

Davide Castelnovo

Ph. D.

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Citizenship: Italian

Education

- Jun. 2023 - Jun. 2024 **Research Fellow**, *University of Padova*, Italy.
- Nov. 2019 - Oct. 2023 **Ph. D.**, *University of Udine*, Italy.
 - Thesis: "Fuzzy algebraic theories and \mathcal{M}, \mathcal{N} -adhesive categories"
 - Supervisor: Prof. Marino Miculan
- Jan. - May 2022 **Visiting student at Tallinn Institute of Technology**, *Tallinn*, Estonia, Collaborating with Dr. Fosco Loregian.
- Oct. 2016 - Dec. 2018 **Master in Mathematics**, *University of Milano*, Italy.
 - 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).
 - GPA: 110/110 summa cum laude.
- Oct. 2012 - Jul. 2016 **Bachelor in Mathematics**, *University of Milano*, Italy.
 - GPA: 99/110
- Sep. 2007 - Jun. 2012 **High School**, *Liceo Scientifico Tecnologico "Antonio Badoni"*, *Lecco*, Italy.
 - GPA: 97/100

Talks and workshops

- Mar. 2024 **Talk at Workshop on Process Theory for Security Protocols and Cryptography "On the axioms of \mathcal{M}, \mathcal{N} -adhesive categories"**, *Tallinn Institute of Technology*, Tallinn, Estonia.
- Feb. 2024 **Talk at 35th Estonian and the 9th Joint Estonian-Latvian Theory Days "On the axioms of \mathcal{M}, \mathcal{N} -adhesive categories"**, *Randivälja*, Estonia.
- Feb. 2024 **Talk at TallCat - Compositional Systems and Methods group at TalTech, "On the axioms of \mathcal{M}, \mathcal{N} -adhesive categories"**, *Tallinn Institute of Technology*, Tallinn, Estonia.
- Jul. 2023 **Talk at PRIN 2017 "IT-MATTERS" Final Workshop " \mathcal{M}, \mathcal{N} -adhesivity: results and examples"**, *Scuola IMT Alti Studi*, Lucca, Italy.
- Dec. 2022 **3rd ItaCa Workshop**, *University of Pisa*, Pisa, Italy.
- Sep. 2022 **9th Symposium on Compositional Structures**, *University of Como*, Como, Italy.
- Apr. 2022 **Talk at 25th 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.
- Feb. 2022 **Talk at 30th EACSL Annual Conference on Computer Science in Logic 2022, "Fuzzy Algebraic theories"**, *University of Göttingen*, Göttingen (online), Germany.

- Mar. 2021 **Talk at 22nd Graduate Student Conference in Logic “Closure Hyperdoctrines”**, *University of Illinois*, Urbana-Champaign (online), United States of America.
- Sep. 2021 **International Conference on Algebra, Topology and Their Interactions**, *Udine (online)*, Italy.
- Sep. 2021 **Talk at 9th Conference on Algebra and Coalgebra in Computer Science, “Closure Hyperdoctrines”**, *University of Salzburg*, Salzburg, Austria.
- Apr. 2021 **Midlands Graduate School in the Foundations of Computing Science**, *University of Sheffield*, Sheffield (online), United Kingdom.
- Oct. 2020 **Talk at TallCat - Compositional Systems and Methods group at TalTech, “Equational theories in an enriched context”**, *Tallinn Institute of Technology*, Tallinn (online), Estonia.
- Mar. 2020 **Talk at 25th Estonian Winter School in Computer Science, “Preclosure Hyperdoctrines, Completeness of (Higher Order) Spatial Logic for Closure Spaces”**, *Tallinn Institute of Technology*, Palmse, Estonia.
- Dec. 2019 **1st ItaCa Workshop**, *University of Milano*, Milano, Italy.

Teaching and outreach activities

- 2020, 2021 (winter term) **Undergraduate students tutoring**, Tutoring the *Algebra 1* class for the first year of the Math undergraduate program, University of Udine.
- 2021, 2023 (winter term) **Undergraduate students tutoring**, Tutoring the *Linear Algebra* for the first year of 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 L^AT_EX, OFFICE PACKAGE

Languages

- Italian Mother tongue
- English Fluent, speaking and writing

List of publications

Preprints

- 2024 Davide Castelnovo, Marino Miculan, *On The Axioms Of \mathcal{M}, \mathcal{N} -Adhesive Categories*, arXiv preprint at arXiv:2401.12638.

Journals

- 2024 Davide Castelnovo, Fabio Gadducci, Marino Miculan, *A simple criterion for \mathcal{M}, \mathcal{N} -adhesivity*, Theoretical Computer Science 982:114280

Proceedings of conferences

- 2022 Davide Castelnovo, Fabio Gadducci, Marino Miculan, *A new criterion for \mathcal{M}, \mathcal{N} -adhesivity, with an application to hierarchical graphs*, Proceedings of the 25th International Conference on Foundations of Software Science and Computation Structures
- 2022 Davide Castelnovo, Marino Miculan, *Fuzzy Algebraic Theories*, Proceedings of the 30th EACSL Annual Conference on Computer Science Logic
- 2021 Davide Castelnovo, Marino Miculan, *Closure Hyperdoctrines*, Proceedings of the 9th Conference on Algebra and Coalgebra in Computer Science