Florian Eisele

Curriculum Vitae

City, University of London, Department of Mathematics
Northampton Square, London EC1V 0HB
☎ +44 (0)20 7040 8458
✉ feisele86@gmail.com
https://feisele.github.io

Personal Details

Email: feisele86@gmail.com

Address: Department of Mathematics
City, University of London
Northampton Square
London EC1V 0HB
United Kingdom

Education

2008-2012 **PhD in mathematics**, *RWTH Aachen University*, graduated "mit Auszeichnung" (with distinction).
Thesis title: *"Group Rings over the p-Adic Integers"*, defended in March 2012.
Supervisor: Prof. Gabriele Nebe
Awarded "Borchers medal" for an outstanding dissertation in mathematics.

2004–2008 **Student of mathematics**, *RWTH Aachen University*, graduated "mit Auszeichnung" (with distinction).
Thesis title: *"Algorithmische Behandlung p-adischer ganzzahliger Gruppenringe"* (*"Algorithmic treatment of p-adic integral group rings"*)
Supervisor: Prof. Gabriele Nebe

Employment

2019– **Lecturer in Mathematics**, *University of Glasgow*.
(fixed term)

2015–2018 **Postdoctoral researcher**, *City, University of London*.
Research group of Prof. Markus Linckelmann

2012–2015 **Postdoctoral researcher**, *Vrije Universiteit Brussel*, Brussels, Belgium.
Research group of Prof. Eric Jespers

2009–2012 **Research assistant**, *RWTH Aachen University*.
Funded by the German Research Foundation (DFG) in the framework of the priority program *Representation Theory*, 0.75 FTE

2010–2012 **Teaching assistant**, *RWTH Aachen University*.
In addition to the above, 0.25 FTE

2008–2009 **Teaching assistant**, *RWTH Aachen University*.
Invariant theory tutorials, 0.5 FTE

2007–2008 **Student teaching assistant**, *RWTH Aachen University*.
Linear algebra tutorials for two terms and Maple tutorials for one term

Publications

Preprints

[1] C. W. Eaton, F. Eisele, M. Livesey, *Donovan's conjecture, blocks with abelian defect groups and discrete valuation rings*, preprint, `arXiv:1809.08152` (2018)

[2] F. Eisele, *The Picard group of an order and Külshammer reduction*, preprint, `arXiv:1807.05110` (2018)

Published or accepted for publication

[3] F. Eisele, L. Margolis, *A Counterexample to the First Zassenhaus Conjecture*, Adv. Math., Vol. 339 (2018), pp 599–641

[4] F. Eisele, G. Janssens and T. Raedschelders, *A reduction theorem for τ-rigid modules*, Math. Z., Vol. 290 (2018), Issue 3–4, pp 1377–1413

[5] F. Eisele, M. Geline, R. Kessar, M. Linckelmann, *On Tate duality and a projective scalar property for symmetric algebras*, Pac. J. Math. Vol. 293 (2018), No. 2, pp 27–300

[6] F. Eisele, *Blocks with a generalized quaternion defect group and three simple modules over a 2-adic ring*, 2015, J. Algebra 456 (2016), pp 294–322

[7] F. Eisele, A. Kiefer, I. Van Gelder, *Describing units of integral group rings up to commensurability*, J. Pure Appl. Algebra, Volume 219 (2015), Issue 7, pp 2901–291

[8] F. Eisele, *The p-adic group ring of $SL_2(p^f)$*, J. Algebra 410 (2014), pp 421–459

[9] F. Eisele, *Defect Two Blocks of $\mathbb{Z}_p\Sigma_n$*. Comm. Algebra 42 (2014), no. 7, pp 2890–290

[10] F. Eisele, *On the IYB-property in some solvable groups*, Arch. Math. (Basel), Volume 101 (2013), Issue 4, pp 309–318

[11] F. Eisele, *p-Adic lifting problems and derived equivalences*, J. Algebra 356 (2012), pp 90–114

Teaching Experience

W 2018	Lecture "Number Theory & Cryptography" (> 60 students; lecture for first year BSc students and all associated responsibilities; student feedback results: 4.2/5 overall)
W 2016/17	Lecture "Number Theory & Cryptography" *(> 60 students; student feedback results: 4.1/5 overall)*
W 2014/15	"Algebra II" tutorials (as in 2013/14) and "Affine and projective geometry" tutorials
W 2013/14	"Algebra II" (ring and module theory) tutorials *(tutorials & drafting and administering the written exam)*
S 2013	Supervised bachelor student's thesis project. Title "Discrete valuatieringen" *("Discrete valuation rings")*
W 2010/11– W 2011/12	Maple practical courses *(administering weekly oral exams for first year mathematics students)*
W 2008/09	Invariant theory tutorials *(giving weekly tutorials & setting homework exercise sheets & marking homework)*

S 2008 Maple practical courses *(answering students' questions about their assignments; covered wide range of mathematical topics)*

W 2007/08 "Linear algebra II" tutorials *(holding weekly tutorials & marking homework)*

S 2007 Linear algebra for computer scientists tutorials *(giving weekly tutorials & marking homework)*

Invited Talks

Oct 2018 Algebra Seminar, University of Cambridge: *A counterexample to the first Zassenhaus conjecture*

Jun 2018 79th BLOC meeting, University of Oxford: *A counterexample to the first Zassenhaus conjecture*

Feb 2018 Algebra Seminar, University of Manchester: *Blocks as orders over a p-adic ring*

Jan 2018 Seminar on Groups and Representations, University of Kaiserslautern: *A counterexample to the first Zassenhaus conjecture*

Oct 2017 Algebra Seminar, University of Aberdeen: *On the Zassenhaus Conjecture*

Nov 2016 London Algebra Colloquium: *Tame blocks*

Oct 2016 Algebra Seminar, University of York: *Tame blocks*

Sep 2016 Algebra Seminar, University of Murcia: *Tame blocks*

Feb 2016 Workshop "Computational Methods for Representations and Group Rings", Stuttgart: *Virtually irreducible lattices for symmetric orders*

Jan 2015 Oberseminar Algebra/Zahlentheorie, University of Jena: *Basic algebras of blocks over a p-adic ring*

Dec 2013 Colloquium of the "Graduiertenkolleg", RWTH Aachen University: *Einheitengruppen von ganzzahligen Gruppenringen endlicher Gruppen*

June 2010 Representation Theory Seminar, University of Oxford: *Defect two blocks of symmetric groups over the p-adic integers*

July 2009 Oberseminar Algebra, University of Stuttgart: *p-adische Gruppenringe mit Zerlegungszahlen 0 und 1*

Research Stays

5–9 Mar 2018 University of Glasgow, collaboration with T. Raedschelders and G. Janssens (work on τ-tilting theory)

6–8 Feb 2018 University of Manchester, hosted by C. Eaton und M. Livesey (work on Donovan's conjecture for abelian defect groups)

15–21 Oct 2017 University of Murcia, hosted by Leo Margolis (work on Zassenhaus conjecture)

18–24 Sep 2016 As part of the semester program "Local representation theory and simple groups", EPFL, Lausanne

10–16 Sep 2017 University of Murcia, hosted by Leo Margolis (work on Zassenhaus conjecture)

Apr–Oct 2010 Research stay with Karin Erdmann, University of Oxford

Attended Conferences & Contributed Talks

Aug 2018	ICRA, Prague Talk: *Picard groups of orders and Külshammer reduction*
Apr 2018	Workshop "Representations of Finite and Algebraic Groups", Berkeley
Aug 2017	Conference "Groups St Andrews", Birmingham Talk: *Tame blocks*
June 2017	Conference "Groups, Rings and the Yang-Baxter equation", Spa Talk: *Computing with lattices over group rings of finite groups*
Jan 2017	Conference "Darstellungstheorietage", Wuppertal
Aug 2016	"17th Workshop and International Conference on Representations of Algebras", Syracuse Talk: *Knoerr lattices for symmetric orders*
Jul 2016	Workshop "Advanced lectures on local representation theory", Lausanne
Feb 2016	Workshop "Computational Methods for Representations and Group Rings", Stuttgart
Feb 2016	Conference "Representation Theory of Symmetric Groups and Related Topics", Kaiserslautern
Nov 2015	Darstellungstheorietage, Stuttgart
July 2015	Conference "Blocks of Finite Groups and Beyond", Jena
Sep 2014	Conference "DMV-PTM Joint Meeting", Poznań Talk: *Involutive Yang-Baxter groups*
Aug 2014	"XVI International Conference on Representations of Algebras", Sanya Talk: *Lifting group rings and tame blocks*
July 2014	Conference "Brock International Conference on Groups, Rings and Group Rings", St. Catharines Talk: *Units of integral group rings of finite groups up to commensurabilty*
Dec 2013	Darstellungstheorietage and Nikolaus Conference, Aachen
Aug 2013	Conference "Groups St Andrews", St Andrews
July 2013	LMS/EPSRC Short Instructional Course "Computational Group Theory", St Andrews
July 2013	Conference "Classical Aspects of Ring Theory and Module Theory", Bedlewo Talk: *On the Involutive Yang-Baxter Property in Finite Groups*
June 2013	Conference "Advances in Group Theory and Applications", Porto Cesareo
June 2013	Conference "Recent Trends in Rings and Algebras", Murcia Talk: *On the Involutive Yang-Baxter Property in Finite Groups*
Nov 2012	Darstellungstheorietage, Magdeburg
Oct 2012	Symposium in honor of F. Van Oystaeyen, Antwerp
Jun 2012	Workshop "Group Rings and related topics", Stuttgart
Sep 2011	DMV Jahrestagung, Köln Talk: *Lifting Algebras to Orders*
Aug 2011	Summer School on Computational Group Theory, Kirchberg/Hunsrück

Aug 2011	Summer School on Polynomial Representations of the General Linear Group, Bad Driburg Talk: *Definition of $V_{\lambda,K}$ and its Properties as a Weyl Module*
July 2011	Groups, Rings, and Group-Rings, Edmonton Talk: *Lifting Algebras to Orders*
Mar 2011	Darstellungstheorie Schwerpunkttagung, Münster
May 2010	Conference on Arithmetic of Group Rings and Related Objects, Aachen Talk: *Defect two blocks of symmetric groups over the p-adic integers*
Apr 2010	Darstellungstheorie Schwerpunkttagung, Bad Honnef
May 2009	CMS session on Groups & Hopf algebras, St. John's Talk: *Algorithms for p-Adic Group Rings*
Sep 2007	Summer School on Algorithmic D-Module Theory, Kleinwalsertal Talk: *Very basic intersection theory and Serre's formula*

Other Responsibilities

- I have refereed articles for: *Journal of Algebra*, *Proceedings of the LMS*, *Quarterly Journal of Mathematics*, *Osaka Journal of Mathematics* and *Journal of Pure and Applied Algebra*.
- I was a local organiser for the conference "Arithmetic of Group Rings and Related Objects" in Aachen, 2010

Computer Algebra

- I have experience with the following computer algebra systems: GAP, MAPLE, MAGMA.
- I wrote a GAP-package that deals with orders over the p-adic integers, and lattices over such orders. The package can be downloaded here: `https://github.com/feisele/orders/`

Languages

- German (native)
- English (fully proficient)
- Dutch (fully proficient; CNaVT certificate C1)
- French (fluent)