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- CONTACT INFORMATION** School of Mathematics,
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ORCID: 0000-0002-9631-3583
- NATIONALITY** British citizen.
- RESEARCH INTERESTS** Representation theory, categorical and homological methods, connections to cluster algebras and related combinatorics.
Abelian, exact and triangulated categories, (higher) Auslander–Reiten theory.
Non-commutative algebra, connections to geometry, mathematical physics, Lie theory.
- GRANTS** **EPSRC Postdoctoral Fellowship:** Dimer models with boundary.
Three year research fellowship at University of Leeds, U.K., from 30.03.20.
Transferred to University of Glasgow, U.K., from 05.01.22.
Total value £375,748.
Max Planck Institute Guest Programme, Bonn, Germany.
Research fellowship, 01.04.16–31.03.17.
Total value €25,200 plus travel expenses.
- EMPLOYMENT** **Temporary Lecturer,** 05.01.22–04.04.22.
School of Mathematics & Statistics, University of Glasgow, U.K.
Wissenschaftlicher Mitarbeiter (postdoc), 01.04.17–30.09.21 (on leave from 30.03.20).
Institut für Algebra und Zahlentheorie, Universität Stuttgart, Germany.
- PAPERS** **On quiver Grassmannians and orbit closures for gen-finite modules**
With J. Sauter. To appear in *Algebr. Represent. Theory*, 33 pages.
Special tilting modules for algebras with positive dominant dimension
With J. Sauter. *Glasg. Math. J.* **64** (2022), no. 1, pp. 79–105.
Mutation of frozen Jacobian algebras
J. Algebra **546** (2020), pp. 236–273.
Graded Frobenius cluster categories
With J. E. Grabowski. *Doc. Math.* **23** (2018), pp. 49–76.
Internally Calabi–Yau algebras and cluster-tilting objects
Math. Z. **287** (2017), no. 1–2, pp. 555–585.
Labelled seeds and the mutation group
With A. King. *Math. Proc. Cambridge Philos. Soc.* **163** (2017), no. 2, pp. 193–217.
Perfect matching modules, dimer partition functions and cluster characters
With İ. Çanakçı and A. King. Preprint, [arXiv:2106.15924](https://arxiv.org/abs/2106.15924), 55 pages.
From frieze patterns to cluster categories
Preprint, [arXiv:2010.14302](https://arxiv.org/abs/2010.14302), 23 pages. To appear in CUP proceedings volume.
Calabi–Yau properties of Postnikov diagrams
Preprint, [arXiv:1912.12475](https://arxiv.org/abs/1912.12475), 29 pages.
Categorification for principal coefficient cluster algebras
Preprint, [arXiv:1702.05352](https://arxiv.org/abs/1702.05352), 29 pages.
Auslander–Reiten translations for Gorenstein algebras
With S. Kvamme. Appendix to *Monomial Gorenstein algebras and the stably Calabi–Yau property*, by A. García Elsener, *Algebr. Represent. Theory* **24** (2021), pp. 1083–1099.
- OTHER FUNDING** **Hausdorff Junior Trimester Programme:** New Trends in Representation Theory.
Funding to lead research group (İ. Çanakçı, M. Kalck, M. Pressland) during programme.
Total value €9,300.
Heilbronn Research Grant: Categorification and Grassmannian Mirror Symmetry.
Funds research with İ. Çanakçı, B.T. Jensen, A. King (PI), T. Magee, K. Rietsch and X. Su.
Total value £7,500.
SIAM Early Career Travel Award.
For travel to 2019 SIAM Conference on Applied Algebraic Geometry.
Total value CHF 500.

VISITING POSITIONS **Invited participant**, Cluster Algebras and Representation Theory, 06.09.21–17.12.21.
Isaac Newton Institute for Mathematical Sciences, Cambridge, U.K.
Group leader, New Trends in Representation Theory, 01.09.20–29.11.20.
Hausdorff Institute for Mathematics, Bonn, Germany.
Visiting researcher in SFB 701, 18.01.16–18.03.16.
Universität Bielefeld, Germany

EDUCATION **PhD**, 2011–15.
University of Bath, United Kingdom
 Adviser: Prof. Alastair King.
 Thesis title: *Frobenius categorification of cluster algebras*.
 Defended 01.09.15, awarded 18.11.15.
MMath, Master of Mathematics, First Class, 2007–2011.
University of Warwick, United Kingdom
 IBM Student Recognition Award 2010, Warwick 2nd Year Mathematics Prize 2009.

ESTEEM **Referee**: Proc. Lond. Math. Soc., Adv. Math. ($\times 2$), Int. Math. Res. Not. IMRN, Algebra Number Theory, Math. Z., Quart. J. Math. Oxford, J. Combin. Theory Ser. A, Math. Proc. Cambridge Philos. Soc., Algebr. Represent. Theory ($\times 3$), Monatsh. Math., Appl. Categ. Structures, J. Algebraic Combin., Glasg. Math. J.
External examiner: Eight Bachelors' theses in algebra, NTNU Trondheim, 2019.
Administrator: FDLIST, mailing list in representation theory of algebras, since 2020.
Reviewer: MathSciNet, zbMath.
Local organiser: Bridges Between Representation Theory and Algebraic Geometry, Leeds, 19.05.20–22.05.20 (postponed); Two Weeks of Silting, Stuttgart, 30.07.19–09.08.19; Calf regional algebraic geometry seminar, Bath, 31.05.12.
Main organiser: Representation theory working group, Stuttgart (winter semester 2019/20 on dimer models, summer semester 2017 on Auslander's Philadelphia notes and winter semester 2017/18 on τ -tilting theory); Bath Postgraduate Seminar Series, 2012–13.
Founder, main organiser: Bath Postgraduate Geometry & Algebra Seminar, 2012–15.
Outreach: Early Career Researcher roundtable on U.K. R&D Roadmap, 24.09.20.

TALKS **Lecture Series**
 Preprojective Algebras and Calabi–Yau Algebras, Online / Ōsaka, 03.22
 London Mathematical Society Autumn Algebra School, Online, 06–09.10.20

Invited Talks
 Hodge Seminar, Edinburgh, 08.12.21
 Séminaire d'Algèbre d'IMJ-PRG, Online / Paris, 18.10.21
 New Developments in Rep. Theory Arising from Cluster Algebras, Cambridge, 23.09.21
 Cluster Algebras and Related Topics, Online / Běijīng, 06.06.21
 Plymouth Pure Mathematics Seminar, Online / Plymouth, 25.02.21
 TRAC Seminar, Online / Sherbrooke, 17.02.21
 Categorifications in Representation Theory, Online / Leicester, 16.09.20
 Dimers in Combinatorics and Cluster Algebras, Online / Ann Arbor, 13.08.20
 FD Seminar, Online, 21.05.20
 Séminaire d'Algèbre d'IMJ-PRG, Paris, 17.02.20
 Darstellungstheorie Oberseminar, Bonn, 06.12.19
 Séminaire Quantique, Strasbourg, 20.11.19
 Algebraic Representation Theory and Related Topics, Sānyà, 11.10.19
 SIAM Conference on Applied Algebraic Geometry, Bern, 09.07.19
 Cluster Algebras and Representation Theory, Kyōto, 11.06.19
 LaCIM Seminar, UQÀM, Montréal, 02.05.18
 Maurice Auslander International Conference, Woods Hole, 25.04.18
 Cluster Algebras in Mathematical Physics, Mainz, 28.03.17
 Algebra and Number Theory Seminar, Graz, 09.03.17
 Seminar am Institut für Algebra und Zahlentheorie, Stuttgart, 05.08.16
 Darstellungstheorie Oberseminar, Bonn, 15.07.16
 Cluster Algebras and Finite Dimensional Algebras, Leicester, 05.06.15
 44th ARTIN Meeting, Manchester, 08.05.15
 Algebra Seminar, Leeds, 10.03.15

Calf Seminar, Imperial College London, 28.01.15
Junior Geometry Seminar, Imperial College London, 29.01.14
Calf Seminar, Oxford, 26.04.13

Selected Other Talks

Tilting Theory, Singularity Categories and Non-Commutative Resolutions, Oaxaca, 02.09.19
Workshop on Stability Conditions, Oaxaca, 02.11.18
First SWAN Workshop, Stuttgart, 17.09.18
International Conference on Representations of Algebras, Prague, 16.08.18
Tropical Geometry Meets Representation Theory, Cologne, 15.03.18
Darstellungstheoretage 2017, Eichstätt, 10.11.17
Lie Theory and Cluster Algebras, Rome, 20.10.16
International Conference on Representations of Algebras, Syracuse, 15.08.16
Quivers and Bipartite Graphs, London, 03.05.16
Cluster Algebras and Geometry, Münster, 11.03.16
International Conference on Representations of Algebras, Sānyà, 25.08.14

Local Talks

Working group talks in Stuttgart on morphisms determined by objects, τ -tilting theory, Cohen–Macaulay modules, stability conditions, Koszul duality and Knörrer periodicity.
Working group talks in Bonn, on affine Hecke algebras and Koszul duality.
Ten talks to postgraduate seminars in Bath.
Nine talks to reading groups in Bath, on algebraic and differential geometry.

RESEARCH VISITS

University of Bath, U.K., Heilbronn Research Grant meeting, 05–09.07.21
Vrije Universiteit Amsterdam, Netherlands, Visiting İ. Çanakçı, 13–15.01.20
University of Bath, U.K., Visiting A. King, 23–25.07.19
NTNU, Trondheim, Norway, Visiting S. Oppermann and L.-P. Thibault, 29.05–02.06.19
Universität Bielefeld, Germany, Visiting J. Sauter, 02–03.11.17
University of Bath, U.K., Visiting A. King, 05–09.06.17 and 22.09.17
Karl-Franzens-Universität Graz, Austria, Visiting K. Baur and D. Bogdanić, 06–14.03.17
Universität Bielefeld, Germany, Visiting J. Sauter, 25–26.11.16
University of Bath, U.K., Visiting A. King, 14–16.12.15
Lancaster University, U.K., Visiting J.E. Grabowski, 14–17.09.15

TEACHING

Institut für Algebra und Zahlentheorie, Universität Stuttgart, Germany
Lehrassistent **April 2017 to March 2020**

- Teaching for Höhere Mathematik I and II (Summer Semesters 2017, 2018 and 2019, Winter Semester 2019/20, for BSc physics and engineering students) and Advanced Higher Mathematics for INFOTECH (Winter Semesters 2017/18 and 2018/19, for MSc information technology students).
- Delivered Vortragsübungen (‘lectured exercises’) to approximately 200 students in one 90 minute lecture per week (in German).
- Produced weekly exercise sheets and final exams, and provided office hours.
- Topics covered include integration, differential equations, linear algebra and multidimensional analysis.
- Exam invigilation, marking and checking of exam scripts, exam feedback for students.
- Second examiner for oral exams and an undergraduate thesis on representation theory.

Department of Mathematical Sciences, University of Bath, United Kingdom

Teaching Assistant **October 2011 to April 2015**

- Teaching for first and second year courses (Algebra 1A, 1B, 2A, 2B, Analysis 1A).
- Taught groups of 20–30 undergraduates in support classes.
- Marked and gave feedback on students’ work.
- Taught classes covering first and second year algebra, and first year analysis.
- Assisted with workshops to prepare college students for the STEP examination.
- Attended three-day training course on teaching in mathematics before beginning the role, in addition to a further one-day teaching workshop in December 2011.

Mathematics Department, University of Warwick, United Kingdom

Supervisor

October 2010 to June 2011

- Taught five first year students, covering first year algebra, analysis and calculus.
- Marking and feedback for exercises.
- Gave more general advice on university life and good working practices.

Analysis I Peer Tutor

October 2008 to December 2008

- Assisted a postgraduate TA in support classes for first year analysis.