James Stewart

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EDUCATION

University of Oxford

Oxford, UK

DPhil (PhD) in Computer Science

2018 -Present

- I am supervised by Leslie Ann Goldberg and Andreas Galanis.
- I work on randomised algorithms for approximate counting problems.

Imperial College London

London, UK

MEng in Mathematics and Computer Science (First Class Honours)

2013 -2017

JOURNAL PUBLICATIONS

- 1. A. Galanis, L. A. Goldberg, and J. Stewart. "Fast algorithms for general spin systems on bipartite expanders." ACM Transactions on Computation Theory (TOCT) 13, no. 4 (2021): 1-18.
- 2. Z. Chen, A. Galanis, L. A. Goldberg, W. Perkins, J. Stewart, and E. Vigoda. "Fast algorithms at low temperatures via Markov chains." Random Structures & Algorithms 58, no. 2 (2021): 294-321.
- 3. U. Grandi, J. Stewart, and P. Turrini. "Personalised rating." Autonomous Agents and Multi-Agent Systems 34, no. 2 (2020): 1-38.

Conference Publications

- 1. A. Galanis, L. A. Goldberg, and J. Stewart. "Fast mixing via polymers for random graphs with unbounded degree.". In Approximation, Randomization, and Combinatorial Optimization. Algorithms and Techniques (APPROX/RANDOM 2021) (pp. 36:1–36:13). Schloss Dagstuhl Leibniz-Zentrum für Informatik, 2021.
- 2. A. Galanis, L. A. Goldberg, and J. Stewart. "Fast algorithms for general spin systems on bipartite expanders." . In 45th International Symposium on Mathematical Foundations of Computer Science (MFCS 2020) (pp. 37:1–37:14). Schloss Dagstuhl–Leibniz-Zentrum für Informatik, 2020.
- 3. Z. Chen, A. Galanis, L. A. Goldberg, W. Perkins, J. Stewart, and E. Vigoda. "Fast algorithms at low temperatures via Markov chains." . In Approximation, Randomization, and Combinatorial Optimization. Algorithms and Techniques (APPROX/RANDOM 2019) (pp. 41:1–41:14). Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 2019.
- 4. U. Grandi, J. Stewart, and P. Turrini. "The complexity of bribery in network-based rating systems." In Proceedings of the AAAI Conference on Artificial Intelligence, vol. 32, no. 1. 2018.

Work Experience

Amadeus Nice, France Software Engineer 2017 - 2018

- Back-end C++.

Xerox Research Centre Europe

Grenoble, France

Research Intern

 $Summer\ 2016$

Credit Suisse Software Development Intern London, UK Summer 2015

TEACHING

- Class Tutor at Department of Computer Science, University of Oxford Probability and Computing
- 2020, 2021

- Tutor for a class of around 15 master's students.

AWARDS

- EPSRC Studentship

 DPhil funding for four years.
- Distinguished Project Award

 Awarded to my final-year project by the Department of Computing, Imperial College London.