

Amar Hadzihasanovic

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EMPLOYMENT	Tallinn University of Technology , Estonia Postdoctoral Researcher 2020 —
	IRIF, Université de Paris , and Inria , France FSMP Postdoctoral Research Fellow 2019 — 2020
	RIMS, Kyoto University , Japan JSPS Postdoctoral Research Fellow 2017 — 2019
EDUCATION	University of Oxford , United Kingdom Ph.D (D.Phil) in Computer Science 2013 — 2017
	Utrecht University , The Netherlands Visiting Student, Mathematical Institute 2013
	Università di Pavia , Italy M.Sc (Laurea Magistrale) in Mathematics 2011 — 2013 B.Sc (Laurea Triennale) in Mathematics 2008 — 2011
PREPRINTS	[P1] Diagrammatic Sets and Rewriting in Weak Higher Categories. Single-author. arXiv preprint 2007.14505, 2020.
PUBLICATIONS	[8] A Combinatorial-Topological Shape Category for Polygraphs. Single-author. In <i>Applied Categorical Structures</i> , volume 28, issue 3, pages 419—476, 2020.
	[7] Weak Units, Universal Cells, and Coherence via Universality for Bicategories. Single-author. In <i>Theory and Applications of Categories</i> , volume 34, number 29, pages 883—960, 2019.
	[6] A Diagrammatic Calculus of Fermionic Quantum Circuits. With Giovanni de Felice and Kang Feng Ng. In <i>Logical Methods in Computer Science</i> , volume 15, issue 3, pages 26:1—26:34, 2019.
	[5] Two Complete Axiomatisations of Pure-State Qubit Quantum Computing. With Kang Feng Ng and Quanlong Wang. In <i>33rd Annual ACM/IEEE Symposium on Logic in Computer Science (LICS) 2018</i> , pages 502—511, ACM, 2018.
	[4] A Diagrammatic Axiomatisation of Fermionic Quantum Circuits. With Giovanni de Felice and Kang Feng Ng. In <i>3rd International Conference on Formal Structures for Computation and Deduction (FSCD) 2018</i> , volume 108 of LIPIcs, pages 17:1—17:20, 2018.
	[3] A Topological Perspective on Interacting Algebraic Theories. Single-author. In <i>Proceedings 13th International Conference on Quantum Physics and Logic (QPL) 2016</i> , volume 236 of EPTCS, pages 70-86, 2017.
	[2] Nonstandard Functional Interpretations and Categorical Models. With Benno van den Berg. In <i>Notre Dame Journal of Formal Logic</i> , volume 58, number 3, pages 343—380, 2017.

- [1] A Diagrammatic Axiomatisation for Qubit Entanglement.
 Single-author. In *30th Annual ACM/IEEE Symposium on Logic in Computer Science (LICS) 2015*, pages 573–584, IEEE, 2015.

TEACHING

Kyoto University, Japan

Lecturer, *Category Theory and Diagrammatic Reasoning* 2019

Advanced undergraduate and graduate students of Mathematics and Computer Science. Lecture notes written and available on personal website.

University of Oxford, United Kingdom

Teaching Assistant, *Categories, Proofs and Processes* 2015 — 2016

Teaching Assistant, *Automata, Logic and Games* 2017

Advanced undergraduate and graduate students of Mathematics and Computer Science.

Università di Pavia, Italy

Teaching Assistant, *Linear Algebra and Geometry* 2012 — 2013

First-year students of Industrial and Civil Engineering.

Lecturer, *Preliminary Mathematics* 2012

First-year students of Mathematics and Physics.

SUPERVISION

Giovanni de Felice. *Hopf algebras in quantum computation*. 2017

Master's thesis, University of Oxford. Co-supervised with Bob Coecke.

INVITED TALKS

International workshops

- 5 Jul 2020, Geometric and Categorical Structures in Computation and Deduction, Paris, France.

Seminars

- 11 Jun 2020, TallCat Seminar, Tallinn, Estonia.
- 21 Feb 2020, OASIS Seminar, Oxford, UK.
- 31 Oct 2019, RIMS Computer Science Seminar, Kyoto, Japan.
- 4 Oct 2019, Séminaire Catégories supérieures, polygraphes et homotopie, Paris, France.
- 18 Jan 2019, Séminaire Catégories supérieures, polygraphes et homotopie, Paris, France.
- 1 November 2018, RIMS Computer Science Seminar, Kyoto, Japan.
- 5 July 2018, Séminaire Catégories supérieures, polygraphes et homotopie, Paris, France.
- 7 December 2017, RIMS Computer Science Seminar, Kyoto, Japan.
- 14 January 2016, Séminaire PPS, Paris, France.
- 7 March 2016, Category Theory Seminar, Bruxelles, Belgium.
- 28 August 2014, Seminario di Logica Permanente, Gargnano, Italy.
- 11 September 2013, Colloquium on Mathematical Logic, Amsterdam, The Netherlands.

INVITED MEETINGS

- Jan 2019, *Higher Structures*, CIRM, France.
- Nov 2018, *Diagrammatic methods for linear and nonlinear systems*, NII Shonan, Japan.
- Jan 2018, *Intensional and extensional aspects of computation*, NII Shonan, Japan.
- Sep 2017, *Categories for homotopy theory and rewriting*, CIRM, France.

GRANTS	<i>FSMP — Fondation Sciences Mathématiques de Paris</i>	2019 — 2020
	Postdoctoral Fellowship (€ 30,000).	
	<i>JSPS — Japanese Society for the Promotion of Science</i>	2017 — 2019
	Postdoctoral Fellowship for Research in Japan (Standard) (¥8,888,000). KAKENHI Grant-in-Aid (¥2,200,000).	
GRANTS	<i>EPSRC — Engineering and Physical Sciences Research Council, Department of Computer Science, and Wolfson College, Oxford</i>	2013 — 2016
	Combined studentship: EPSRC Doctoral Training Partnership, Departmental Studentship for Doctoral Study, and Isaiah Berlin Scholarship.	
	<i>IUSS — Istituto Universitario di Studi Superiori and Collegio Ghislieri, Pavia</i>	2008 — 2013
	Studentship and place in college.	
AWARDS	Best Student Paper. Quantum Physics and Logic (QPL).	2015
	<i>A diagrammatic axiomatisation of the GHZ and W quantum states.</i>	
	Premio AILA. Italian Association of Logic and Applications (AILA).	2014
	Best Master's Thesis in Logic defended at an Italian university in the Academic Year 2012-2013.	
AWARDS	Premio Migliore Laureato. Università di Pavia.	2014
	Top Graduate from the Department of Mathematics in the Academic Year 2012-2013.	
SERVICE	Program committee chair for <i>Symposium on Compositionality (SYCO)</i> 7.	
	Program committee member for <i>Applied Category Theory (ACT)</i> 2020, <i>Workshop on String Diagrams in Computation, Logic and Physics (STRING)</i> 3, and <i>Symposium on Compositional Structures (SYCO)</i> 4.	
	Reviewer for journals: <i>Mathematical Structures in Computer Science</i> .	
	Reviewer for conferences with proceedings: <i>Formal Structures for Computation and Deduction (FSCD)</i> , <i>Logic in Computer Science (LICS)</i> , <i>International Colloquium on Automata, Languages, and Programming (ICALP)</i> , <i>Quantum Physics and Logic (QPL)</i> , <i>Mathematical Foundations of Programming Semantics (MFPS)</i> , <i>Mathematical Foundations of Computer Science (MFCS)</i> , <i>Applied Category Theory (ACT)</i> .	
PERSONAL	Italian citizen.	
LANGUAGES	Italian, Bosnian-Croatian-Serbian (bilingual native), English (near-native), French (advanced), Japanese (basic).	