

Chirantan Mukherjee

CONTACT INFORMATION	Middlesex College, Rm. 102 Western University London, Ontario N6A 5B7	 https://publish.uwo.ca/~cmukher/  cmukher@uwo.ca
RESEARCH INTERESTS	Algebraic topology, homotopy theory, and category theory- especially higher category theory	
EDUCATION	Western University , Canada Ph.D. in Mathematics, Sep. 2022–Anticipated Aug. 2026 <ul style="list-style-type: none">• Advisor: Dan Christensen University of Trento , Italy M.Sc. in Mathematics, Sep. 2019–Mar. 2022 <ul style="list-style-type: none">• Dissertation Topic: Complete Segal Spaces as a model of Higher Categories• Advisor: Nima Rasekh Erasmus+ Study in University of Warsaw, Poland. Institute of Mathematics and Applications , India B.Sc. in Mathematics and Computing, Aug. 2015–Apr. 2018 <ul style="list-style-type: none">• Dissertation Topic: Set Theory and Foundation of Mathematics• Advisor: Shashi Mohan Srivastava	
PUBLICATIONS	Preprint Mar. 2022	Chirantan Mukherjee. <i>Twisted Arrow Construction for Segal Spaces</i> . arXiv preprint, 2022. arXiv:2203.01788.
RESEARCH EXPERIENCE	2021–2022 2017–2018	École Polytechnique Fédérale de Lausanne, Switzerland. Indian Statistical Institute, Kolkata, India.
TALKS AND PRESENTATIONS	Jul. 2022 Jun. 2022 Mar. 2021 Jan. 2021 Dec. 2020 Nov. 2020	<i>Complete Segal Spaces as a Model of Higher Categories</i> , GROOT Summer Seminar 2022, University of Notre Dame, US. <i>Higher Category Theory</i> , Indian Statistical Institute, Kolkata, India. <i>The $Conf_2$ space of rational homology of S^3 and propagators</i> , University of Warsaw, Poland. <i>Differentiable manifolds and forms, de Rham cohomology</i> , University of Warsaw, Poland. <i>Products and cochains of equivariant cohomology theories</i> , University of Warsaw, Poland. <i>Polish spaces</i> , University of Warsaw, Poland.
GRANTS AND AWARDS	2022–2026 2021–2022 2020–2021	Western Graduate Funding, Western University, Canada, \$18,196/year. Thesis Research Abroad, University of Trento, Italy, €2,700. Erasmus+ Grant, Italian Erasmus+ Agency, Italy, €6,207.

TEACHING EXPERIENCE	Courses	
	Winter 2023	Math 1600. <i>Linear Algebra I</i> , Teaching Assistant, Western University, Canada. Managing a class of 41 students helping them solve weekly problems, conducting bi-weekly quizzes and grading them.
	Fall 2022	Math 1228. <i>Methods of Finite Mathematics</i> , Teaching Assistant, Western University, Canada. Proctoring and marking tests throughout the term.
	Projects	
	Fall 2022	Sterling Ebel. <i>The Yoneda Lemma</i> . Directed Reading Program, Western University, Canada.
	Other	
	Winter 2023	<i>Math-Physics Accelerator Help Centre</i> Duties both in-person and virtual help centre.
	Fall 2022	<i>Math-Physics Accelerator Help Centre</i> Duties both in-person and virtual help centre.
	Jun. 2017	<i>Regional Mathematical Olympiad Training Camp</i> Train junior mathematical olympiad 2016 awardees for mathematical olympiad.
	Jun. 2017	<i>Training Camp for Pathani Samanta Mathematics Scholarship</i> Nurturing of talents in mathematics from rural India.
RESEARCH SCHOOLS AND INTERNSHIPS ATTENDED	May 2016	<i>Training Camp for Pathani Samanta Mathematics Scholarship</i> Nurturing of talents in mathematics from rural India.
	2015–2018	<i>Sunday Morning Problem Solving Classes</i> Interactive classes for school children, with emphasis on children from vernacular schools.
	2022	<i>HoTTEST Summer School 2022</i> , Western University, Canada. Introductions to homotopy type theory and formalization.
	2022	<i>Higher Category Lecture</i> , Australian National University, Australia. Instructors: Yuki Maehara.
	2021	<i>Masterclass on Topological Field Theories and Factorization Homology</i> , University of Copenhagen, Denmark, €336.07 (University of Copenhagen) + €469.69 (University of Trento). Instructors: Adrien Brochier; Quantum character varieties and TFTs, and Claudia Scheimbauer; Dualizability, higher categories and TFTs.
	2021	<i>EPFL Topology Seminar Spring 2021</i> , EPFL, Switzerland. Seminar on algebraic topology and category theory.
	2021	<i>Intensive Research Programme: Higher Homotopical Structures</i> , CRM, Spain. Development of higher categorical tools for theory and computations in algebraic K-theory and related theories.
	2020	<i>Scuola Matematica Interuniversitaria</i> , University of Perugia, Italy Instructors: Barbara Nelli; Differential geometry, and Frédéricch Robert; Functional Analysis.
	2017	<i>Summer Research Programme</i> , IMSc, India, ₹11,000. Advisor: Pralay Chatterjee.
	2017	<i>Project on basic set topology</i> , ISI, Kolkata, India. Advisor: Goutam Mukherjee.
TECHNICAL SKILLS	Languages: Software:	Agda (<i>learning</i>), C/C++, Java L ^A T _E X, Mathematica
RELEVANT SKILLS	Languages: Extra:	English (Fluent), Bengali (Native), Hindi (Native) Poet (Published a book of poems), Swimmer and Life Guard