

Contact

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Masaryk University
Kotlářská 02, Brno.
birth 04/17/1992, in Mazara del Vallo, Italy

Current

Ph.D Student, *Masaryk University*, Brno, since Jan 2017.
Advisor: prof. Jiří Rosický.

Young Researcher, *Czech Academy of Sciences*, Prague.
Research coordinator: prof. Wiesław Kubiś.

Education

- 2016 **Graduate Student in Pure Mathematics**, *Università di Pisa*.
Dissertation: A survey on Barr's Theorem.
Advisors: Prof. Nicola Gambino, prof. Alessandro Berarducci.
- 2015 **Bachelor Student in Pure Mathematics**, *Università di Pisa*.
Dissertation: Definable groups in o-minimal structures.
Advisor: Prof. Alessandro Berarducci.

Research

Category theory, motivated by *logic* and *foundations* of mathematics. I have worked in **categorical logic, formal approaches to dualities of syntax-semantics type, locally presentable and accessible categories, topoi** as a foundational framework for topology and a geometric point of view on logic.

Publications

- 2019 **Weak saturation and weak amalgamation property**, *Journal of Symbolic Logic*, doi:10.1017/jsl.2019.45.
- 2018 **Homotopical Algebra is not concrete**, j/w F. Loregian, *J. Homotopy Relat. Struct.* (2018) 13: 673.

Preprints

- 2019 **Codensity: Isbell duality, pro-objects, compactness and accessibility**.
- 2019 **Gabriel-Ulmer duality for topoi and its relation with site presentations**, j/w Julia Ramos Gonzalez.
- 2019 **On the unicity of formal category theories**, j/w F. Loregian.
- 2018 **Accessibility and Presentability in 2-categories**, j/w F. Loregian.

Travels

Visits

- 2019 **Antwerp University visit**, *Antwerp*, to collaborate with Julia Ramos Gonzalez.
- 2018 **MPI visit**, *Bonn*, to collaborate with Fosco Loregian.

Conferences

- 2019 **ItaCa I**, *Università di Milano*.
- 2019 **CT2019**, *University of Edinburgh*.
- 2019 **TACL19**, *University of Nice*.
- 2019 **Prague&Brno Algebra workshop**, *Masaryk University*.
- 2019 **Syco3**, *University of Oxford*.
- 2018 **ECI workshop**, *Trest*.
- 2018 **PSSL104**, *University of Amsterdam*.
- 2018 **Accessible categories and their connections**, *University of Leeds*.
- 2018 **CT2018**, *University of Azores*.
- 2018 **Toposes in Como**, *University of Como*.
- 2018 **PSSL103**, *Masaryk University*.
- 2017 **ECI Workshop**, *Telc*.
- 2017 **PSSL101**, *University of Leeds*.
- 2017 **Logic Colloquium**, *University of Stockholm*.
- 2015 **Combinatorics and Algebraic Topology of Configurations**, *Centro Ric. Mat. De Giorgi*.
- 2014 **AILA 2014**, *Scuola Normale Superiore*.

Talks

Invited

- 2019 **Topos theoretic approaches to Abstract model theory**, *Technische Universität Wien*.
- 2019 **A specialization of Gabriel Ulmer duality for Grothendieck topoi**, *University of Antwerp*.
- 2018 **Morita theories and 2-dimensional dualities of Stone-type**, *Università di Milano*.
- 2018 **The shape of water: Homotopical algebra and set functors**, *Max Plank institut*.

Conference

- 2019 **The Scott Adjunction**, *Edinburgh*, CT2019.
- 2019 **Codensity, Isbell duality and Pro-objects**, *Brno*, Prague&Brno Algebra workshop.
- 2019 **On the unicity of formal category theories**, *Oxford*, Syco3.
- 2018 **Faithful and conservative functors into Set**, *Trest*, ECI Workshop.
- 2018 **An axiomatic approach to Gabriel Ulmer duality**, *University of Azores*, CT2018.
- 2017 **Weak saturation and weak amalgamation property**, *Telc*, ECI Workshop.
- 2017 **Weak saturation and weak amalgamation property**, *University of Leeds*, PSSL101.

Informal

- 2019 **Variations on the concept of *there***, *University of Pisa*.
- 2017 **A geometric perspective on the Yoneda Lemma**, *University of Pisa*.
- 2017 **On the concreteness of certain categories**, *University of Pisa*.

Academic activities

Organizer

2019 **ItaCa I**, *Università di Milano*, Program committee.

2018 **PSSL103**, *Masaryk University*, Organizer.

Teaching: MUNI

2019 **Topics in Category Theory**, *Lecturer*.

2019 **Topology**, *Teaching assistant*.

2018 **Topics in Category Theory**, *Lecturer*.

2017 **Rings and Modules**, *Teaching assistant*.

Teaching: UniPi

2016 **Tutor**, *I have tutored courses of first two years, especially Algebra courses*.

Thesis Reader: MUNI

2019 **Yuriy Dupyn**, *Algebraic Theories*, bachelor thesis.

2018 **Jan Jurka**, *Locally presentable categories*, bachelor thesis.

2018 **Vladislav Demenchuk**, *Elements of nonstandard analysis*, bachelor thesis.

Grants

Young Researcher, *Institute of Mathematics, Czech Academy of Sciences, Prague*, Ph.D student in grant Generic Objects under the guidance of prof. W Kubiś.

2017 - present

Scholarships

Scholarship to attend CT2019.

Scholarship to attend Topology Algebra and Categories in Logic 2019.

Scholarship to attend Toposes in Como.

Scholarship to attend Logic Colloquium 2017, ASL.