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PERSONAL INFORMATION	<b>Date of birth:</b> 31.07.1989 <b>Nationality:</b> 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.	
FELLOWSHIPS	<b>EPSRC Postdoctoral Fellowship</b> , 30.03.20–29.09.23 Originally at University of Leeds, UK, transferred to University of Glasgow, UK, 05.01.22. Total value £375,748, funding full time postdoctoral research position for myself. <b>Max Planck Institute Guest Programme</b> , Bonn, Germany, 01.04.16–31.03.17 Postdoctoral research fellowship, total value €25,200 plus travel expenses.	
OTHER EMPLOYMENT	<b>Postdoctoral Research Associate</b> , 30.09.23–29.09.24 <b>School of Mathematics &amp; Statistics, University of Glasgow</b> , UK <b>Temporary Lecturer</b> , 05.01.22–04.04.22 <b>School of Mathematics &amp; Statistics, University of Glasgow</b> , UK <b>Wissenschaftlicher Mitarbeiter</b> (postdoc), 01.04.17–30.09.21 (on research leave from 30.03.20) <b>Institut für Algebra und Zahlentheorie, Universität Stuttgart</b> , Germany	
EDUCATION	<b>PhD</b> , completed 2015. <b>University of Bath</b> , United Kingdom Adviser: Prof. Alastair King. Thesis title: <i>Frobenius categorification of cluster algebras</i> . Defended 01.09.15, awarded 18.11.15. <b>MMath</b> , Master of Mathematics, First Class, 2007–2011 <b>University of Warwick</b> , United Kingdom IBM Student Recognition Award 2010, Warwick 2nd Year Mathematics Prize 2009.	
LANGUAGES	English (native speaker), German (B1–2), French (B1), various others (A1–2).	
FURTHER FUNDING	<b>Hausdorff Junior Trimester Programme</b> : New Trends in Representation Theory, €9,300 Funding to lead a three-person research group during the programme. <b>Foundation Compositio</b> , €6,000 <b>London Mathematical Society Scheme 1 Grant</b> , £5,000 <b>Heilbronn Small Grants Scheme</b> , £4,000 Funding for the conference ‘Quivers, Clusters, Moduli and Stability’, Oxford, January 2023. <b>London Mathematical Society Scheme 3 Grant</b> , £1,200 Funding for the research network ‘Clusters and Applications in the North’. <b>Edinburgh Mathematical Society Student Research Bursary</b> , £900 Funding for a student to carry out a summer research project under my supervision. <b>Heilbronn Research Grant</b> , £7,500 Funded research in a seven-person group led by principal investigator A. King.	
PAPERS	9 peer reviewed publications and 4 preprints: <b>From frieze patterns to cluster categories</b> In <i>Modern Trends in Algebra and Representation Theory</i> , LMS Lecture Notes, CUP. <b>A categorification of acyclic principal coefficient cluster algebras</b> <i>Nagoya Math. J.</i> , <b>252</b> (2023), 769–809. <b>Calabi–Yau properties of Postnikov diagrams</b> <i>Forum Math. Sigma</i> <b>10</b> (2022), Paper no. e56, 31 pages.	

**On quiver Grassmannians and orbit closures for gen-finite modules**

With J. Sauter. *Algebr. Represent. Theory* **25** (2022), no. 2, 413–445.

**Special tilting modules for algebras with positive dominant dimension**

With J. Sauter. *Glasg. Math. J.* **64** (2022), no. 1, 79–105.

**Mutation of frozen Jacobian algebras**

*J. Algebra* **546** (2020), 236–273.

**Graded Frobenius cluster categories**

With J.E. Grabowski. *Doc. Math.* **23** (2018), 49–76.

**Internally Calabi–Yau algebras and cluster-tilting objects**

*Math. Z.* **287** (2017), no. 1–2, 555–585.

**Labelled seeds and the mutation group**

With A. King. *Math. Proc. Cambridge Philos. Soc.* **163** (2017), no. 2, 193–217.

**Reduction of Frobenius extriangulated categories**

With E. Faber and B.R. Marsh. Preprint, [arXiv:2308.16232](https://arxiv.org/abs/2308.16232), 39 pages.

**Extriangulated ideal quotients, w/ applications to cluster theory and gentle algebras**

With X. Fang, M. Gorsky, Y. Palu and P.-G. Plamondon. Preprint, [arXiv:2308.05524](https://arxiv.org/abs/2308.05524), 47 pages.

**Quasi-coincidence of cluster structures on positroid varieties**

Preprint, [arXiv:2307.13369](https://arxiv.org/abs/2307.13369), 55 pages.

**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.

**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), 1083–1099.

VISITING  
POSITIONS

**Invited participant**, Cluster Algebras and Representation Theory, 06.09.21–17.12.21

**Isaac Newton Institute for Mathematical Sciences**, Cambridge, UK

**Group leader**, New Trends in Representation Theory, 01.09.20–29.11.20

**Hausdorff Institute for Mathematics**, Bonn, Germany.

ESTEEM

**Awards**

Jon Nimmo Teaching Prize for early career staff, Glasgow, 2022

**Invitations**

Three invited lecture series and many invited conference talks (further details below).

Invitations to exclusive conferences at Oberwolfach (×2) and Casa Matemática Oaxaca (×3).

**Main organiser**

Quivers, Clusters, Moduli and Stability, Oxford, 09–13.01.22

Bridges Between Representation Theory and Algebraic Geometry, Leeds, 24–27.05.22

Representation Theory Working Group, Stuttgart, 2017–18 and 2019–20

Bath Postgraduate Geometry & Algebra Seminar, 2012–15

Bath Postgraduate Seminar Series, 2012–13

**Local organiser**

Research network ‘Clusters and Applications in the North’, local organiser for Glasgow node

Two Weeks of Silting, Stuttgart, 30.07.19–09.08.19

Calf regional algebraic geometry seminar, Bath, 31.05.12

**Refereeing experience**

Adv. Math. (×3), Proc. Lond. Math. Soc., Algebra Number Theory, Int. Math. Res. Not. IMRN, J. Combin. Theory Ser. A, Math. Z., Bull. Lond. Math. Soc., Math. Proc. Cambridge Philos. Soc., J. Algebraic Combin., Algebr. Represent. Theory (×3), SIGMA Symmetry Integrability Geom. Methods Appl., Monatsh. Math., Glasg. Math. J., Quart. J. Math. Oxford, Appl. Categ. Structures.

**External examiner**

Eight Bachelors’ theses in algebra (three in Norwegian), NTNU Trondheim, 2019

**Administrator**

**FDLIST**, mailing list and webpage for representation theory of algebras, with 400 registered users worldwide, since 2020

**Reviewer**

MathSciNet, zbMath

## Outreach and administration

Royal Institution Masterclass for secondary school students, Glasgow, 26.11.22  
Early Career Researcher roundtable with science minister, on UK R&D Roadmap, 24.09.20  
Staff-Student Liaison Committee postgraduate representative, Bath, 2013–14  
Teaching Assistant for STEP Outreach Programme for sixth-form students, Bath, 2013

## TEACHING

### School of Mathematics and Statistics, University of Glasgow, United Kingdom

*Temporary Lecturer*

**January to April 2022**

- Course head and lecturer for level 3 honours course ‘Metric Spaces and Basic Topology’.
- Full responsibility for delivering lectures, setting weekly problem sheets, setting and grading the exam and other assessments (including online quiz), maintaining the course webpage and lecture notes (with accessibility considerations), and organising tutors and tutorials.
- Three lectures (50 mins, online) plus one tutorial (50 mins, in-person) per week.
- Recognised with the Jon Nimmo Teaching Prize for early career staff.

*Supervision*

- Supervised a third year undergraduate for a summer project on frieze patterns (06–07.2022).
- Supervising an M.Sc. project student on the McKay correspondence (07–09.2023).

### Institut für Algebra und Zahlentheorie, Universität Stuttgart, Germany

*Teaching Assistant*

**April 2017 to March 2020**

- Teaching for Höhere Mathematik (Higher Mathematics) 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 included integration, differential equations, linear algebra and multidimensional analysis.
- Exam invigilation, grading 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 tutorials, plus grading and feedback.
- 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 Institute, University of Warwick, United Kingdom

*Supervisor*

**October 2010 to June 2011**

- Taught five first year students algebra, analysis and calculus, plus grading and feedback.
- 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 tutorials for first year analysis.

## TALKS

### Lecture Series

Mutations in Representation Theory of Algebras, Online / Isfahan, Iran, 10–12.05.23  
Preprojective Algebras and Calabi–Yau Algebras, Online / Ōsaka, Japan, 02–04.03.22  
London Mathematical Society Autumn Algebra School, Online, 06–09.10.20

### Invited Talks

Séminaire d’Algèbre et de Géométrie, Caen, France, 02.04.24  
FD Seminar, Online, 28.09.23  
Homological Algebra and Representation Theory, Karlóvaci, Greece, 07.23  
Nordic Congress of Mathematicians, Aalborg, Denmark, 07.23  
Combinatorial Aspects of Representation Theory, Oslo, Norway, 28.03.23  
Séminaire AG, Versailles, France, 14.03.23  
GLEN Algebraic Geometry Seminar, Edinburgh, UK, 09.12.22  
Pure Mathematics Seminar, Lancaster, UK, 12.10.22  
Geometric and Combinatorial Methods in Homological Algebra, Aarhus, Denmark, 21.07.22

Clusters and Braids Seminar, Online, 06.06.22  
 Øyvind 60, Trondheim, Norway, 04.06.22  
 58th ARTIN Meeting, Manchester, UK, 17.03.22  
 International Workshop on Geometry and Math. Physics, Online / Ulsan, South Korea, 15.02.22  
 LAGOON Seminar, Online, 10.02.22  
 Hodge Seminar, Edinburgh, UK, 08.12.21  
 Séminaire d'Algèbre d'IMJ-PRG, Online / Paris, France, 18.10.21  
 New Developments in Rep. Theory Arising from Cluster Algebras, Cambridge, UK, 23.09.21  
 Cluster Algebras and Related Topics, Online / Běijīng, China, 06.06.21  
 Plymouth Pure Mathematics Seminar, Online / Plymouth, UK, 25.02.21  
 TRAC Seminar, Online / Sherbrooke, Canada, 17.02.21  
 Categorifications in Representation Theory, Online / Leicester, UK, 16.09.20  
 Dimers in Combinatorics and Cluster Algebras, Online / Ann Arbor, USA, 13.08.20  
 FD Seminar, Online, 21.05.20  
 Séminaire d'Algèbre d'IMJ-PRG, Paris, France, 17.02.20  
 Darstellungstheorie Oberseminar, Bonn, Germany, 06.12.19  
 Séminaire Quantique, Strasbourg, France, 20.11.19  
 Algebraic Representation Theory and Related Topics, Sānyà, China, 11.10.19  
 SIAM Conference on Applied Algebraic Geometry, Bern, Switzerland, 09.07.19  
 Cluster Algebras and Representation Theory, Kyōto, Japan, 11.06.19  
 LaCIM Seminar, UQAM, Montréal, Canada, 02.05.18  
 Maurice Auslander International Conference, Woods Hole, USA, 25.04.18  
 Cluster Algebras in Mathematical Physics, Mainz, Germany, 28.03.17  
 Algebra and Number Theory Seminar, Graz, Austria, 09.03.17  
 Seminar am Institut für Algebra und Zahlentheorie, Stuttgart, Germany, 05.08.16  
 Darstellungstheorie Oberseminar, Bonn, Germany, 15.07.16  
 Cluster Algebras and Finite Dimensional Algebras, Leicester, UK, 05.06.15  
 44th ARTIN Meeting, Manchester, UK, 08.05.15  
 Algebra Seminar, Leeds, UK, 10.03.15  
 Calf Seminar, Imperial College London, UK, 28.01.15  
 Junior Geometry Seminar, Imperial College London, UK, 29.01.14  
 Calf Seminar, Oxford, UK, 26.04.13

#### **Selected Other Talks**

Arbeitsgemeinschaft: Cluster Algebras, Oberwolfach, Germany, 12.10.23  
 Silting in Rep. Theory, Singularities, and Noncommutative Geometry, Oaxaca, Mexico, 14.09.23  
 Advances in Representations of Algebras IX, Kingston, Canada, 13.06.23  
 International Conference on Representations of Algebras, Buenos Aires, Argentina, 09.08.22  
 Tilting, Singularity Categories & Non-Commutative Resolutions, Oaxaca, Mexico, 02.09.19  
 Workshop on Stability Conditions, Oaxaca, Mexico, 02.11.18  
 First SWAN Workshop, Stuttgart, Germany, 17.09.18  
 International Conference on Representations of Algebras, Prague, Czechia, 16.08.18  
 Tropical Geometry Meets Representation Theory, Cologne, Germany, 15.03.18  
 Darstellungstheoretage 2017, Eichstätt, Germany, 10.11.17  
 Lie Theory and Cluster Algebras, Rome, Italy, 20.10.16  
 International Conference on Representations of Algebras, Syracuse, USA, 15.08.16  
 Quivers and Bipartite Graphs, London, USA, 03.05.16  
 Cluster Algebras and Geometry, Münster, Germany, 11.03.16  
 International Conference on Representations of Algebras, Sānyà, China, 25.08.14