Michael C. Kopreski

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RESEARCH INTERESTS

Geometric group theory, low-dimensional topology, Polish groups and their geometric, topological, and algebraic structure

EDUCATION

University of Utah
Salt Lake City, Utah, USA
Ph.D. candidate in Mathematics   August 2020–
Advisor: Mladen Bestvina

University of Cambridge
Cambridge, United Kingdom
Master of Advanced Study (MASt) in Pure Mathematics   July 2019

College of William & Mary
Williamsburg, Virginia, USA
B.S. in Mathematics (Honors) and Physics (Honors)   May 2017
Summa cum laude; GPA 4.0/4.0

PUBLICATIONS

"Automorphisms of sphere complex of an infinite graph"
Preprint. arXiv:2410.06531 (2024).
(Joint work with T. Hill, R. Rechkin, G. Shaji and B. Udall)

"The asymptotic dimension of the grand arc graph is infinite"
In peer review. arXiv:2402.03603 (2024).

"Multiarc and curve graphs are hierarchically hyperbolic"
In peer review. arXiv:2311.04356 (2023).

"Prescribed arc graphs"
In peer review. arXiv:2305.05316 (2023).

"Maximum average degree and relaxed coloring"
Discrete Mathematics **340** (2017) 2528–2530. *(Joint work with G. Yu)*

HONORS & AWARDS

NSF Research and Training Grant Fellowship (U. of Utah)	2020–22, 2025
NSF Research and Training Grant Summer Fellowship (U. of Utah)	2022, 2023
Early-career AMS–NSF–Simons–ICM Travel Grant & Kovalevskaya Grant	Jan 2022
Fulbright Scholar (Research, Switzerland)	Mar 2017
Swiss Government Excellence Scholarship	Mar 2017
William & Mary Prize in Mathematics	May 2017
Phi Beta Kappa	Dec 2016
Outstanding Presentation Award, Joint Mathematics Meeting	Jan 2016
William & Mary James Monroe Scholar	Dec 2015
William & Mary NSF EXTREEMS-QED recipient	May 2015

SELECTED TALKS

"Asymptotic dim. of graphs of arcs and curve on infinite-type surfaces"   Oct 2024
Topology Seminar, University of Michigan

"Quasi-isometry types of graphs of arcs and curves "   Oct 2024
RTG Seminar on Geometry, Dynamics and Topology, University of Michigan

"Asymptotic dimension bounds for surface combinatorial models" (poster) Apr 2024
Young Geometric Group Theorists XII, Bristol

"Multiarc and curve graphs are classified by their witnesses" Feb 2024
  Geometric Topology Grad and Postdoc Seminar (GT GAPS)

"Multiarc and curve graphs are hierarchially hyperbolic" Dec 2023
  Max Dehn Seminar, University of Utah

"Prescribed arc graphs" (lightning talk) July 2023
  Group Actions and Low-Dimensional Topology, El Barco de Ávila, Spain

"Pseudo-Anosovs of surfaces via stable laminations" (minicourse) Apr 2022
  Learning seminar for *Groups acting on fractals* trimester program
  Institut Henri Poincaré, Paris

"Katok's paradoxical foliation" Oct 2021
  University of Utah Stallings Seminar

"Folding graphs and groups" Feb 2021
  University of Utah Stallings Seminar

"A general basis for finitely supported *G*-equivariant maps" Nov 2018
  University of Cambridge Part III Seminar Series

"Metasurface-based spin-selective optical cavity" Aug 2016
  University of Washington Institute of Nuclear Theory REU

"Relaxed coloring of sparse graphs" Apr 2016
  George Washington University EXTREEMS-QED Conference

PART III ESSAY	"Combinatorial Morse Theory" Assessor: Henry Wilton University of Cambridge	May 2019
HONORS THESES	"Relaxed coloring of sparse graphs" Mathematics, Advisor: Gexin Yu College of William & Mary	Dec 2016
	"Holographic non-perturbative thermodynamic systems" Physics, Advisor: Joshua Erlich College of William & Mary	May 2017
PRIOR RESEARCH EXPERIENCE	**École Polytechnique Fédérale de Lausanne**, Lausanne, Switzerland	
	Field and Strings Laboratory, Institute of Physics *Fulbright researcher, 1 year* Advisor: João Penedones	2017–2018
	College of William & Mary, Williamsburg, Virginia, USA	
	William & Mary Graph Theory Group, Department of Mathematics *Undergraduate researcher, 21 months* Advisor: Gexin Yu	2015–2017
	William & Mary High Energy Theory Group, Department of Physics *Undergraduate researcher, 17 months* Advisor: Joshua Erlich	2016–2017

CONFERENCE ABSTRACTS	Kopreski, M., Zhan, A., and Majumdar, A., "Metasurface-based spin-selective optical cavity".	Oct 2016
	Frontiers in Optics, Optical Society of America and American Physical Society Division of Laser Science, Rochester, NY. *Poster.*	
	Kopreski, M., "Relaxed coloring of sparse graphs".	Jan 2016
	Joint Mathematics Meeting, American Mathematical Society and Mathematical Association of America, Seattle, WA. *Abstracts for the MAA Undergraduate Poster Session, abstract 134, page 41.*	
SERVICE & OUTREACH	**U. of Utah Association for Women in Math.**, *Outreach chair* Responsible for organizing and facilitating community outreach events for the U. of Utah Association for Women in Math.	AY 2024–25
	BRIDGES, *Teaching Assistant* Facilitated exercise sessions for Kim Ruane's minicourse in geometric group theory and hyperbolic groups.	July 2024
	Young Geometric Group Theorists XII, *Discussion session leader* Lectured in and facilitated a discussion session introducing mapping class groups of surfaces and relevant techniques.	April 2024
	Madsen–Weiss Reading Seminar, *Organizer, speaker* Organized and facilitated a seminar exploring techniques relevant to the Madsen–Weiss theorem and several extensions.	Spring 2024
	Geometric Topology Learning Seminar, *Organizer, speaker* Presented weekly lectures on the theory of geodesic laminations on surfaces and the Nielsen-Thurston classification.	Fall 2022
	University of Cambridge STIMULUS, *Volunteer* Prepared and facilitated a weekly afterschool *Code Club* program for primary school students.	Spring 2019
TEACHING	**University of Utah**	
	Math 1320 Engineering Calculus II *(Instructor)*	Spring 2024
	Math 3140 Vector Calculus and PDEs for Engineers *(Lab TA)*	Spring 2023
	Math 1320 Engineering Calculus II *(Instructor)*	Fall 2022
	Math 1060 Trigonometry *(Instructor)*	Fall 2021
	Math 1320 Engineering Calculus II *(Lab TA)*	Spring 2021