

CONTACT INFORMATION	School of Mathematics and Statistics, University of Glasgow, Glasgow G12 8QQ, Scotland, 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> Dimer models with boundary. Three year research fellowship, from 30.03.20, originally held at University of Leeds, U.K. Transferred to University of Glasgow, U.K., from 05.01.22. Total value £375,748. <b>Max Planck Institute Guest Programme,</b> Bonn, Germany. Research fellowship, 01.04.16–31.03.17. Total value €25,200 plus travel expenses.	
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>Edinburgh Mathematical Society Student Research Bursary,</b> £900 Funds a student to carry out a summer research project under my supervision. <b>SIAM Early Career Travel Award,</b> CHF 500 For travel to 2019 SIAM Conference on Applied Algebraic Geometry.	
PAPERS	<b>Calabi–Yau properties of Postnikov diagrams</b> To appear in <i>Forum Math. Sigma</i> . <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. <b>Graded Frobenius cluster categories</b> With J. E. Grabowski. <i>Doc. Math.</i> <b>23</b> (2018), 49–76. <b>Internally Calabi–Yau algebras and cluster-tilting objects</b> <i>Math. Z.</i> <b>287</b> (2017), no. 1–2, 555–585. <b>Labelled seeds and the mutation group</b> With A. King. <i>Math. Proc. Cambridge Philos. Soc.</i> <b>163</b> (2017), no. 2, 193–217. <b>Perfect matching modules, dimer partition functions and cluster characters</b> With İ. Çanakçı and A. King. Preprint, <a href="https://arxiv.org/abs/2106.15924">arXiv:2106.15924</a> , 55 pages. <b>From frieze patterns to cluster categories</b> Preprint, <a href="https://arxiv.org/abs/2010.14302">arXiv:2010.14302</a> , 23 pages. To appear in CUP proceedings volume. <b>A categorification of acyclic principal coefficient cluster algebras</b> Preprint, <a href="https://arxiv.org/abs/1702.05352">arXiv:1702.05352</a> , 29 pages. <b>Auslander–Reiten translations for Gorenstein algebras</b> With S. Kvamme. Appendix to <i>Monomial Gorenstein algebras and the stably Calabi–Yau property</i> , by A. García Elsener, <i>Algebr. Represent. Theory</i> <b>24</b> (2021), 1083–1099.	

VISITING POSITIONS	<p><b>Invited participant</b>, Cluster Algebras and Representation Theory, 06.09.21–17.12.21.  <b>Isaac Newton Institute for Mathematical Sciences</b>, Cambridge, U.K.</p> <p><b>Group leader</b>, New Trends in Representation Theory, 01.09.20–29.11.20.  <b>Hausdorff Institute for Mathematics</b>, Bonn, Germany.</p> <p><b>Visiting researcher</b> in SFB 701, 18.01.16–18.03.16.  <b>Universität Bielefeld</b>, Germany</p>
ESTEEM	<p><b>Awards</b>  Jon Nimmo Teaching Prize for early career staff, Glasgow, 2022</p> <p><b>Main organiser</b>  Bridges Between Representation Theory and Algebraic Geometry, Leeds, 24.05.22–27.05.22  Representation theory working group, Stuttgart, 2017–18 and 2019–20  Bath Postgraduate Seminar Series, 2012–13</p> <p><b>Local organiser</b>  Two Weeks of Silting, Stuttgart, 30.07.19–09.08.19  Bath Postgraduate Geometry &amp; Algebra Seminar, 2012–15  Calf regional algebraic geometry seminar, Bath, 31.05.12</p> <p><b>Referee</b>  Bull. Lond. Math. Soc., Proc. Lond. Math. Soc., Adv. Math. (<math>\times 2</math>), 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 (<math>\times 3</math>), Monatsh. Math., Appl. Categ.  Structures, J. Algebraic Combin., Glasg. Math. J.</p> <p><b>External examiner</b>  Eight Bachelors’ theses in algebra, NTNU Trondheim, 2019</p> <p><b>Administrator</b>  FDLIST, mailing list in representation theory of algebras, since 2020</p> <p><b>Reviewer</b>  MathSciNet, zbMath</p> <p><b>Outreach</b>  Early Career Researcher roundtable on U.K. R&amp;D Roadmap, 24.09.20  Teaching Assistant for STEP Outreach Programme, 2013.</p>
TEACHING	<p><b>School of Mathematics and Statistics, University of Glasgow</b>, United Kingdom</p> <p><i>Temporary Lecturer</i> <b>January to April 2022</b></p> <ul style="list-style-type: none"> <li>○ Course leader for level 3 honours course ‘Metric Spaces and Basic Topology’.</li> <li>○ 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.</li> <li>○ Three 50-minute lectures (online) plus one tutorial (in-person, with associated grading) per week.</li> <li>○ Recognised with Jon Nimmo Teaching Prize for early career staff.</li> </ul> <p><i>Summer Project Adviser</i> <b>June to July 2022</b></p> <ul style="list-style-type: none"> <li>○ Supervisor for a 6-week summer project on frieze patterns, carried out by a student between third and fourth year.</li> </ul> <p><b>Institut für Algebra und Zahlentheorie, Universität Stuttgart</b>, Germany</p> <p><i>Lehrassistent</i> <b>April 2017 to March 2020</b></p> <ul style="list-style-type: none"> <li>○ 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).</li> <li>○ Delivered Vortragsübungen (‘lectured exercises’) to approximately 200 students in one 90 minute lecture per week (in German).</li> <li>○ Produced weekly exercise sheets and final exams, and provided office hours.</li> <li>○ Topics covered include integration, differential equations, linear algebra and multidimensional analysis.</li> <li>○ Exam invigilation, marking and checking of exam scripts, exam feedback for students.</li> <li>○ Second examiner for oral exams and an undergraduate thesis on representation theory.</li> </ul>

**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.

## 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.

## 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

Geometric and Combinatorial Methods in Homological Algebra, Aarhus, 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 / Běijing, 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, Sànyà, 25.08.14

#### **Local Talks**

Algebra and Number Theory Seminar, Glasgow.  
 Working group talks in Glasgow on dimer duality and tilting theory.  
 Working group talks in Stuttgart on morphisms determined by objects,  $\tau$ -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**

**NTNU, Trondheim, Norway**, Visiting algebra group, 01–04.06.22  
**King’s College London, U.K.**, Visiting T. Magee and K. Rietsch, 19–20.04.22  
**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