

Anna Hutchinson

anna.hutchinson@mrc-bsu.cam.ac.uk; annahutchinson.com; github.com/annahutch

A biostatistics PhD student at the University of Cambridge interested in developing statistical methods to improve understanding of complex human diseases.

Education

PhD, MRC Biostatistics Unit, University of Cambridge and GlaxoSmithKline (October 2018 – Present)
Supervised by Dr Chris Wallace and Dr David Wille; “Statistical methods to improve understanding of complex human diseases”

BSc (Hons), Collingwood College, University of Durham (September 2014 - June 2018)
1st Class honours degree in Mathematics and Biology with year abroad at the University of Calgary, Canada.

A-Levels, Bishop Vesey’s Grammar School (September 2012 – June 2014)
Mathematics (A*), Further Mathematics (A*), Biology (A)

Research Experience

“Visualising and analysing big-data” (October 2017 – June 2018)
Professor Steve Abel and Dr Sushma Greltscheid, University of Durham. Undergraduate research project analysing various dimensionality reduction techniques with application to RNA-seq data to study ageing in mice (1st class – 78%).

“Objectifying randomised clinical trials” (January – May 2017)
Dr Ying Yan, University of Calgary. Part-time research assistant project investigating methods to improve the objectivity of randomised clinical trials, with application to AIDS clinical trial data.

“Ovarian-breast cancer causing mutations in white British and Punjabi women” (July – August 2016)
Professor Jean-Baptiste Cazier, University of Birmingham. Summer bioinformatics research project to compare ovarian-breast cancer mutations between white British and Punjabi women using COSMIC and ensemble databases.

Publications

Anna Hutchinson, Guillermo Reales and Chris Wallace (2020). **Leveraging auxiliary data from arbitrary distributions to boost GWAS discovery with Flexible cFDR**. <https://doi.org/10.1101/2020.12.04.411710> (under review at a peer-reviewed journal)

Anna Hutchinson, Jenn Asimit and Chris Wallace (2020). **Fine mapping genetic associations**. *Human Molecular Genetics*: <https://doi.org/10.1093/hmg/ddaa148>

Boris P.Hejblum, ..., Anna Hutchinson, ..., Annemarie H. Eckes-Shepard (2020). **Realistic and Robust Reproducible Research for Biostatistics**. *Preprint.org*: <https://doi.org/10.20944/preprints202006.0002.v1> (under review at peer-reviewed journal)

Anna Hutchinson, Hope Watson and Chris Wallace (2020). **Improving the coverage of credible sets in Bayesian genetic fine-mapping**. *PLOS Computational Biology*: <https://doi.org/10.1371/journal.pcbi.1007829>

Christophe Bourges, ..., Anna Hutchinson, ..., James C Lee (2020). **Resolving mechanisms of immune-mediated disease in primary CD4 T cells**. *EMBO Molecular Medicine*: <https://doi.org/10.15252/emmm.202012112>

Speaker Engagements

“Not-so-credible credible sets” (November 2019)
South of England Genetics and Epidemiology Group (SEGEG) Meeting

“Not-so-credible credible sets” (June 2019)
Quantitative Genomics Conference, best long talk award

“Not-so-credible credible sets” (April 2019)
Mathematical and Statistical Aspects of Molecular Biology (MASAMB) Conference, best student talk award

Courses

A variety of bioinformatics training courses offered by the University of Cambridge including: An introduction to solving biological problems with Python, ChIP-Seq and ATAC-seq analysis, Open Targets: Integrating genetics and genomics for disease biology and translational medicine, High Performance Computing: An Introduction, Snakemake workshop and Analysis of mapped NGS data with SeqMonk.

Other Activities

Programming: Proficient in bash, R, python and LaTeX
Journal peer-reviewer for *Nature*, *Cell Press* and *Genetic Epidemiology*
PhD Student Representative at MRC Biostatistics Unit (2019-2021)
Social Secretary at St Catharine’s College, University of Cambridge (2019-2021)
International travel; cooking; private tutoring; board games

References

Available upon request.