

*A DPhil student in statistics, with interests in Bayesian nonparametrics, network analysis, data compression and causal inference.*

### Education

- Oct 2017 – Present **DPhil Statistical Science (EPSRC and MRC Centre for Doctoral Training)**, *University of Oxford*.  
Supervised by Professor François Caron and Professor Judith Rousseau.
- Oct 2015 – **MSc Statistics**, *Imperial College London*, Distinction.  
Sep 2016 Ranked 1<sup>st</sup> and awarded the Winton Capital Prize for Best Student.
- Thesis – “Robust Estimation and Approximate Bayesian Methods in Causal Inference Problems”, supervised by Professor Emma McCoy and Professor Daniel Graham. Awarded a score of 90%.
- Oct 2012 – **BA Mathematical Tripos**, *University of Cambridge*, First.  
Jun 2015

### Experience

#### Internships

- Sep 2020 – **PhD Intern**, *Facebook*, London.  
Nov 2020 Intern within the Core Data Science team. Created data pipelines and performed statistical analysis for problems in Community Integrity.
- Jan 2017 – **Quantitative Intern**, *Stratagem Technologies*, London.  
May 2017 Quantitative Research Intern. Developed and extended a Bayesian updating model for the outcomes of football matches using in-play data.
- Oct 2016 – **Quantitative Intern**, *GMO*, London.  
Dec 2016 Quantitative intern within the Global Equity Team. Created a data validation tool for large-scale fundamental accounting data for approximately 30,000 companies globally.
- Jul 2015 – **Summer Intern**, *Metaswitch Networks*, Enfield.  
Sep 2015 Intern with the Perimeta Architecture Team. Designed and implemented code in Python for the automated orchestration of the Perimeta software upgrade process.

#### Teaching

- Oct 2019 – **Class Tutor**, *Department of Statistics, University of Oxford*.  
Dec 2019 Foundations of Statistical Inference (3rd year course)
- July 2019 **Tutor**, *Department of Statistics, University of Oxford*.  
Mock probability tutorials for a summer school aimed at encouraging applications from students from disadvantaged backgrounds.
- Oct 2018 – **Teaching Assistant**, *Department of Statistics, University of Oxford*.  
Mar 2021
  - Foundations of Statistical Inference (3rd year course) - 2018/19
  - Advanced Simulation Methods (4th year/MSc course) - 2020/21

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## Publications and Preprints

- 2021 **Sparse networks with core-periphery structure**, *Electronic Journal of Statistics*, 15(1), 1814–1868.  
**C. Naik**, F. Caron, J. Rousseau.
- 2019 **Do speed cameras reduce road traffic collisions?**, *PLoS ONE*, 14(9): e0221267.  
D.J. Graham, **C. Naik**, E.J. McCoy, H. Li.
- 2017 **Multiply robust dose-response estimation for multivalued causal inference problems**, *preprint*, arXiv:1611.02433.  
**C. Naik**, E.J. McCoy, D.J. Graham.

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## Working Papers

- 2021 **Bayesian nonparametrics for sparse dynamic networks**.  
**C. Naik**, F. Caron, J. Rousseau, Y.W. Teh, K. Palla.
- 2021 **Impact of geographic diversity on citation of collaborative research**.  
**C. Naik**, C.R. Sugimoto, V. Larivière, C. Leng, W. Guo.
- 2021 **A recursive construction for Hilbert coresets**.  
**C. Naik**, J. Rousseau, T. Campbell.

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## Talks and Poster Presentations

- Jun 2021 **2021 ISBA World Meeting**, *contributed session*.  
Sparse networks with core-periphery structure
- Dec 2020 **CMStatistics**, *contributed session*.  
Bayesian nonparametrics for sparse dynamic networks
- Jun 2019 **Bayesian Nonparametrics 12**, *poster*.  
Sparse networks with core-periphery structure
- Mar 2019 **Workshop on Machine Learning, Computational Statistics and Applications, Amazon Development Centre, Germany**, *poster*.  
Sparse networks with core-periphery structure

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## Awards

- 2016 Winton Capital Prize for Best Student, Imperial College London, Statistics MSc.
- 2015 Andrew Jennings Scholarship, Imperial College London.
- 2015 Jesus College Scholarship, University of Cambridge.
- 2012 British Maths Olympiad - Bronze Award in Round 1 and qualified for Round 2

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## Computer skills

- Advanced Python, R, MATLAB,  $\text{\LaTeX}$
- Intermediate Hive, Presto, Spark, MongoDB, Dataswarm, Mercurial
- Basic C++, Hack, PHP, Git

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## Interests

- Sport Hockey - West Hampstead Hockey Club 2<sup>nd</sup> Team, 2020-present. Tennis. Squash.
- Music Singing - StatsChoir, 2019-20. Violin - school senior orchestra and a senior string quartet, 2007-12.
- Volunteering Oxford Maths Festival - 2019, 2020 (Team Leader)