Marina Anagnostopoulou-Merkouri

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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

-Marina Anagnostopoulou-Merkouri, Peter J. Cameron, and Enoch Suleiman. "Pre-primitive permutation groups". Journal of Algebra, Dec 2023.
`https://www.sciencedirect.com/science/article/pii/S0021869323004593`
-Marina Anagnostopoulou-Merkouri and Peter J. Cameron. "Association schemes with given stratum dimensions: on a paper of Peter M. Neumann", *To appear in Algebraic Combinatorics*.
`https://arxiv.org/abs/2208.04049`
-Marina Anagnostopoulou-Merkouri, James Mitchell, and Maria Tsalakou. "Computing the congruences of a finite semigroup or monoid" *Submitted*.
`https://arxiv.org/abs/2302.06295`
-Marina Anagnostopoulou-Merkouri, Zachary Mesyan, and James Mitchell. "Properties of congruence lattices of graph inverse semigroups", *To appear in International Journal of Algebra and Computation*.
`https://arxiv.org/abs/2108.08277`

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

Seminars on groups and graphs, SUSTech - New properties of permutation groups. *October 2023*
York semigroups seminar - Congruence lattices of graph inverse semigroups. *March 2023*
Tomorrow's Mathematicians Today - Pre-primitive permutation groups. *March 2023*
St Andrews Maths Society - Strongly regular graphs with given stratum dimensions. *November 2022*
Tomorrow's Mathematicians Today - Congruence lattices of finite graph inverse semigroups. *February 2022*

TEACHING

University of Bristol *September 2023 - Present*
-Linear algebra tutor *September 2023 - May 2024*

Private tutoring *November 2023 - 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 - Present), Safety and Fundraising Officer (04/2020 - 04/2021).
St Andrews Athletic Union Colours Award
- Award for exceptional service and dedication to the karate club.   *2022*
University of St Andrews Mathematics Society
- Social Representative.   *April 2021 - March 2022*
Trained in piano and singing (mostly classical)