7. Juan Cuadra and Ehud Meir- Orders of Nikshych's Hopf algebra. Accepted for publication in the Journal of Noncommutative Geometry. ArXiv: 1405.2977
- Juan Cuadra and Ehud Meir- On the existence of orders in semisimple Hopf algebras. Transactions of the American Mathematical Society, Volume 368 (4), (2016), 25472562. ArXiv:1307.3269

- 9. Ehud Meir and Markus Szymik- Drinfeld centers for bicategories and homotopy theory. Documenta Mathematica 20, (2015) 707-735. Arxiv 1412.4487.
- Nir Ben David, Yuval Ginosar and Ehud Meir Isotropy in group cohomology. Bulletin of the London Mathematical Society, Volume 46 (3), (2014), 587-599 ArXiv: 1309.2438
- 11. Ehud Meir- Every central simple algebra is Brauer equivalent to a Hopf Schur algebra. Illinois J. Math. 56(2) (2012), 423-432. Arxiv: 1001.0157
- Ehud Meir and Evgeny Musicantov- Module categories over graded Fusion categories. Journal of Pure and Applied Algebra 216 (11) (2012), 2449-2466 Arxiv: 1010.4333
- Ehud Meir- Projective resolutions for modules over infinite groups. Algebras and representation theory, Volume 15 (2) (2012), 391-405. Arxiv: 1006.0129
- Eli Aljadeff and Ehud Meir- Nilpotency of Bocksteins, Kropholler's hierarchy and a conjecture of Moore. Advances in mathematics 226 (2011) 4212-4224. Arxiv: 0905.1459
- Ehud Meir- Group extensions as G-graded fusion categories. An appendix for the paper "Fusion categories and homotopy theory" by Pavel Etingof, Dmitri Nikshych and Victor Ostrik. Quantum Topology, 1 (2010), 209-273. Arxiv: 0909.3140
- Ehud Meir- The cohomological restriction map and FP-infinity groups. Bulletin of the London Mathematical Society 42 (6) (2010) 1101-1114 Arxiv: 0911.3267
- Eli Aljadeff, Juan Cuadra, Shlomo Gelaki and Ehud Meir- On the Hopf Schur group of a field- Journal of Algebra 319 (12) (2008) 5167-5177. Arxiv: 0708.1943
- Ehud Meir- An explicit formula for the action of a finite group on a commutative ring. Journal of Pure and Applied Algebra 211 (1) (2007) 43-49. Arxiv: 0707.2167

## AWARDS and PRIZES

• Fondation Sciences Mathematiques de Paris postdoc for 2012/3 ; declined.

- 2010-12: EPDI fellowship 2010-2012
- 2011: Elisha Netanyahu award for Ph.D. Thesis.
- 2010: Technion prize for excellence in teaching.
- 2009: Professor Haim Hanani award for advancement in Ph.D degree.
- 2005: Faculty excellence award for the M.Sc degree.

#### CONFERENCES

- Brussels Hopf algebra workshop 2017. Brussels, Belgium. August 2017. Talk: Hopf algebras, monoidal categories and geometric invariant theory.
- Conference on Hopf Algebras and Noncommutative Geometry (in honor of the 70th birthday of Professor Fred Van Oystaeyen). Hefei, China. August 2017. Talk: Hopf algebras, monoidal categories and geometric invariant theory
- Lessons from conformal field theory. Hamburg, Germany. June 2017. Talk: Symmetric monoidal categories, Deligne theory and algebraic structures.
- Topological quantum groups and Hopf algebras. Banach Center, Warsaw, Poland. November 2016. Talk: Applications of geometric invariant theory to Hopf algebras
- Lie Theory and Geometry. Castle Rauischholzhausen, Germany. March 2016. Organized by the University of Giessen and the University of Marburg. Plenary talk: Hopf algebra invariants, symmetric monoidal categories and geometric invariant theory.
- Workshop on Hopf algebras and related topics. Turin, Italy. January 2016. Talk: Descent and invariants via Deligne's Theory of symmetric monoidal categories.
- Algebra and Number Theory day, Technion, Israel. December 2015. Talk: Descent and invariants via Deligne's Theory of symmetric monoidal categories.
- New trends in Hopf algebras and tensor categories, Brussels, Belgium. June 2015. Talk: Hopf algebras via geometric invariant theory.
- From Poisson Brackets to Universal Quantum Symmetries, IMPAN, Warsaw, Poland, August 2014. Talk: Deformations of braidings by monoidal categories.

- First Joint International Meeting of the Italian and Spanish mathematical societies. Bilbao, Spain. July 2014. Talk in the session on Rings, modules, categories and applications: Descent and generic forms via symmetric monoidal categories
- Galois groups and Brauer groups, Technion, Haifa, Israel. January 2013. Talk: On orders of finite dimensional semisimple Hopf algebras
- Harmonic analysis, deformation quantization and noncommutative geometry, Scalea, Italy. September 2011. Informal talk: On module categories over graded fusion categories.
- Hopf algebras and tensor categories, University of Almeria, Spain. July 2011. Talk: On module categories over graded fusion categories.
- Amitsur Memorial Symposium, Ben Gurion University, Beer Sheva, Israel. May 2011. Talk: On simple quotients of finite dimension Hopf algebras.
- Quantum groups conference, Clermont Ferrand, France. September 2010. Talk: On the Hopf Schur group of a field
- Conference on Brauer groups, Kibbutz Ketura, Israel, January, 2010. Talk: On the Hopf Schur group of a field
- Colloquium on Hopf algebras, Quantum groups and tensor categories, Cordoba, Argentina, September 2009. Talk: On the Hopf Schur group of a field
- Workshop on Representations and Cohomology, University of Cologne, March, 2009. Talk: Moore's conjecture and nilpotency of certain cohomology elements
- Israel mathematical union annual meeting, 2007, Ben Gurion University, Beer Sheva, May 2007. Talk: Is any central simple algebra Brauer equivalent to the quotient of a Hopf algebra?

#### SEMINAR TALKS

- Universite Pierre et Marie Curie (Paris 6). Seminar 'Varietes Rationnelles'. September 2017.
- Charles University, Prague. May 2017.
- UNAM Morelia, Seminario de Teoria de Categorias. Series of three lectures on tensor categories. May 2017.
- Ben Gurion University, Algebraic Geometry and Number Theory Seminar. December 2016.

- UNAM Morelia, Prospects en Topologia Seminar. August 2016.
- Seminar Bremen-Hamburg-Kiel. Hamburg, February 2016.
- University of Strasbourg, Seminar Quantique. November 2015.
- University of Hamburg, Algebra and Mathematical Physics seminar. October-November 2015.
- Norwegian University of Science and Technology, Trondheim, Norway, March 2015.
- University of Coimbra, Portugal. March 2015.
- Heidelberg University, Hauptgeometrie Seminar. November 2014
- Universite Pierre et Marie Curie (Paris 6). Seminar 'Varietes Rationnelles'. March 2013.
- University of Copenhagen. Algebra/ Topology Seminar. February 2012, September 2012
- Universite Pierre et Marie Curie (Paris 6). Algebra Seminar. November 2011
- Universidad de los Andes, Bogota, Colombia. Algebra Seminar. November 2011
- Universite Paris Nord (13), Algebraic Topology Seminar. October 2011
- University of Strasbourg, Algebra Seminar. October 2011
- Universite Paris Sud (11), talk at groupe de travail de theorie geometrique des groupes. September 2011
- University of Cambridge Algebra Seminar. March 2011 University of Cambridge Category Theory Seminar. March 2011 University of Aberdeen Algebra Seminar. May 2011.
- University of Oxford Algebra Seminar. February 2011.
- University of Almeria Algebra Seminar. October 2010
- University of Aarhus Algebra Seminar. February 2010.
- MIT Noncommutative Algebra Seminar. March 2009.
- Hebrew University in Jerusalem Algebra Seminar. January 2009.
- University of Haifa Algebra Seminar. January 2009.
- University of Glasgow Algebra Seminar. October 2008.
- University of Aberdeen Algebra Seminar. October 2008.

• Technion Algebra Seminar. March 2005, January 2009, April 2010, May 2010,

## VISITS

- August 2016 and May 2017- UNAM Morelia, Mexico.
- February 2016 and February 2017- Vrije Universiteit Brussel, Belgium.
- March 2015- Norwegian University of Science and Technology, Trondheim, Norway.
- March 2015- University of Coimbra, Portugal.
- January 2012- University of Almeria, Spain.
- November 2011- Universidad de los Andes, Bogota, Colombia.
- October 2010- University of Almeria, Spain.
- February 2010- The Center for Quantum Geometry of Moduli Spaces, University of Aarhus, Denmark.
- March 2009- M.I.T, USA.
- October 2008 and May 2011- University of Aberdeen, UK.

### **PROFESSIONAL SERVICE**

- Co-organiser of the Pre-StringMath Summer School, University of Hamburg, July 2017.
- Co-organiser of the Algebra / Topology Seminar, University of Copenhagen, September 2013 to July 2015.
- Co-organiser of a seminar on fusion categories, Max Planck Institute for Mathematics, Spring 2012.
- Referee for the journals:
  - Journal of Pure and Applied Algebra
  - Applied Categorical Structures
  - Communications in Algebra
  - Glasgow Mathematical Journal
  - Proceedings of the London Mathematical Society
  - Forum Mathematicum
  - Letters in mathematical physics
  - Transactions of the American mathematical society

- Advances in Mathematics
- Pacific Journal of Mathematics
- Reviewer for the AMS mathematical reviews
- Reviewer for zbMATH

### **TEACHING EXPERIENCE** Lecturer

University of Hamburg Summer Semester 2015/16- Introduction to algebraic groups.

University of Copenhagen

- Winter Semester 2014/15- Homological Algebra.
- Winter Semester 2013/14- Homological Algebra.
- Spring Semester 2012/13- Commutative Algebra.
- Winter Semester 2012/13- Homological Algebra.

### Teaching Assistant

University of Hamburg

- Summer Semester 2016/17- Advanced Algebra.
- Winter Semester 2016/17- Mathematics for Physicists 1.
- Winter Semester 2016/17- Algebra 1.
- Summer Semester 2015/16- Algebra 1.
- Winter Semester 2015/16- Mathematics for Physicists 3.

University of Copenhagen

- Spring Semester 2014/15- Commutative Algebra.
- Spring Semester 2013/14- Modern Algebra.

Technion

- Spring Semester 2009/10- Modern Algebra.
- Winter Semester 2009/10- Modern Algebra.

## REFERENCES

- Prof. Eli Aljadeff, Department of Mathematics, Technion, Israel. elialjadeff@gmail.com
- Prof. Pavel Etingof, Department of Mathematics, MIT. etingof@math.mit.edu

- Prof. Chrsitan Kassel, IRMA, University of Strasbourg, kassel@math.unistra.fr
- Prof. Ryszard Nest, Department of Mathematics, University of Copenhagen, rnest@math.ku.dk
- Prof. Christoph Schweigert, Department of Mathematics, University of Hamburg, Christoph.Schweigert@uni-hamburg.de