# Davide Castelnovo

### Education

Jun. 2023 - Jun. **Research Fellow**, *University of Padova*, Italy. 2024

Nov. 2019 - Oct. Ph. D., University of Udine, Italy.

2023 (expected) • Subjects: Algebraic theories, Categorical models for graph rewriting

O Supervisor: Prof. Marino Miculan

Jan. - May 2022 **Visiting student at Tallinn Institute of Technology**, *Tallinn*, Estonia, Collaborating with Dr. Fosco Loregian.

Oct. 2016 - Dec. Master in Mathematics, University of Milano, Italy.

2018 • Master thesis "A conservative embedding of intuitionistic logic in a topos of sheaves"

- Supervisors: Prof. S. Mantovani (Univ. of Milano) & Prof. M. E. Maietti (Univ. of Padova).

o GPA: 110/110 summa cum laude.

Oct. 2012 - Jul. Bachelor in Mathematics, University of Milano, Italy.

2016 • GPA: 99/110

2007 - 2012 High School, Liceo Scientifico Tecnologico "Antonio Badoni", Lecco, Italy.

o GPA: 97/100

# Talks and workshops

- 2023 Talk at PRIN 2017 "IT-MATTERS" Final Workshop " $\mathcal{M}, \mathcal{N}$ -adhesivity: results and examples", Scuola IMT Alti Studi, Lucca, Italy.
- 2022 **3**<sup>rd</sup> **ItaCa Workshop**, *University of Pisa*, Pisa, Italy.
- 2022 **9**<sup>th</sup> **Symposium on Compositional Structures**, *University of Como*, Como, Italy.
- Talk at 25<sup>th</sup> International Conference on Foundations of Software Science and Computation Structures, "A new criterion for  $\mathcal{M}, \mathcal{N}$ -adhesivity, with an application to hierarchical graphs", *Technische Universität München*, München, Germany.
- Talk at 30<sup>th</sup> EACSL Annual Conference on Computer Science in Logic 2022, "Fuzzy Algebraic theories", *University of Göttingen*, Göttingen (online), Germany.
- 2021 Talk at 22<sup>nd</sup> Graduate Student Conference in Logic "Closure Hyperdoctrines", *University of Illinois*, Urbana-Champaign (online), United States of America.
- 2021 International Conference on Algebra, Topology and Their Interactions, *Udine* (online), Italy.
- Talk at 9<sup>th</sup> Conference Conference on Algebra and Coalgebra in Computer Science, "Closure Hyperdoctrines", *University of Salzburg*, Salzburg, Austria.
- 2021 Midlands Graduate School in the Foundations of Computing Science, *IMPRS*, (online).

- 2020 Talk at TallCat Compositional Systems and Methods group at TalTech, "Equational theories in an enriched context"., Tallinn Institute of Technology, Tallinn (online), Estonia.
- 2020 Talk at 25<sup>th</sup> Estonian Winter School in Computer Science, "Preclosure Hyperdoctrines, Completeness of (Higher Order) Spatial Logic for Closure Spaces", *Tallinn Institute of Technology*, Palmse, Estonia.
- 2019 1st ItaCa Workshop, University of Milano, Milano, Italy.

## Teaching and outreach activities

2020, 2021 (winter **Undergraduate students tutoring**, Tutoring the *Algebra 1* class for the first year of term) the Math undergraduate program, University of Udine..

2021 **Undergraduate students tutoring**, Tutoring the *Linear Algebra* for the first year of (winter term) the Mechanical Engineering undergraduate program, University of Udine..

# Other Scientific Activity

Sep. 7-8, 2021 Member of the Organizing Committee of the International Conference on Algebra, Topology and Their Interactions, *Udine* (online), Italy.

2020 - 2023 Students' representative at Mathematics, Computer Science and Physics Departmental Council, *Univ. of Udine*, Italy.

2021 - 2023 Students' representative at Mathematics, Computer Science and Physics PhD School Council, *University of Udine*, Italy.

#### Technical Skills

Programming HASKELL (basic), C++ (basic)

OS LINUX, WINDOWS

Editing LATEX, OFFICE PACKAGE

#### Languages

Italian Mother tongue

English Fluent, speaking and writing

## List of publications

- Davide Castelnovo, Fabio Gadducci, Marino Miculan, A simple criterion for M, N-adhesivity, 2022, submitted to Theoretical Computer Science;
- Davide Castelnovo, Fabio Gadducci, Marino Miculan, A new criterion for M, N-adhesivity, with an application to hierarchical graphs, 2022, Proceedings of the 25<sup>th</sup> International Conference on Foundations of Software Science and Computation Structures;
- Davide Castelnovo, Marino Miculan, *Fuzzy Algebraic Theories*, Proceedings of the 30th EACSL Annual Conference on Computer Science Logic, 2022;
- Davide Castelnovo, Marino Miculan, Closure Hyperdoctrines, Proceedings of the 9<sup>th</sup> Conference on Algebra and Coalgebra in Computer Science.