

# Alex Kavvos

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**Research interests** Type theory, (higher) category theory, programming languages, logic, theoretical models of security.

## Appointments

May 2018–  
**Wesleyan University**  
**Postdoctoral Research Associate & Visiting Assistant Professor**  
Conducting research in directed type theory under Prof Daniel R. Licata.

Oct 2014–Sep 2017  
**University College, Oxford**  
**Non-Stipendiary College Lecturer & Admissions Interviewer**

Oct 2013–Jun 2017  
**Department of Computer Science, University of Oxford**  
**Graduate Tutor**

## Education

Oct 2013–Nov 2017  
**St John’s College, University of Oxford**  
**DPhil in Computer Science**  
Supervisor: Prof Samson Abramsky. EPSRC doctoral training grant.

Oct 2009–Jun 2013  
**University College, University of Oxford**  
**MCompSci Computer Science**  
First class. Awarded the *Hoare Prize* (twice) for best overall performance.

## Writings and Presentations

### Publications

1. G. A. Kavvos. “Modalities, Cohesion, and Information Flow”. In: *Proceedings of the ACM on Programming Languages* 3.POPL (2019). arXiv: 1809.07897. doi: 10.1145/3290333.
2. G. A. Kavvos. “Dual-context calculi for modal logic”. In: *2017 32nd Annual ACM/IEEE Symposium on Logic in Computer Science (LICS)*. IEEE, 2017. ISBN: 978-1-5090-3018-7. doi: 10.1109/LICS.2017.8005089.
3. G. A. Kavvos. “On the Semantics of Intensionality”. In: *Proceedings of the 20th International Conference on Foundations of Software Science and Computation Structures (FoSSaCS)*. ed. by Javier Esparza and Andrzej

S. Murawski. Vol. 10203. Lecture Notes in Computer Science. Springer-Verlag Berlin Heidelberg, 2017, pp. 550–566. arXiv: 1602.01365. doi: 10.1007/978-3-662-54458-7\_32.

4. G. A. Kavvos. “Intensionality, Intensional Recursion, and the Gödel-Löb axiom”. In: *Proceedings of 7th Workshop on Intuitionistic Modal Logic and Applications (IMLA 2017)*. 2017. arXiv: 1703.01288.

## Pre-prints

1. G. A. Kavvos. “The Many Worlds of Modal Lambda Calculi: I. Curry-Howard for Necessity, Possibility and Time”. In: *CoRR* (2016). arXiv: 1605.08106. Draft survey paper, under continuous revision.
2. G. A. Kavvos. “Dual-Context Calculi for Modal Logic”. In: *CoRR* (Aug. 2018). arXiv: 1602.04860. Submitted to *Logical Methods in Computer Science*.

## Talks and Seminars

1. “Modalities, Cohesion, and Information Flow”. Invited talk at the MIT Categories Seminar (3 Dec 2018).
2. “Curry-Howard for Modal Logic”. Invited seminar at the City University of New York (30 Oct 2018).
3. “On the Semantics of Intensionality”. Invited seminar at the National Technical University of Athens (16 Oct 2017).
4. “A Type-Theoretic Alternative to LISP”. Talk at the 11th Panhellenic Logic Symposium (Delphi, Greece).
5. “A Type-Theoretic Alternative to LISP”. Talk at TYPES 2017 (Budapest, Hungary).
6. “On the Semantics of Intensional Recursion”. Invited seminar at the University of Sussex (15 Feb 2017).

## Thesis

Georgios Alexandros Kavvos. “On the Semantics of Intensionality and Intensional Recursion”. DPhil thesis. University of Oxford, 2017. URL: <https://ora.ox.ac.uk/objects/uuid:f89b46d8-b514-42fd-9321-e2803452681f>

## Teaching

### Wesleyan University (2019)

- I will lecture and examine the “How to Design Programs” course in Spring, which is an introduction to functional programming for students not necessarily specialising (‘majoring’) in Computer Science.

### SEMFE, National Technical University of Athens (2018)

- Co-supervised the diploma thesis of Manos Plitsis on categorical models of dependent types.

### Department of Computer Science, University of Oxford (2013–2017).

- Taught departmental classes (5-15 students). TA for Computer Security (3rd year/MSc course, 2013). Class Tutor and TA for Advanced Security (4th year/MSc course, 2014 & 2015).

### Worcester College, Oxford (2016–2017)

- Tutored a visiting student in Principles of Programming Languages, and Lambda Calculus and Types.

### University College, Oxford (2013–2017)

- Tutored students reading for degrees in Computer Science and joint schools (groups of 1-3).
- Interviewed students for admission to the undergraduate degree.
- Involvement in pastoral support.
- Subjects tutored: Functional Programming; Linear Algebra; Discrete Mathematics; Imperative Programming; Object-oriented Programming; Design and Analysis of Algorithms; Logic and Proof; Models of Computation; Lambda Calculus and Types; Categories, Proofs and Processes.

## Visits

- Nov 2018 **Tulane University, Department of Computer Science**  
Invited by Prof Michael W. Mislove. 2 day visit.
- Oct 2018 **City University of New York, The Graduate Center**  
Invited by Prof Sergei Artemov. 1 day visit
- Feb–May 2018 **National Technical University of Athens, CoReLab**  
Invited by Prof Stathis Zachos.
- Aug 2017 **Aarhus University, Logic & Semantics group**  
Invited by Prof Lars Birkedal. 3 day visit.

## Other Professional Activities

- Co-organiser of the Strachey 100 centenary conference, celebrating the life and research of programming languages pioneer Christopher Strachey. (<https://www.cs.ox.ac.uk/strachey100>)
- Reviewer for LICS 2016, PEPM 2017, POPL 2018, CSL 2018.
- Participation at events: Voevodsky Memorial (Princeton, 2018); FSCD 2017 (Oxford); ESSLLI 2017 (Toulouse); TYPES 2017 (Budapest); ETAPS 2017 (Uppsala); International Summer School on Metaprogramming (Robinson College, Cambridge, 2016); Homotopy Type Theory Workshop (Oxford, 2014); Prakashfest (Oxford, 2014); Midlands Graduate School (Nottingham, 2014); Samson@60 (Oxford, 2013).

## References

[DPhil supervisor]  
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[postdoc supervisor]  
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[teaching reference at University College]  
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