



# 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

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- [1] Ioannis Markakis. *Computads for Generalised Signatures*. 2023. preprint.
- [2] Christopher J. Dean, Eric Finster, Ioannis Markakis, David Reutter, Jamie Vicary. *Computads for weak  $\omega$ -categories as an inductive type*. 2022. preprint.
- [3] Dimitrios I. Dais, Ioannis Markakis. *Computing minimal generating systems for some special toric ideals*. 2017. preprint.

## Presentations

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|--|-------------------|
| Apr 2023 <b>Peripatetic Seminar on Sheaves and Logic 107</b> , Computads for generalised signatures      | Athens, Greece    |
| Mar 2023 <b>Yorkshire and Midlands Category Theory Seminar 30</b> , Computads for generalised signatures | Birmingham, UK    |
| Jun 2022 <b>Topology, Algebra and Categories in Logic 2022</b> , Computads for weak $\omega$ -categories | Coimbra, Portugal |

## Conferences

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|---|---------------------------|
| Aug. 2023 <b>Pittsposium</b>  | Cambridge, UK             |
| Jul. 2023 <b>Category Theory 2023</b>   | Louvain-la-Neuve, Belgium |
| Jun. 2023 <b>31th YaMCATS Meeting</b>   | Leeds, UK                 |
| Jun. 2023 <b>A Panorama of Homotopy Theory</b>  | Oxford, UK                |
| Apr. 2023 <b>11th Symposium on Compositional Structures</b>                           | Palaiseau, France         |
| Apr. 2023 <b>Peripatetic Seminar in Sheaves and Logic 107</b>                         | Athens, Greece            |
| Mar. 2023 <b>30th YaMCATS Meeting</b>   | Birmingham, UK            |
| Dec. 2022 <b>10th Symposium on Compositional Structures</b>                           | Edinburgh, UK             |
| Sep. 2022 <b>28th YaMCATS Meeting</b>   | Cambridge, UK             |
| Sep. 2022 <b>9th Symposium on Compositional Structures</b>                            | Como, Italy               |
| Jun. 2022 <b>Topology, Algebra and Categories in Logic 2022</b>                       | Coimbra, Portugal         |
| May 2022 <b>27th YaMCATS Meeting</b>  | Leeds, UK                 |
| Apr. 2022 <b>4th Midlands Graduate School in the Foundations of Computing Science</b> | Nottingham, UK            |
| Feb. 2022 <b>Logic and higher structures</b>  | Marseille, France         |
| Jan. 2022 <b>26th YaMCATS Meeting</b>   | Birmingham, UK            |
| Aug. 2021 <b>Category Theory 20→21</b>  | Genoa, Italy              |
| Jul. 2021 <b>Applied Category Theory 2021</b>   | Cambridge, UK             |

## Experience

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### Applied Category Theory 2021

LOCAL CONFERENCE ORGANISER

Cambridge, UK

Jul. 2021

### University of Cambridge

SUPERVISOR

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

Cambridge, UK

Oct. 2020 - May 2024

### 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

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- Fluent in English, Spanish, and Greek
- Basic understanding of German
- Confident in using  $\text{\LaTeX}$ , and various proof assistants