CV - Luke Elliott

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Degrees

St Andrews University – PhD

2018-2021 Thesis: On constructing topology from algebra (submitted 27/9/2021)
Viva pass date: December 16th 2021

Work Experience in Academia

2021-present	Research Fellow, School of Mathematics and Statistics, University of St Andrews
2018-2021	PhD Student at the University of St Andrews (includes tutoring)
2017	Laidlaw Undergraduate Research and Leadership Programme: Writing algorithms concerning commutative semigroups supervised by Prof James Mitchell.

Papers

Luke Elliott. Unindexed subshifts of finite type and their connection to automorphisms of Thompson's groups, 2021.

L. Elliott, J. Jonuŝas, Z. Mesyan, J. D. Mitchell, M. Morayne, and Y. Péresse. Automatic continuity, unique Polish topologies, and Zariski topologies on monoids and clones, submitted, 2021

Luke Elliott. A description of Aut(dV_n) and Out(dV_n) using transducers, submitted, 2020.

Collin Bleak, Luke Elliott, and James Hyde. Sufficient conditions for a group of homeomorphisms of the cantor set to be two-generated, submitted, 2020.

Technical Skills

Programming GAP, Python, LaTeX

Awards

St Andrews Dean's list 2015, 2016, 2017, 2018,
Scottish Mathematical Council "Maths Challenge" gold awards

Talks

Talk	Venue
Unindexed subshifts of finite type	Analysis Seminar (Glasgow) 2022
Removing indexing from shift spaces	Pure Postgraduate Seminar (St Andrews) 2021

Removing indexing from shift spaces	Algebra and combinatorics seminar (St Andrews) 2021
Automorphisms of the Brin-Thompson groups nV	Young geometric group theory X (Newcastle) 2021
Finding topologies for semigroups.	Pure Postgraduate Seminar (St Andrews) 2021
Automorphisms of the Brin-Thompson groups nV	London Mathematical Society Virtual Graduate Student Meeting 2020
Rubin's Theorem	St Andrews Research Day 2020
Topological Semigroups.	St Andrews Burn Trip 2020
Automorphisms of nV	Pure Postgraduate Seminar (St Andrews) 2019
Vigorous Homeomorphism groups	St Andrews Burn Trip 2019
Polish Semigroups	2019 EMS Postgraduate Meeting for Students
Polish Semigroups	Algebra and combinatorics seminar (St Andrews) 2018

Positions of Responsibility

2016-present	Treasurer of St Andrew's Anime Society
2019	Organiser of St Andrews PhD student burn trip (with 4 other organisers)

Education

St Andrews University – MMath (Hons) Mathematics (Fast Track)

Year	Modules	Average Grade
2017/18	Topics in Groups, Independent Study (Algebraic Topology), Real and Abstract Analysis, Semigroups, Dissertation (Infinite Symmetric Groups)	19.1
2016/17	Graph Theory, Measure and Ergodic Theory, Real Analysis, Advanced Symbolic Computation, Galois Theory, Groups, Topics in Geometry and Analysis	19.3
2015/16	Analysis, Complex Analysis, Differential Equations, Finite Mathematics, Linear Mathematics 2, Algebra: Rings and Fields, Mathematical Programming, Number Theory, Statistical Inference, Topology	17.5
2014/15	Mathematics, Combinatorics and Probability, Multivariate Calculus, Topics in Mathematics: Problem-solving techniques, Abstract Algebra, Linear Mathematics, Mathematical Modelling, Vector Calculus	18.5

Stewart's Melville College, Edinburgh

2013/14 Advanced Higher: Pure Maths (A), Applied Maths (A), Physics (A)

Interests & Activities

Maths, Japanese, Anime, Video/Board games.

Referees

Dr Collin Bleak	PhD Supervisor	Email: cb211@st-andrews.ac.uk
Prof. James Mitchell	PhD Supervisor	Email: jdm3@st-andrews.ac.uk
Prof. Volodymyr Nekrashevych	Viva Examiner	Email: nekrash@math.tamu.edu
Prof. Michał Morayne	Coauthor	Email: Michal.Morayne@pwr.edu.pl