



THE UNIVERSITY of EDINBURGH

informatics

Looking for an M1/M2 internship?

Programming languages in Edinburgh might be the topic for you!

Here's a selection of our research institutes and interested supervisors. Check out our homepage for the full list.

Institute for Computing Systems Architecture (ICSA) <http://web.inf.ed.ac.uk/icfa/>

The ICSA hosts around 20 computer scientists with interests in architecture and engineering of future computing systems, focusing on scalability, performance, and applicability.

Laboratory for Foundations of Computer Science (LFCS) <http://web.inf.ed.ac.uk/lfcs/>

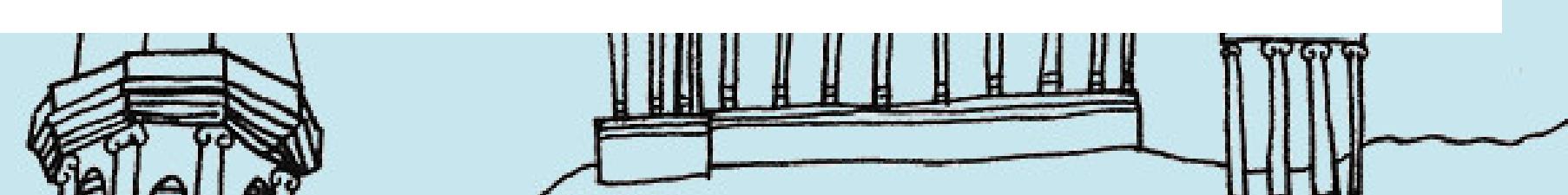
The LFCS hosts around 40 theoretical computer scientists with interests in concurrency, semantics, categories, algebra, types, logic, algorithms, complexity, databases and modelling.

Chris Heunen



I'm interested in the foundations of quantum informatics. That includes quantum logic and quantum programming languages, but also probabilistic and reversible programming and computational effects. My weapons of choice are category theory, algebra, and functional analysis.

<https://homepages.inf.ed.ac.uk/cheunen/>

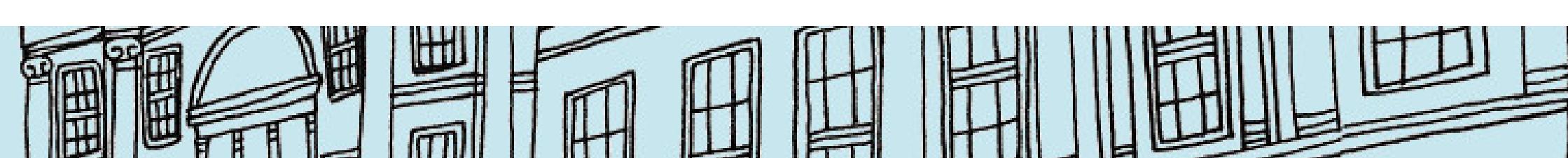


Ohad Kammar



I'm interested in the foundations of programming languages (denotational semantics, reasoning, statistical modelling languages) as well as advanced programming techniques (computational effects, dependent-types, partial evaluation, staging, and metaprogramming), and applied mathematics (category theory, logic, algebra).

<https://www.denotational.co.uk/>



Sam Lindley



I'm interested in programming language design and implementation, including computational effects (in particular algebraic effects and effect handlers), behavioural types (in particular session types), dependent types, linear types, row types, meta programming, type inference, compilers, functional programming, lambda calculus, and semantics

Liam O'Connor



I'm interested in the application of foundational formal methods research to programming languages and software engineering. My work covers the spectrum from specification (e.g. with logics/models/abstractions/algebras) to verification (e.g. via tests/types/proof assistants/model checkers). I also have an interest in historical computing.

<http://liamoc.net/>

Elizabeth Polgreen



I am interested in formal program synthesis (syntax-guided synthesis, oracle-guided synthesis, invariant synthesis, in general higher-order satisfiability problems), automatic verification of software via model-checking, and the integration of synthesis with verification techniques.

<https://polgreen.github.io/>

Michel Steuwer



I'm interested in programming languages and compilation, including programming languages and type systems for compiler intermediate representations, program transformations via rewriting, domain-specific languages for performance-oriented domains. I am particularly interested in bringing academic research in programming languages into production compilers such as LLVM and MLIR.

<https://michel.steuwer.info/>

Philip Wadler



I am interested in functional programming, including gradual types, dependent types, linear types, session types, and writing and validating smart contracts (especially in Haskell/Plutus). I am also interested in applications of Propositions as Types.

<https://homepages.inf.ed.ac.uk/wadler/>

Edinburgh

We are the largest centre for Informatics research in the UK and one of the largest in Europe. The University, founded in 1582, is the sixth oldest university in the English-speaking world and one of Scotland's ancient universities. Edinburgh is Scotland's capital city, renowned for its heritage, culture, and festivals. Its historic centre is a World Heritage Site. Easy access to beautiful Scotland makes Edinburgh the second most popular tourist destination in the UK.



For more information, please contact your supervisor of interest, or
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