Ivan Di Liberti

Contact

addr	Department of Mathematics and Statistics Masaryk University Kotlářská 02, Brno.
mail	diliberti.math@gmail.com
web	diliberti.github.io
phone	+39 346 7841968

Education

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

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

Research Visits

2020 **University of Cambridge**, *Cambridge*, to visit prof. Forster.

2019 **Institute de recerche et informatique fondamentale**, *Paris*, to visit prof. Sam van Gool.

2019 **Antwerp University visit**, *Antwerp*, to collaborate with Julia Ramos Gonzalez.

2018 **Max Plank Institute**, *Bonn*, to collaborate with Fosco Loregian.

▬ Talks

Invited

2019 **Topos theoretic approaches to formal model theory**, *Institute de recerche et informatique fondamentale*.

2019 **Topos theoretic approaches to formal 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 **From algebra to monads, from monads to dualities**, *Prague*, Colloquiumfest.

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*.

▬ Teaching

Teaching: MUNI

2020 **Topology**, *Teaching assistant*.

2019 **Topics in Category Theory**, *Instructor (shared with John Bourke)*.

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

2018 **Topics in Category Theory**, *Instructor (shared with John Bourke)*.

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 Structures*, bachelor thesis.

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

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

▬ Service

American Mathematical Society, Reviewer.

Zentralblatt, Reviewer.

MathOverflow, top 3% in 2019.

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

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

Honors

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 - 2019.

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*.