

MARU SARAZOLA

CURRICULUM VITAE

Contact Information

Department of Mathematics
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Fields of Interest

Homotopy theory, algebraic topology, algebraic K-theory, category theory, applied category theory

Education

2015-present	Cornell University Ithaca, NY Ph.D. candidate in Mathematics M.S. in Mathematics (2017) Advisor: Inna Zakharevich
2010-2015	Universidad de la República Montevideo, Uruguay Bachelor in Mathematics, Monograph: “Symmetries in three homological dimensions” Advisor: Marcelo Lanzilotta

Publications

- (1) Fong, Brendan and Sarazola, Maru. “A recipe for black box functors” <https://arxiv.org/abs/1812.03601>
- (2) Baez, John C.; Pollard, Blake; Lorand, Jonathan and Sarazola, Maru. “Biochemical Coupling Through Emergent Conservation Laws” arXiv: <https://arxiv.org/abs/1806.10764>

Awards and recognitions

2018	Olivetti Egg Award – awarded each semester to the best speaker in Cornell’s graduate student seminar “Olivetti Club”.
2017	Recipient of the Torng Prize – Cornell Mathematics Department award for outstanding teaching.

Conference talks

2018	“Category theory in action”, 43rd Annual New York Regional Graduate Mathematics Conference, Syracuse, New York
2017	“Detecting algebraic categories with an internal Hom”, International Category Theory Conference, Vancouver, Canada.

Seminar talks

2018	“Applying category theory to real life (for real)”, Olivetti Club, Cornell University, Ithaca, NY
2018	“A compositional framework for reaction networks” –together with Sasha Targ, Applied Category Theory Seminar (Online seminar)
2018	“ ∞ -categories and why we should care about them”, a series of three talks for the Homotopy Theory Reading Group, Cornell University, Ithaca, NY
2018	“Category theory in action”, Olivetti Club, Cornell University, Ithaca, NY
2017	“Algebra valued functors in general and tensor products in particular”, Kan Extension Seminar II (Online seminar)
2014	“A theorem of Kaplansky”, Algebra Seminar, Universidad de la República, Montevideo, Uruguay
2014	“The (semi)simple things”, Student seminar, Universidad de la República, Montevideo, Uruguay

Workshop and Seminar Participation

2019 <small>UPCOMING</small>	Women in Topology III, Bonn, Germany
2018	The MIT Talbot Workshop: Model-independent theory of ∞ -categories. Talk: “ ∞ -cosmoi and their homotopy 2-categories”
2018	Applied Category Theory Research Week, Lorentz Center, Leiden, The Netherlands
Spring 2018	The Kan Extension Lab, a semester-long online seminar organized by Brendan Fong and Nina Otter
Spring 2017	The Kan Extension Seminar II, a semester-long online seminar organized by Emily Riehl, Alexander Campbell and Brendan Fong
2017	Instructional skills workshop (a 26-hour long workshop on tools for active learning), Cornell University, Ithaca, NY

Teaching Experience

2015-present	Cornell University
Fall 2018	Math 1110 and Math 1120 (Calculus 1 and 2). <i>Czar’s assistant.</i>
Spring 2018	Math 1106 (Calculus for the life sciences). <i>Teaching assistant.</i>
Summer 2017	Summer Program for Undergraduate Research: Topological Methods in Discrete Geometry. <i>Graduate assistant</i>
Fall 2017	Math 1910 (Calculus for engineers). <i>Teaching assistant.</i>
Fall 2015	
Spring 2016	Math 4340 (Honors introduction to algebra). <i>Grader.</i>
Fall 2016	Math 1910 (Calculus for engineers). <i>Head teaching assistant.</i>
2012-2015	School of Sciences, Universidad de la República

Spring 2014	Linear algebra I. <i>Teaching assistant.</i>
Fall 2014	Algebra I (Rings and modules). <i>Teaching assistant.</i>
Spring 2013 Spring 2012	Mathematics I (Mathematics for the Life Sciences). <i>Teaching assistant.</i>
Fall 2013	Introduction to computer science (Haskell). <i>Teaching assistant.</i>
2013-2014	School of Engineering, Universidad de la República
Spring 2014 Fall 2014	Linear algebra and geometry I. <i>Teaching assistant.</i>
Spring 2013 Fall 2013	Differential and integral calculus I. <i>Teaching assistant.</i>

Other Activities

Fall 2018	Organized the Homotopy Theory Reading Group, Cornell University
Spring 2018	Co-organized the Homotopy Theory Reading Group, Cornell University
Spring 2017	Planned and led a session of the Math Explorer's Club; an extracurricular program that introduces new mathematical concepts to grades 8-12 students, Cornell University
2016 - 2018	Class representative, Cornell University
2012 - 2013	Students representative for the Directive Committee of the Mathematics Department, School of Sciences, Universidad de la República