

Nicola Di Vittorio

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EDUCATION

Ph. D. in Mathematics / Macquarie University (AU) / 2025

- Research focused on aspects of Enriched and Higher Category Theory.
- Thesis title: "Higher derivators as a foundation for ∞ -category theory".

M. Res. in Mathematics / Macquarie University (AU) / 2021

Degree preparatory to Ph.D. studies, awarded with 94.1 out of 100.

M. Sc. in Mathematics / University of Padova (IT) / 2019

Degree awarded with 104 out of 110.

- Completed an exchange at UCLouvain (Louvain-la-Neuve, BE).
- Involved in events organisation, including university movie nights and in-person gatherings for the Italian community of Reddit in Padova, Bologna and Torino.

B. Sc. in Mathematics / University of Bari (IT) / 2017

Degree awarded with 95 out of 110.

Studied classes in Algebra, Computer Science, Geometry, Mathematical Analysis, Physics and Probability.

PUBLICATIONS

- N. Di Vittorio, *A Gray-categorical pasting theorem*, Theory and Applications of Categories, Vol. 39, 2023, No. 5, pp 150-171.
- N. Di Vittorio and G. Lobbia, *Some remarks on the interchange in Gray-categories*, arXiv: 2310.03503, 2023.
- N. Di Vittorio, *2-derivators*, arXiv: 2309.05216, 2023.

SKILLS

- Programming languages (Python, R, C, MATLAB)
- Markup languages (\LaTeX , HTML)
- Italian: Native.
- English: Fluent.

WORK EXPERIENCE

Teaching assistant / Macquarie University / 2020 - ongoing

Teaching assistant for undergraduate courses in

- Discrete Mathematics,
- Calculus and Linear Algebra,
- Applied Statistics,
- Vector Calculus and Complex Analysis.

Graph algorithms Regular languages Turing machines

Numerical integration Differential equations t-tests

ANOVA Linear regression Statistical Analysis with R.

Organiser / CaCS / 2021 & 2022

Categories and Companions Symposium 2021 & 2022

Brought together an average of over 200 researchers in pure and applied Category Theory, including PhD students, postdocs, and more than 20 established professors who are world-renowned experts in the field.

Project Management Communication

Scientific committee member / Australian Kittens / 2021

Australian Kittens 2021: A Meeting of Early Career Researchers in Category Theory and Homotopy Theory

A conference aimed at early career researchers in category theory, homotopy theory and related areas.

Administration Time Management

AWARDS

- *Lift-off Fellowship*, granted annually by the Australian Mathematical Society to the top 7 PhD graduates to support their early-career research and development.
- *PGRF with Commendation*, funding from Macquarie University to conduct research overseas (awarded an additional +10% funding above baseline).
- *Macquarie University Executive Dean's Commendation for Academic Excellence in Year 2 Master of Research*.
- *iMQRES scholarship* (full scholarship for both Master of Research and Ph.D. programs; included living allowance).
- Funding from Coimbra Group to support an exchange at UCLouvain during the Masters program.
- €5000 scholarship to support my Bachelor's studies. Awarded by the Italian Ministry of Education based on exceptional High School performance.