



Ioannis Markakis

DOCTORATE CANDIDATE IN COMPUTER SCIENCE

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Education

University of Cambridge

PH. D. IN COMPUTER SCIENCE

Cambridge, UK

Oct. 2020 - May 2024

- Thesis title: Computads for Generalised Signatures
- Supervised by Prof. Jamie Vicary

University of Maryland

M.A. IN MATHEMATICS

College Park, Maryland, USA

Sep. 2017 - May 2020

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

University of Crete

PTYCHION IN MATHEMATICS

Heraklion, Crete, Greece

Sep. 2013 - Jun. 2017

- Entered, and graduated top of my class
- GPA: 9.34 / 10.00
- Was an Erasmus exchange student at University of Barcelona for the academic year 2016 - 2017
- Completed 6 courses at a graduate level

Awards

Fitzwilliam College

COLLEGE SENIOR SCHOLARSHIP

Cambridge, UK

Mar. 2022 - Nov. 2022

- I received two scholarships for exceptional performance at graduate studies

University of Cambridge

DEPARTMENTAL STUDENTSHIP

Cambridge, UK

Sep. 2020

- Studentship for 3.5 years of PhD studies

Onassis Foundation

SCHOLARSHIP

Cambridge, UK

Sep. 2020

- Scholarship for 4 years of PhD Studies

University of Crete

"STILIANOS PICHORIDIS" AWARD

Heraklion, Crete, Greece

Nov. 2016

- Outstanding student award given at most annually by the Department of Mathematics and Applied Mathematics of University of Crete

University of Crete

"CHRISANTHOS AND ANASTASIA KARIDI" SCHOLARSHIP

Heraklion, Crete, Greece

Jul. 2014

- Scholarship given annually to the student with the highest entrance score in the Department of Mathematics and Applied Mathematics of University of Crete

Eurobank

MONETARY AWARD

Heraklion, Crete, Greece

Oct. 2013

- Given annually to the student of the 8th General Lyceum of Heraklion with the highest performance in the Hellenic National Examinations.
- Scored 19,099 / 20,000 (top 0.42% nationwide).

Hellenic Mathematic Society

BRONZE MEDAL

Athens, Greece

May 2010

- Award given for my performance in the National Mathematical Olympiad "Archimedes"

Publications

Duality for weak ω -categories (Preprint)

Thibaut Benjamin, Ioannis Markakis

2024

Computads for Generalised Signatures (Preprint)

Ioannis Markakis

2023

Computads for weak ω -categories as an inductive type (Preprint)

Christopher J. Dean, Eric Finster, Ioannis Markakis, David Reutter, Jamie Vicary

2022

Computing minimal generating systems for some special toric ideals (Preprint)

Dimitrios I. Dais, Ioannis Markakis

2017

Presentations

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

Conferences

Aug. 2023 **Pittsposium**

Cambridge, UK

Jul. 2023 **Category Theory 2023**

Louvain-la-Neuve,

Belgium

Jun. 2023 **31th YaMCATS Meeting**

Leeds, UK

Jun. 2023 **A Panorama of Homotopy Theory**

Oxford, UK

Apr. 2023 **11th Symposium on Compositional Structures**

Palaiseau, France

Apr. 2023 **Peripatetic Seminar in Sheaves and Logic 107**

Athens, Greece

Mar. 2023 **30th YaMCATS Meeting**

Birmingham, UK

Dec. 2022 **10th Symposium on Compositional Structures**

Edinburgh, UK

Sep. 2022 **28th YaMCATS Meeting**

Cambridge, UK

Sep. 2022 **9th Symposium on Compositional Structures**

Como, Italy

Jun. 2022 **Topology, Algebra and Categories in Logic 2022**

Coimbra, Portugal

May 2022 **27th YaMCATS Meeting**

Leeds, UK

Apr. 2022 **4th Midlands Graduate School in the Foundations of Computing Science**

Nottingham, UK

Feb. 2022 **Logic and higher structures**

Marseille, France

Jan. 2022 **26th YaMCATS Meeting**

Birmingham, UK

Aug. 2021 **Category Theory 20→21**

Genoa, Italy

Jul. 2021 **Applied Category Theory 2021**

Cambridge, UK

Experience

Applied Category Theory 2021

Cambridge, UK

LOCAL CONFERENCE ORGANISER

Jul. 2021

University of Cambridge

Cambridge, UK

SUPERVISOR

Oct. 2020 - May 2024

- Supervised students from King's, Claire, Emmanuel, and Selwyn colleges
- Supervised the courses “Discrete Mathematics”, “Logic and Proof”, and “Computation Theory”

University of Maryland

TEACHING ASSISTANT

- I was an independent instructor for the course “College Algebra and Trigonometry”
 - Gave lectures
 - Designed and graded quizzes
 - Graded homework and exams
- I was a Teaching Assistant for “Precalculus” and “Calculus I”
 - Gave recitation lectures
 - Graded homework and exams
- I was a grader for the courses
 - Introduction to Abstract Algebra
 - Axiomatic Set Theory
 - (Graduate) Logic I
 - (Graduate) Algebraic Geometry I

College Park, Maryland, USA

Sep. 2017 - May 2020

University of Crete

TEACHING ASSISTANT

- I gave recitation lectures for “Foundations of Mathematics” for two semesters

Herakleion, Crete, Greece

Feb. 2014 - May 2016

Other Skills

- Fluent in English, Spanish, and Greek
- Basic understanding of German
- Confident in using \LaTeX
- Confident in using the proof assistants Agda and Lean
- Basic experience in programming in Python and Haskell