Frances Cooper | CV

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Education

University of Glasgow   **Glasgow, Scotland**
PhD Computing Science   *2015 - present*
- Thesis title: Open problems in the area of matching under preferences
- School of Computing Science research student representative
- Tutor (see *Teaching* section); member of several committees (see *Committees* section)

University of Glasgow   **Glasgow, Scotland**
MSc Software Development, Distinction - Class Prize - Grace Hopper Prize   *2013 - 2015*
- Member of committee (see *Committees* section)

Open University   **UK-wide**
BSc Mathematics, 1st Class (Hons)   *2009 - 2013*
- Distance learning degree
- Whilst studying, I worked in special needs and mainstream schools, and volunteered with a drug agency and DeafblindUK

Awards and Scholarships

3 Minute Thesis Finalist: *2017*
- Competition to explain your thesis to a non-technical audience
- *University of Glasgow Finalist* and *College of Science and Engineering Commendee*

EPSRC PhD Scholarship: *2015 - 2020*
- Funded PhD in Computer Science, University of Glasgow (3.5 years)

Confucius Institute Scholarship, China: *Summer 2015*
- Won a scholarship after previous Chinese language study
- Attended a *Language and Culture Exchange* at *Nankai University in Tianjin, China*

Class Prize: *2013 - 2015*
- MSc Software Development *highest overall grade (21.2 / 22.0)*

Grace Hopper Prize: *2013 - 2015*
- MSc Software Development *highest achieving female student*

SFC MSc Scholarship: *2013 - 2015*
- Funded MSc in Software Development, University of Glasgow

Internships

(future) Google   **Munich, Germany**
3 month internship at Google, Munich   *July - September 2019*

Amazon   **Edinburgh, Scotland**
3 month internship at Amazon Development Centre, Edinburgh   *April - June 2018*
- Developed new methods to allow advertisers on Amazon to understand who their customers are. This work encompassed graph theory, algorithms and machine learning.

Computing skills

General computing skills: Java, Python, Gurobi, Bash, HTML, CSS, Bootstrap, LaTeX, Git

Areas of interest: Algorithms & Complexity, Integer/Constraint Programming, Optimisation

Enterprises and Teaching

Founder of Glasgow Women in Computing Science (GWiCS)   **Glasgow, Scotland**
Networking and talks supporting career progression for women in CS   *August 2018 - present*
- 100+ members, talks by leaders in academia and industry

Creator of www.program-able.org   **Glasgow, Scotland**
A CS tutorial website aimed at improving code efficiency   *2018 - present*
- Articles on e.g. Command line tools, Git, Regex, Sed, Grep

Lead Instructor for CodeFirst:Girls   **Glasgow, Scotland**
Enterprise to increase the number of women in tech.   *September 2018 - present*
- Teaching HTML, CSS, UX, Git & version control, Bootstrap, Javascript and jQuery

Various tutoring and outreach positions   **Glasgow, Scotland**
For example: *October 2015 - present*
- Hacky Hour and Compumatch - Sharing computing skills with researchers in other departments
- Teaching cryptography to schoolchildren (Quantum Cryptography School)
- Teaching & marking Java Programming at Masters level

Conference Presentations

SEA conference talk - paper presentation   **L'Aquila, Italy**
Symposium on Experimental Algorithms   *June 2018*
- Paper title: A 3/2-Approximation Algorithm for the Student-Project Allocation Problem

BCTCS conference talk   **Royal Holloway, England**
British Colloquium of Theoretical Computer Science   *March 2018*
- Title: A 3/2-Approximation Algorithm for the Student-Project Allocation Problem

Invited speaker AWIDM   **Cape Town, South Africa**
Invited speaker at African Women in Discrete Mathematics conference   *January 2018*
- Encouraging women graduates into academic research roles

SICSA poster presentation   **Dundee, Scotland**
The Scottish Informatics & Computer Science Alliance   *June 2017*
- Title: Hard Variants of the Student-Project Allocation Problem *shortlisted

MATCH-UP poster presentation   **Boston, USA**
Microsoft Research Centre MATCH-UP conference   *April 2017*
- Title: Integer Programming for Student-Project Allocation

Committees

College of Science and Engineering Strategic Advisory Board: *2018 - 2019*

School of Computing Science Research Students Committee: *2017 - 2018*

BCTCS conference 2018 organising committee: *2017 - 2018*

College of Science and Engineering Graduate School Board: *2017 - 2018*

Athena SWAN committee (promoting gender equality in CS):   *2015 - 2016*

MATCH-UP and COST Action conference 2015 organising committee: *2015 - 2016*

Languages

English: Native proficiency

Mandarin: Beginner/Intermediate   *Hanyu Shuiping Kaoshi (HSK) level 2 certificate*

Publications

- F. Cooper and D. Manlove. A 3/2-Approximation Algorithm for the Student-Project Allocation Problem. In *Proceedings of Leibniz International Proceedings in Informatics (LIPIcs)* 103:8:1-8:13, 2018. Available from `http://drops.dagstuhl.de/opus/volltexte/2018/8943`
- The full version of above is available as Technical Report number 1804.02731, Computing Research Repository, Cornell University Library, 2018. Available from http://arxiv.org/abs/1804.02731.