

VERONICA KELSEY

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EDUCATION

- 2018 - present **PhD Mathematics** University of St Andrews
Supervisors: Prof Colva M. Roney-Dougal and Dr Martyn Quick
Research Topic: generation and base size of almost simple groups
- 2014 - 2018 **MMath Mathematics** The University of Manchester
Average: 98%
Dissertation: Mathieu groups and Chamber Graphs

PUBLICATIONS

- [1] **A Note on Involution Centralizers in Black Box Groups** - with P.J. Rowley
Journal of Group Theory, J. Group Theory 23 (2020), no. 2, 287 - 297.
- [2] **A Note on Involution Centralizers in Black Box Groups** - with P.J. Rowley
Journal of Group Theory, J. Group Theory 23 (2020), no. 2, 287 - 297.
- [3] **Chamber graphs of minimal parabolic sporadic geometries.** - with P.J. Rowley
Innovations in Incidence Geometry 18 no. 1 (2020), 25–37.
- [4] **Chamber Graphs of some Geometries that are Almost Buildings** - with P.J. Rowley
Innovations in Incidence Geometry, 17 (2019), no. 3, 189 - 200.
- [5] **M_{24} Orbits of Octad Triples** - with P.J. Rowley
Graphs and Combinatorics, Volume 34, (2018) Issue 6, pp 1429 - 1443.
- [6] **Generating Finite Coxeter Groups with Elements of the Same Order**
with S. Hart and P.J. Rowley. Submitted.
- [7] **Maximal Cocliques in the Generating Graphs of the Alternating and Symmetric Groups** C. Roney-Dougal. Submitted.
- [8] **A Note on the Rank 5 Polytopes of M_{24}** with R. Nicolaides and P.J. Rowley. Submitted
- [9] **Imprimitive Maximal Cocliques in the Generating Graphs of the Alternating and Symmetric Groups** with C. Roney-Dougal. Manuscript.

AWARDS AND SCHOLARSHIPS

- 2020 **Research in “Pairs”, MFO Oberwolfach** A funded research visit at Mathematisches Forschungsinstitut Oberwolfach.
- 2018 **St Andrews PhD scholarship** Fees and a stipend for 3 years of study.
- 2018 **Outstanding Academic Achievement Award** Presented to 0.5% of the Manchester students.
- 2018 **Institute of Mathematics and its Applications Prize 2018** Final year outstanding project.
- 2018 **President’s Doctoral Scholar Award (Manchester)** As part of a PhD offer (declined).
- 2018 **Nominated for The Distinguished Achievement Award** Undergraduate of the Year.
- 2017 **Fourth Year Scholarship** Tuition fee waiver.
- 2017 **LMS Undergraduate Research Bursary** Funding for a summer research project.
- 2016 **BP achievement award 2016** For an essay on Big Data.
- 2016 **Dalton scholarship** Academic achievement in 2nd year.
- 2015 **Dalton scholarship** Academic achievement in 1st year.
- 2014 **Manchester Bursary** Academic achievement at A-level.

TALKS

Jan 2021	Relational Complexity of Primitive Permutation Groups Functor Categories for Groups meeting
Dec 2020	Piscopia Society Talk aimed to raise awareness of PhD options, highlight female and non-binary role models, and provide a support network
Oct 2020	Base Size of Permutation Groups North British Semigroups Network
June 2020	M_{24} and Octad Triples Junior London Algebra Colloquium
May 2020	Maximal Subgroups and Maximal Cocliques York Algebra Seminar
Jan 2020	Chamber Graphs of The Sporadic Groups Postgraduate Interdisciplinary Mathematics Symposium, The Burn House
Aug 2019	Maximal Cocliques in The Generating Graph of S_n Postgraduate Group Theory Conference, Birmingham
May 2019	Octad Triples Edinburgh Mathematical Society Postgraduate Meeting, The Burn
Apr 2019	The Generating Graph and Maximal Cocliques Algebra and Combinatorics Seminar, University of St Andrews
Jan 2019	Maximal Subgroups and Maximal Cocliques Postgraduate Interdisciplinary Mathematics Symposium, The Burn House
Nov 2018	A Brief Introduction to M_{12} Pure Postgraduate Seminar, St Andrews
June 2018	The Kitten, The MINIMOG and M_{12} Pure Postgraduate Seminar, Manchester
May 2018	Mathieu Groups and Chamber Graphs Masters Talk, Manchester
Mar 2017	Imprimitive Wreath Products Finite Groups Study Group, Manchester

TEACHING

I have produced a number supplementary handouts which students can download from my website, veronicakelsey@github.io.

I have attended a Mental Health Training Day which provides staff with practical information on how to deal with student situations involving mental ill health.

2020	Probability and Combinatorics St Andrews
2020	Abstract Algebra St Andrews
2019	Linear Maths St Andrews
2019	Combinatorics and Probability (cover) St Andrews
2019	Abstract Algebra St Andrews
2018	Linear Algebra Manchester
2017	Foundations of pure mathematics Manchester
2016	Linear Algebra Manchester
2016	Sequences and Series Manchester
2016	Introduction to Statistics, PASS leader Manchester
2015	Probability 1 Manchester
2015	Sets, Numbers and Functions Manchester

CONFERENCES AND WORKSHOPS ATTENDED

Mar 2020	Groups, representations and applications: new perspectives (Invited participant) Isaac Newton Institute
Jan 2020	Introductory Workshop Isaac Newton Institute
Aug 2019	Post Graduate Group Theory Conference Birmingham
June 2019	EWM-EMS Summer School Institut Mittag-Leffler
May 2019	Edinburgh Mathematical Society Postgraduate Meeting The Burn House
May 2019	North British Geometric Group Theory Seminar St Andrews
May 2019	Groups, Generalisations and Applications St Andrews
Jan 2019	Workshop on Groups, Generalisations and Applications Aberdeen
Dec 2018	The Functor Categories for Groups on Graphs and groups Lancaster
May 2018	The Manchester-Birmingham-London-Bristol “Triangle” Manchester
Sep 2017	LMS Prospects in Mathematics Workshop Reading

OTHER ACTIVITIES

Oct 2020	London Marathon
Sep 2020	Website Building
June 2020	Python Core and Advanced Course
June 2020	Basic online first aid course
Jan 2020	Postgraduate Intradisciplinary Mathematics Symposium Organiser
2019/2020	Pure Postgraduate Seminar Convener
May 2019	Mental Health Training Day
2018 - present	Mentor in Peer Mentoring scheme
2017 - 2018	MathSoc Seminar Convener and Topical Secretary

REFERENCES

Prof Colva M. Roney-Dougal - PhD Supervisor
Colva.Roney-Dougal@st-andrews.ac.uk

Prof Alexandre Borovik - Dissertation Marker
alexandre.borovik@manchester.ac.uk