Marina Anagnostopoulou-Merkouri

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https://marinaanagno.github.io

EDUCATION

PhD in Mathematics   *2023 - Present*
University of Bristol
Supervisor: Prof. Tim Burness

Master in Pure Mathematics (First Class)   *2019 - 2023*
University of St Andrews
Final year project on the O'Nan-Scott theorem and base sizes of permutation groups supervised by Prof. Colva Roney-Dougal.

PUBLICATIONS

[5] On the regularity number of a finite group and other base-related invariants
joint with Timothy C. Burness
52 pages, submitted.

[4] Computing finite index congruences of finitely presented semigroups and monoids
joint with Reinis Cirpons, James D. Mitchell, and Maria Tsalakou
50 pages, submitted.

[3] Pre-primitive permutation groups
joint with Peter J. Cameron and Enoch Suleiman
Journal of Algebra 636 (Dec. 2023), pp. 695–715.

[2] Association Schemes with given stratum dimensions: on a paper of Peter M. Neumann
joint with Peter J. Cameron
Algebraic Combinatorics Volume 6 (2023) no. 5, pp. 1189-1210.

[1] Properties of congruence latttices of graph inverse semigroups
joint with Zachary Mesyan and James D. Mitchell
International Journal of Algebra and Computation Vol. 34, No. 03, pp. 371-396 (2024)

SOFTWARE

Digraphs GAP package
-Improved efficiency for methods used for canonical labelling and graph isomorphism.
-Implemented graph theory algorithms such as the almost linear Tarjan and Lengauer algorithm for computing dominators, and algorithms for reachability.

Semigroups GAP package
-Constructed new algorithms for graph inverse semigroup congruences and congruence lattices and implemented them.

TALKS

[9] **Postgraduate Group Theory Conference** *July 2024*
The regularity number of a finite group
University of Birmingham

[8] **Groups in Florence IV** *July 2024*
The regularity number of a finite group
Università degli Studi di Firenze

[7] **Bristol Junior Geometry Seminar (BRIJGES)** *February 2024*
The regularity number of a finite group
University of Bristol

[6] **Bristol postgraduate seminar** *November 2023*
Permutation groups and Galois' confusion
University of Bristol

[5] **Seminars on groups and graphs, SUSTech** *October 2023*
New properties of permutation groups
Southern University of Science and Technology (SUSTech), Shenzhen, China (Online)

[4] **York semigroups seminar** *March 2023*
Congruence lattices of graph inverse semigroups
University of York

[3] **Tomorrow's Mathematicians Today** *March 2023*
Pre-primitive permutation groups
University of Greenwich (Online)

[2] **St Andrews Maths Society** *November 2022*
Strongly regular graphs with given stratum dimensions
University of St Andrews

[1] **Tomorrow's Mathematicians Today** *February 2022*
Congruence lattices of finite graph inverse semigroups
University of Greenwich (Online)

TEACHING

University of Bristol *September 2023 - Present*
-Linear algebra tutor *September 2023 - May 2024*
-Perspectives in Mathematics demonstrator *December 2023*

Private tutoring *November 2022 - April 2023*
-Prepared notes and delivered tutorials for GCSE, A-level students, and IB students.

MyTutor   *December 2020 - September 2022*
-Prepared notes and delivered tutorials for GCSE and A-level students.

Coronavirus Tutoring Initiative   *April 2020 - October 2020*
-Prepared notes and delivered tutorials for GCSE and A-level students.

FUNDING AWARDED

St Andrews Research Internship Scheme
- Funding granted for doing research on permutation group theory.   *2022*

University of St Andrews Careers Centre Employability Bursary
- Funding granted to extend my summer research internship and undertake a second project on group theory.   *2022*

LMS Undergraduate Research Bursary
- Funding granted for a summer research project on association schemes.   *2022*

St Andrews Research Internship Scheme
- Funding granted for completing a research project on computational semigroup theory.   *2022*

LANGUAGES

Greek (Native), English (C2), French (C2), German (B2).

OTHER

Maths Base Helper   *September 2020 - May 2023*
- Helping first and second year St Andrews students with questions.

School of Mathematics and Statistics Ambassador   *October 2021 - April 2023*
-Helping at the school of matematics and statistics visiting day talks, attended by prospective students.

Zero Gravity mentor   *July 2022 - May 2023*
-Mentoring a final year school pupil from a low-income background that wants to study mathematics in university.

University of St Andrews Karate Club
- Captain (04/2021 - 04/2023), Covid Officer (09/2020 - 03/22), Wellbeing Officer (04/2020 - 10/2021, 04/2022 - 04/2023), Safety and Fundraising Officer (04/2020 - 04/2021).

University of St Andrews Mathematics Society
- Social Representative.   *April 2021 - March 2022*