THEOFILOS TSANTILAS

Ph.D. student in Mathematics

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National Technical University of Athens

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ABOUT ME

I am a Ph.D. student at the School of Applied Mathematical and Physical Sciences, National Technical University of Athens, Greece, working on Category Theory under the supervision of Christina Vasilakopoulou and Panagis Karazeris.

My spare time activities include playing around with markup languages such as HTML, CSS and LaTeX (currently collaborating with a Greek publication house for the production of university textbooks using XeLaTeX).

EDUCATION

Ph.D. in Mathematics (ongoing) | *National Technical University of Athens, Greece*

- **Research area**: Category Theory
- **Supervisors**: Christina Vasilakopoulou, Panagis Karazeris
- Financially supported by the Special Account for Research Funding (Ε.Λ.Κ.Ε.) of National Technical University of Athens

M.Sc. in Pure Mathematics | *National Kapodistrian University of Athens, Greece*

- **Focus**: Algebra, Foundations of Mathematics
- **Master Thesis**: "*Grothendieck's Galois Theory*"

B.Sc. in Mathematics | *National Kapodistrian University of Athens, Greece*

- **Focus**: Pure Mathematics, Algebra

RESEARCH

My research interests lie within Category Theory, on topics motivated by Algebra and/or Theoretical Computer Science.

Research areas Category Theory

Research interests double categories, (co)algebras of endofunctors

PUBLICATIONS

- **On categories of monads and comonads in double categories**, Vasileios Aravantinos-Sotiropoulos, T. T. and Christina Vasilakopoulou. arXiv:2606.26755

TEACHING

Teaching Assistant | *National Technical University of Athens*

- **Analytic Geometry and Linear Algebra** *winter 2026, winter 2025, winter 2024*
  School of Applied Mathematical and Physical Sciences
- **Algebra II** *spring 2026*
  School of Applied Mathematical and Physical Sciences
- **Number Theory** *spring 2026, spring 2025*
  School of Applied Mathematical and Physical Sciences
- **Algebra and Applications** *winter 2025, winter 2024*
  School of Applied Mathematical and Physical Sciences
- **Multivariable Calculus** *spring 2025*
  School of Civil Engineering
- **Mathematical Analysis and Linear Algebra** *winter 2024*
  School of Civil Engineering
- **Mathematical Analysis (Multivariable Calculus)** *spring 2024*
  School of Electrical and Computer Engineering

SELECTED TALKS

- **The (virtual) double category of restriction distributors**, *3rd Virtual Workshop on Double Categories*.
- **Local presentability of (co)monads in double categories**, *Peripatetic Seminar on Sheaves and Logic PSSL113*, UCLouvain, Louvain-la-Neuve, Belgium.
- **A double category theoretic perspective on partiality**, with Y. Chamoun, V. Jelínek and H. Nasu, *Applied Category Theory Conference ACT2026*, TalTech, Tallinn, Estonia.
- **Monads are monadic and locally presentable: a double perspective**, talk at *TSEM*, TalTech, Tallinn, Estonia.
- **Restriction categories as double categories**, with V. Jelínek, *ACT Adjoint School 2026 reading presentation*.
- **Doing Category Theory within HoTT**, talk at the *Homotopy Type Theory Seminar* of the graduate program ALMA.

LANGUAGES

Natural Greek (Native), English (C2)

Programming (Xe)LaTeX. HTML/CSS (self-taught for the website needs of various projects). Limited use and understanding of other languages such as MatLab, Python and Mathematica.