

Ioannis Markakis

PHD CANDIDATE IN COMPUTER SCIENCE

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jmarkakis

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Education

University of Cambridge

PH.D. IN COMPUTER SCIENCE

Cambridge, UK

Oct. 2020 - Sep. 2024

- Thesis title: An inductive approach to ω -categories and their computads
- Supervised by Prof. Jamie Vicary

University of Maryland

M.A. IN MATHEMATICS

College Park, Maryland, USA

Sep. 2017 - May 2020

- Thesis title: Cardinal powers and Silver's theorem
- Supervised by Prof. Michael Chris Laskowski
- Passed two qualifying exams at the Ph.D. level
- GPA: 4.0 / 4.0

University of Crete

PTYCHION IN MATHEMATICS

Heraklion, Crete, Greece

Sep. 2013 - Jun. 2017

- Started and graduated top of my class
- GPA: 9.34 / 10.00
- Did an Erasmus exchange at University of Barcelona
- Completed 6 courses at a graduate level

Publications

- Thibaut Benjamin, Ioannis Markakis, and Chiara Sarti. "CaTT contexts are finite computads". In: *Proceedings of the 40th Conference on Mathematical Foundations of Programming Semantics*. Oxford, UK, 2024. arXiv: 2405.00398.
- Christopher J. Dean, Eric Finster, Ioannis Markakis, David Reutter, and Jamie Vicary. "Computads for weak ω -categories as an inductive type". In: *Advances in Mathematics* 450 (2024).
- Ioannis Markakis. "Computads for generalised signatures". In: *Journal of Pure and Applied Algebra* 228.9 (2024).

Preprints

- Thibaut Benjamin and Ioannis Markakis. *Invertible cells in ω -categories*. 2024. arXiv: 2406.12127. preprint.
- Thibaut Benjamin and Ioannis Markakis. *Opposites of weak ω -categories and the suspension and hom adjunction*. 2024. arXiv: 2402.01611. preprint.
- Dimitrios I. Dais and Ioannis Markakis. *Computing minimal generating systems for some special toric ideals*. 2017. arXiv: 1705.06339 [math]. preprint.

Presentations

- | | | |
|----------|---|-------------------------------|
| Jun 2024 | International Category Theory Conference 2024 , Opposite and hom weak ω -categories | Santiago de Compostela, Spain |
| Apr 2024 | Masaryk University Algebra Seminar , A novel approach to ω -categories | Brno, Czechia |
| Apr 2023 | Peripatetic Seminar on Sheaves and Logic 107 , Computads for generalised signatures | Athens, Greece |
| Mar 2023 | Yorkshire and Midlands Category Theory Seminar 30 , Computads for generalised signatures | Birmingham, UK |
| Jun 2022 | Topology, Algebra and Categories in Logic 2022 , Computads for weak ω -categories | Coimbra, Portugal |

Other Academic activities

12th Symposium on Compositional Structures

PROGRAMME COMMITTEE MEMBER

Birmingham, UK

Apr. 2024

- Peer reviewed for the 12th Symposium on Compositional Structures

Applied Category Theory 2021

LOCAL ORGANISER

Cambridge, UK

Jul. 2021

- Helped with the organisation of the conference
- Planned the talk schedule, and contacted the speakers

Teaching experience

University of Cambridge

SUPERVISOR

Cambridge, UK

Oct. 2020 - May 2024

- Supervised 53 students from King's, Clare, Selwyn and Emmanuel colleges
- Tutored Discrete Mathematics, Logic and Proof, and Computation Theory
- Gave an exercise session for the graduate course Advanced Topics in Category Theory, and helped with the practicals

University of Maryland

TEACHING ASSISTANT

College Park, Maryland, USA

Sep. 2017 - May 2020

- Independent instructor for College Algebra and Trigonometry
 - Gave lectures
 - Designed and graded quizzes
 - Graded homework and exams
- Teaching Assistant for Precalculus, and Calculus I
 - Gave recitation lectures
 - Graded homework and exams
- Grader for the courses
 - Introduction to Abstract Algebra
 - Axiomatic Set Theory
 - (Graduate) Logic I
 - (Graduate) Algebraic Geometry I

University of Crete

UNDERGRADUATE TEACHING ASSISTANT

Herakleion, Crete, Greece

Feb. 2014 - May 2016

- Gave recitation lectures for Foundations of Mathematics

Awards

Fitzwilliam College

COLLEGE SENIOR SCHOLARSHIP

Cambridge, UK

Mar. 2022

- Two scholarships for exceptional performance at doctoral studies

University of Cambridge

DEPARTMENTAL STUDENTSHIP

Cambridge, UK

Sep. 2020

- Studentship for 4 years of doctoral studies

Onassis Foundation

SCHOLARSHIP

Cambridge, UK

Sep. 2020

- Scholarship for 4 years of doctoral studies

University of Crete

"STILIANOS PICHORIDIS" AWARD

Heraklion, Crete, Greece

Nov. 2016

- Outstanding student award by the Department of Mathematics and Applied Mathematics

University of Crete

"CHRISANTHOS AND ANASTASIA KARIDI" SCHOLARSHIP

Heraklion, Crete, Greece

Jul. 2014

- Scholarship for the highest entrance score in the Department of Mathematics and Applied Mathematics

Eurobank

"MOVING EDUCATION FORWARD" AWARD

Heraklion, Crete, Greece

Oct. 2013

- Award for top performing senior high-school graduates
- Scored 19,099 / 20,000 (top 0.42% nationwide) in the Hellenic National Examinations.

Hellenic Mathematic Society

BRONZE MEDAL

Athens, Greece

May 2010

- National Mathematical Olympiad "Archimedes"

Other Skills

Languages English, Spanish, Greek

Programming LaTeX, Agda, Lean, Python