

CONTACT INFORMATION	School of Mathematics and Statistics, University of Glasgow, Glasgow G12 8QQ, United Kingdom	Email: <a href="mailto:Matthew.Pressland@glasgow.ac.uk">Matthew.Pressland@glasgow.ac.uk</a> Webpage: <a href="https://mdpressland.github.io/">https://mdpressland.github.io/</a> ORCID: 0000-0002-9631-3583 ResearcherID: O-3994-2016
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, U.K., transferred to University of Glasgow, U.K., in 01.22. Total value £375,748, funding full time research position for myself. <b>Max Planck Institute Guest Programme</b> , Bonn, Germany, 01.04.16–31.03.17. Total value €25,200 plus travel expenses.	
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 (A2–B1), various others (A1–2).	
EMPLOYMENT	<b>Temporary Lecturer</b> , 05.01.22–04.04.22. <b>School of Mathematics &amp; Statistics, University of Glasgow</b> , U.K. <b>Wissenschaftlicher Mitarbeiter</b> (postdoc), 01.04.17–30.09.21 (on leave from 30.03.20). <b>Institut für Algebra und Zahlentheorie, Universität Stuttgart</b> , Germany.	
OTHER FUNDING	<b>Hausdorff Junior Trimester Programme</b> : New Trends in Representation Theory, €9,300 Funding to lead research group (İ. Çanakçı, M. Kalck, M. Pressland) during programme. <b>Heilbronn Research Grant</b> : Categorification and Grassmannian Mirror Symmetry, £7,500 Funds research with İ. Çanakçı, B.T. Jensen, A. King (PI), T. Magee, K. Rietsch and X. Su. <b>Foundation Compositio</b> , €6,000 Funds the conference ‘Quivers, Clusters, Moduli and Stability’, Oxford, January 2023. <b>London Mathematical Society Scheme 1 Grant</b> , £5,000 Funds the conference ‘Quivers, Clusters, Moduli and Stability’, Oxford, January 2023. <b>Edinburgh Mathematical Society Student Research Bursary</b> , £900 Funds a student to carry out a summer research project under my supervision.	
PAPERS	<b>From frieze patterns to cluster categories</b> To appear in <i>Modern Trends in Algebra and Representation Theory</i> , LMS Lecture Notes, CUP. <b>A categorification of acyclic principal coefficient cluster algebras</b> To appear in <i>Nagoya Math. J.</i> , 42 pages. <b>Calabi–Yau properties of Postnikov diagrams</b> <i>Forum Math. Sigma</i> <b>10</b> (2022), Paper no. e56, 31 pages. <b>On quiver Grassmannians and orbit closures for gen-finite modules</b> With J. Sauter. <i>Algebr. Represent. Theory</i> <b>25</b> (2022), no. 2, 413–445. <b>Special tilting modules for algebras with positive dominant dimension</b> With J. Sauter. <i>Glasg. Math. J.</i> <b>64</b> (2022), no. 1, 79–105. <b>Mutation of frozen Jacobian algebras</b> <i>J. Algebra</i> <b>546</b> (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.

**Perfect matching modules, dimer partition functions and cluster characters**

With İ. Çanakçı and A. King. Preprint, arXiv: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, U.K.

**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

**Main organiser**

Quivers, Clusters, Moduli and Stability, Oxford, 09–13.01.23

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**

Two Weeks of Silting, Stuttgart, 30.07.19–09.08.19

Calf regional algebraic geometry seminar, Bath, 31.05.12

**Refereeing experience**

Adv. Math. ( $\times 2$ ), Proc. Lond. Math. Soc., Algebra Number Theory, J. Combin. Theory Ser. A, Int. Math. Res. Not. IMRN, Math. Z., Bull. Lond. Math. Soc., J. Algebraic Combin., Algebr. Represent. Theory ( $\times 3$ ), Quart. J. Math. Oxford, Math. Proc. Cambridge Philos. Soc., Appl. Categ. Structures, Monatsh. Math., Glasg. Math. J., SIGMA Symmetry Integrability Geom. Methods Appl.

**External examiner**

Eight bachelor’s theses in algebra, NTNU Trondheim, 2019

**Administrator**

FDLIST, mailing list in representation theory of algebras, since 2020

**Reviewer**

MathSciNet, zbMath

**Outreach**

Royal Institution Masterclass, Glasgow, 26.11.22

Early Career Researcher roundtable on U.K. R&D Roadmap, 24.09.20

Teaching Assistant for STEP Outreach Programme, 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 assessment (including online quiz), maintaining the course webpage and lecture notes, and organising tutors and tutorials.
- Three lectures (50 mins, online) plus one tutorial (in-person) per week.
- Recognised with Jon Nimmo Teaching Prize for early career staff.

*Summer Project Adviser*

**June to July 2022**

- Supervisor for a 6-week summer project on frieze patterns, carried out by a student between third and fourth year.

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

*Lehrassistent*

**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 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.

TALKS

**Lecture Series**

Preprojective Algebras and Calabi–Yau Algebras, Online / Ōsaka, 02–04.03.22  
London Mathematical Society Autumn Algebra School, Online, 06–09.10.20

**Invited Talks**

Homological Algebra and Representation Theory, Karlóvasi, 07.23  
Combinatorial Aspects of Representation Theory, Oslo, 03.23  
GLEN Algebraic Geometry Seminar, Edinburgh, 09.12.22  
Pure Mathematics Seminar, Lancaster, 12.10.22  
Geometric and Combinatorial Methods in Homological Algebra, Aarhus, 21.07.22  
Clusters and Braids Seminar, Online, 06.06.22  
Øyvind 60, Trondheim, 04.06.22  
58th ARTIN Meeting, Manchester, 17.03.22  
UNIST International Workshop on Geometry and Math. Physics, Online / Ulsan, 15.02.22  
LAGOON Seminar, Online, 10.02.22  
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**

International Conference on Representations of Algebras, Buenos Aires, 09.08.22  
 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