

Christopher M. Poskitt B.Sc. (Hons), AHEA

General

Full name: Christopher Michael Poskitt B.Sc. (Hons), AHEA
Date of birth: 29th May 1988
Activities: Ph.D. Research Student; Graduate Teaching Assistant
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Qualifications

First degree: B.Sc. (Hons) Computer Science, The University of York, 2009
First class honours degree awarded.

Higher degree: Ph.D. in Computer Science, The University of York, 2012 (Expected)
In progress (registration period began in October 2009).
Supervised by Dr. Detlef Plump; internally assessed by Prof. Jim Woodcock.

Research

I am interested in many aspects of theoretical computer science, but in particular, program verification. Currently, we are developing the theory (and implementation of) a Hoare-like proof calculus, for a novel programming language with graph transformation at its core (the states of programs are simply graphs, and the core of the language is the application of a graph transformation rule).

Journal Articles

1. C.M. Poskitt and D. Plump. Hoare-Style Verification of Graph Programs. *Fundamenta Informaticae*, 2012. *To appear.*

Refereed Conference and Workshop Papers

2. C.M. Poskitt and D. Plump. A Hoare Calculus for Graph Programs. In *Proceedings of the International Conference on Graph Transformation (ICGT 2010)*, volume 6372 of *Lecture Notes in Computer Science*, pages 139-154. Springer-Verlag, 2010.
3. C.M. Poskitt and D. Plump. Hoare Logic for Graph Programs. In *Proceedings of the Theory Workshop at the Third International Conference on Verified Software: Theories, Tools, and Experiments (VS-THEORY 2010)*. 2010.

Technical Reports

4. C.M. Poskitt (ed.). Proceedings of the Fourth York Doctoral Symposium on Computer Science (YDS 2011). Technical Report YCS-2011-468. Department of Computer Science, The University of York, 2011.

Undergraduate Dissertation

5. C.M. Poskitt. Checking Graph Properties with the Graph Programming Language GP. B.Sc. Dissertation, Department of Computer Science, The University of York. 2009.

Research Visits

- Oct–Dec 2011 Theorem Proving Group, Institut für Informatik
Technische Universität München
Supported by a William Gibbs award from York.
- February 2011 Department of Computer Science and Automation,
Indian Institute of Science (Bangalore)
Supported by joint UKIERI project with York.

Summer Schools

- August 2010 Marktoberdorf Summer School 2010
On Software and Systems Safety: Specification and Verification
Participated in the full programme, but also gave an informal tutorial on the relational calculus to support the course being given by Prof. Sir Tony Hoare.

Refereeing

- April 2011 ECEASST Issue for GCM 2010 Post-Workshop Proceedings,
Subreviewer
- November 2010 York Doctoral Symposium on Computing (YDS 2010),
The University of York, UK
Programme Committee Member
- October 2010 Third International Workshop on Graph Computation Models (GCM 2010),
University of Twente, The Netherlands
Subreviewer
- September 2010 Fifth International Conference on Graph Transformation (ICGT 2010),
University of Twente, The Netherlands
Subreviewer

Membership in Programme Committees

- 2011 LSCITS Postgraduate Workshop 2011
YDS 2011 (Programme Chair)
- 2010 YDS 2010

Research Awards and Scholarships

- 2011 K M Stott Memorial Prize
Internal award of £200 for the best paper by a York Computer Science research student in 2010.
- 2011 William Gibbs Award
Internal award of £3,500 to support a three month research visit to the Theorem Proving Group at Technische Universität München.
- 2009 EPSRC DTA Scholarship
Approximately £50,000 over three years towards tuition fees and living expenses. Only $4\frac{1}{2}$ of these were awarded by York in 2009.

Teaching

I regularly teach in undergraduate problem classes, computer-based workshops, and seminar-style sessions. On a few occasions I have also been able to give lectures. Students have praised the quality of my feedback, clarity of explanations, and willingness to support their learning outside of the prescribed contact hours.

Teaching Award

- 2011 Vice-Chancellor's Teaching Award
The University of York, UK
"We were impressed by your motivated and meticulous approach to teaching, in particular the thought you put into giving feedback on student work and into preparing your revision classes. We also commend your effectiveness as an advocate for undergraduate and research students, and for PGWTs."

Professional Development and Recognition

- 2011-present Associate of the Higher Education Academy (AHEA)
- 2010-11 Preparing Future Academics Programme
Accredited course offered by York's Researcher Development Team.

Lecturing

- 2012 Mathematical Foundations of Computer Science
I will be delivering four of the 14 lectures of this core undergraduate course on formal language theory, as well as running practical classes.
- 2011 Mathematical Foundations of Computer Science
I delivered a core lecture on context-free grammar normal forms and the Chomsky hierarchy, which received very positive ratings and comments from students.
- 2010 Mathematics for Computer Science
I delivered the final lecture of a course on formal languages and automata. It was a "revision lecture", and covered some of the topics perceived by students to be the most difficult (e.g. pumping lemma, NPDA to CFG conversion).
- 2010 Lexical and Syntax Analysis of Programming Languages
I delivered a lecture on Yacc/Bison as part of a second year course on lexical scanning and parsing.

Other Lecturing

- 2011 PGWT (PostGraduates Who Teach) Residential
Delivered a lecture at a residential for new teaching assistants; shared personal experiences and tips.
- 2011 Headstart 2011
Devised and delivered a lecture — "Alan Turing's Legacy: Computation and its Limits" — at a pre-university summer school.

Teaching Assistant (Demonstrating)

All of the following modules are taught by the Department of Computer Science at York.

- 2011-12 Computability and Complexity
 Mathematical Foundations of Computer Science

- 2010-11 Computing by Graph Transformation
 Discrete Mathematics Refresher
 Mathematical Foundations of Computer Science
 Numerical Analysis
 Theory of Computation

- 2009-10 Computer Science Writing
 Computing by Graph Transformation
 Logic Programming and Artificial Intelligence
 Lexical and Syntax Analysis of Programming Languages
 Mathematics for Computer Science
 Theory of Computation

Administration

Current

- Seminar Organiser for the *Programming Languages and Systems Research Group*.
- Regular speaker on departmental open and UCAS interview days.

Past

- Organiser (chair) of the department's *Research Student Seminar Series*.
- Research Student Representative on the *Computer Science Board of Studies*.
- Ph.D. Student Representative in the *Langwith College Project Working Group*.

Non-Academic Experience

February 2005 - Present Production Lead, IGN Community Portals, FOX Interactive Media
Part-time web-based production work. Since September 2009, I have been leading a small team of producers remotely operating from three different countries. Prior to this, I variously provided support to the company's hosting and traffic generation teams.

Miscellaneous

- Varying levels of expertise in the following: Ada95, C, C++, CSS, GP (Graph Programs), JavaScript, HTML, L^AT_EX, Linux, OpenGL, Perl, PHP, Scheme, SQL, SVN, UML, Windows.
- Experience in one-to-one piano and music theory tuition, for both informal learners as well as those entering ABRSM examinations. Piano playing ability is beyond ABRSM Grade 8.

Referees

Dr. Detlef Plump
Senior Lecturer
Department of Computer Science
The University of York
Deramore Lane, York, YO10 5GH

Prof. Jim Woodcock
Professor of Software Engineering
Department of Computer Science
The University of York
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