Emily Alger

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Education

October 2022 –October 2025: Institute of Cancer Research, PhD in Early Phase and Adaptive trials

- Awarded bursary of full fees and stipend for three years
- Most recent publications:
    - U-PRO-CRM: designing patient-centred dose-finding trials with patient-reported outcomes
    - Patient and public involvement and engagement in the development of innovative patient-centric early phase dose-finding trial designs
    - Statistical methods and data visualisation of patient-reported outcomes in early phase dose-finding oncology trials: a methodological review

October 2017 – June 2022: University of Warwick, Mathematics and Statistics (BSc MMathStat)

- First Class - Bachelor of Science, Master of Mathematics and Statistics (with Honours)
- Relevant final year modules: Monte Carlo Methods (93), Bayesian Forecasting and Intervention (76), Statistical Learning and Big Data (82), and Medical Statistics and Advanced Topics (76)

Awards

October 2023: Enrichment Scheme award, The Alan Turing Institute, London, UK

June 2022: Best Undergraduate Dissertation in Biostatistics, Statisticians in the Pharmaceutical Industry

October 2021-June 2022: Statistics Senior Scholarship, University of Warwick

Grants

- **TMRP Student Network Funding:** Travel grant to visit MD Anderson Cancer Centre in October 2024 to research adaptive borrowing techniques for Patient-Reported Outcomes.
- **Student award, IDENT Research Dissemination Workshop**: Travel bursary and invitation to present at the *Advanced Statistical Designs to Empower Biomarker-driven Clinical Trials* workshop held May 2024.
- **Training Support Fund, The Alan Turing Institute**: Travel bursary to support my oral presentation at the Society for Clinical Trials annual general meeting in May 2024.
- **ESMO Merit Travel Grant, ESMO TAT 2023**: Travel bursary to present at ESMO TAT 2023 in March 2023.

Research visits

May 2024: Columbia University, Mailman School of Public Health.

- 3-week research visit to develop novel dose-finding trial designs which incorporate Patient-Reported Outcomes with Dr Shing Lee and Professor Ying Kuen Cheung.
- Associated paper published in ESMO Open: U-PRO-CRM: designing patient-centred dose-finding trials with patient-reported outcomes
- On-going collaboration on second project.

Talks and posters

- **Invited talk:** *The use of restricted mean survival time to estimate joint treatment effects in the presence of interaction terms under model misspecification - a simulation study*, Efficient study design discussion group, MRC Biostatistics Unit, University of Cambridge.
- **Talk:** *Patient-Centred Dose-Finding Trials using Safety, Efficacy and Patient-Reported Outcomes*, 45th Annual Conference of the International Society for Clinical Biostatistics.
- **Invited talk:** *Advanced Bayesian dose-finding adaptive designs for assessment of joint outcomes*, UCL Statistical Sciences PhD seminar, University College London.
- **Talk:** *Statistical methods and data visualisation of patient-reported outcomes in early phase dose-finding oncology trials: a methodological review*, 45th Annual Meeting of the Society for Clinical Trials.
- **Invited talk:** *U-PRO-CRM: Designing Patient-Centred Dose-Finding Trials with Patient-Reported Outcomes*, IDENT Research Dissemination Workshop, University of Bath.
- **Invited talk:** *Transforming Early Clinical Trials: Embracing Innovative Methodologies,* Haemato-Oncology Team, The Royal Marsden Hospital.

Experience

October 2023 – July 2024: Enrichment Student, The Alan Turing Institute

- Established fortnightly Bayesian Statistical Methods reading group.
- Collaborated with Academic services as an Enrichment student blogger.
- Successful obtained funding to run student events to promote engagement and cohort building among the Turing community as part of my Community Champion role.

July – September 2022: Research Assistant, MRC Biostatistics Unit, University of Cambridge

- Investigated the novel Restricted Mean Survival Time endpoint within fixed sample size and group sequential clinical trials.
- Simulated fixed sample and group sequential clinical trials in R using cluster computing techniques.
- Paper currently under review and published on arXiv.

December 2020 - August 2022: Department of Statistics Student Blogger, University of Warwick

- Collaborated with the Statistics department to produce articles for incoming and current University students, focusing on communicating accessible statistics.
- Articles included an introduction to statistical paradoxes, a celebration of female mathematicians and R coding tips.

July – August 2021: Summer vacation student within Early Phase and Adaptive Trials, The Institute of Cancer Research

- Researched and developed new flow diagram designs to support the communication of participant flow within Phase I clinical trial papers.
- Presented current deficiencies and importance of communicating participant flow in Phase I clinical trials at a Statistics Research Meeting.
- Associated paper published in Contemporary Clinical trials: [Reporting quality of CONSORT flow diagrams in published early phase dose-finding clinical trial reports: Improvement is needed](#).

Services to the scientific community

- Peer reviewer for *Annals of Applied Statistics*, *Nature Communications*, *ESMO Open* and *Clinical Trials: Journal of the Society for Clinical Trials*.
- On-site organiser of the Trials Methodology and Research Partnership's Adaptive Design Working group in-person meeting, 16th-17th April 2024, hosted at the Institute of Cancer Research.