

Dmitry Vagner

CONTACT		dv[at]math.duke.edu Duke University, Box 90320, Durham, NC 27708-0320
EDUCATION	2013–	Duke University. Durham, NC. <i>PhD</i> Mathematics. <i>MS</i> Computer Science. <i>Certificate</i> History and Philosophy of Science, Technology, and Medicine. <i>Certificate</i> College Teaching.
	2008–13	Brown University. Providence, RI.
	2013	<i>ScM</i> Applied Mathematics.
	2012	<i>AB</i> Economics // Applied Mathematics // Mathematics.
VISITING POSITIONS	2014/15	Massachusetts Institute of Technology. Cambridge, MA. Summer session visiting graduate student. Mentor: David I. Spivak.
INTERESTS		Diagrammatics, Categorification, Categorical Algebra & Logic, Epistemology Bayesian Inference, Game Theory, Network Theory, Functional Programming
FELLOWSHIPS	2018	Applied Category Theory Adjoint School
	2017	Bass Instructional Fellowship , \$11,456, awarded to doctoral candidates to facilitate their design and instruction of a full-credit undergraduate course at Duke University.
	2017	Competitive Graduate Summer Research Fellowship , \$5,500.
PAPERS & PREPRINTS	2. 2017	<i>A Smooth TQFT construction of \mathfrak{sl}_n Homology</i> , with Michael Abel (in preparation).
	1. 2015	<i>Algebras of Open Dynamical Systems on the Operad of Wiring Diagrams</i> , with David I. Spivak and Eugene Lerman. <i>Theory Appl. Categ.</i> , 30: Paper No.51, 1793-1822.
TEACHING		Duke University
	S 2018	Instructor, Math 490: Introduction to Category Theory and Mathematized Thinking.
	S 2017	Teaching Assistant, Math 216: Linear Algebra and Differential Equations.
	F 2016	Teaching Assistant, Math 216: Linear Algebra and Differential Equations.
	F 2016	Grader, Math 551: Applied Partial Differential Equations and Complex Variables.
	S 2016	Grader, Math 602: Commutative Algebra.
	S 2016	Grader, Math 401: Introduction to Abstract Algebra.
	F 2015	Instructor, Math 122L: Introduction to Calculus II with Applications.
	F 2014	Lab Instructor, Math 111L: Laboratory Calculus I.
	F 2014	Lab Instructor, Math 122L: Introduction to Calculus II with Applications.
	F 2013	Lab Instructor, Math 122L: Introduction to Calculus II with Applications.
		Brown University
	S 2013	Teaching Assistant, APMA 36: Honors Methods of Applied Mathematics II.
	F 2012	Teaching Assistant, APMA 35: Honors Methods of Applied Mathematics I.

RESEARCH TALKS		AMS Fall Western Sectional Meeting, Special Session on Applied Category Theory
	11.2017	<i>Algebras of Open Dynamical Systems on the Operad of Wiring Diagrams.</i>
		NC State Geometry & Topology Seminar
	04.2017	<i>A Smooth TQFT Approach to \mathfrak{sl}_n Homology.</i>
		Triangle Area Graduate Mathematics Conferences (TAGMaC)
	04.2017	<i>A Smooth TQFT Approach to \mathfrak{sl}_n Homology.</i>
EXPOSITORY TALKS	12.2016	<i>Categorification for Link Homology.</i>
	10.2015	<i>Topological Compositionality in Doctrines.</i>
		Triangle Topology Learning Seminar: Khovanov Homotopy Type
	2016-17	<i>Five talks on the periodic table & tangle hypothesis, structure of representation categories, generalized homology & spectra, and the Khovanov flow and Burnside categories.</i>
		Duke Graduate Geometry, Topology, & Algebra Seminar
	2016-17	<i>Three talks on Lawvere Theories, Hecke Algebras, and Quantum Group Representations.</i>
CONFERENCES & WORKSHOPS		Duke Graduate / Faculty Seminar
	2016-17	<i>Three talks on n-Categories, Categorification in Combinatorics, and Diagrammatics.</i>
		Invited Talks
	01.2015	<i>Introduction to Combinatorial Species.</i> Texas A&M Discrete Math Working Seminar.
	05.2018	<i>Applied Category Theory.</i> Lorentz Center. Leiden, Netherlands.
	09.2017	<i>String Diagrams in Computation, Logic, and Physics.</i> Oxford, UK.
SERVICE	07.2017	[†] <i>Soergel Bimodules, Summer Graduate School.</i> MSRI. Berkeley, CA.
	06.2017	[†] <i>Homotopy Type Theory, Mathematics Research Communities.</i> Snowbird, Utah.
	03.2017	[*] <i>Gauge Theory and Categorification.</i> IPAM. Los Angeles, CA.
	05.2015	[*] <i>Categorification in Algebra, Geometry and Physics.</i> IESC. Cargèse, France
	01.2014	<i>Algebraic Topology, Introductory Workshop.</i> MSRI. Berkeley, CA.
		<i>awarded funding for: [*]local accommodations [†]local and travel accommodations.</i>
OUTREACH	2017	Co-organizer, TAGMaC @ Duke Graduate Student Conference.
	2016-18	Founder & President, Duke AMS Graduate Student Chapter.
	2015-16	Co-founder & co-organizer, Duke Graduate Geometry, Topology, & Algebra Seminar.
	2014-15	Co-organizer, Duke Mathematics Graduate/Faculty Seminar.
	2013-15	Math Department Representative, Duke Graduate & Professional Student Council.
OUTREACH	2017-18	Mentoring Onkar Singh for his PRUV fellowship senior thesis research project, including independent study course in categorical algebra & logic.
	05.2017	Mentored Elijah Byrnes for 40 hours in category theory, diagrammatic algebra, and knot theory for his senior capstone project at Providence Country Day School.
	07.2016	Presented talks on higher dimensional algebra to high school students at Ranney School and Providence Country Day School.