

EMMA DAVIES SMITH

Postdoctoral Research Fellow in Biostatistics

Department of Biostatistics
Harvard T.H. Chan School of Public Health
655 Huntington Ave, Building 2, 4th Floor
Boston, MA 02115

Email: esmith@hsph.harvard.edu
Website: statisticelle.com
LinkedIn: [linkedin.com/in/emmadaviessmith/](https://www.linkedin.com/in/emmadaviessmith/)
Twitter: [@GirlMeetsStats](https://twitter.com/GirlMeetsStats)

EDUCATION

- 2019 to 2023** **Ph.D. Epidemiology and Biostatistics, Biostatistics**
Schulich School of Medicine & Dentistry, University of Western Ontario
Nonparametric Methods for the Analysis of Cluster Randomization Trials with Multiple Endpoints
Dr. Guangyong (GY) Zou and Dr. Vipul Jairath
- 2016 to 2017** **M.Sc. Mathematics & Statistics, Applied Statistics**
College of Physical & Engineering Sciences, University of Guelph
Quantifying Health with Missing Data: Measuring the Impact of Fecal Microbiota Transplantation on Health-Related Quality of Life
- 2011 to 2015** **B.Sc.H. Mathematics & Statistics, Statistics (Mathematics Minor)**
College of Physical & Engineering Sciences, University of Guelph

RESEARCH INTERESTS

- Randomized controlled trials
- Causal inference
- Correlated data

TEACHING INTERESTS

- Regression methods
- Statistical programming
- Statistical inference

RESEARCH EXPERIENCE

- Sept 2023 to now** **Postdoctoral Research Fellow**
Department of Biostatistics, Harvard T.H. Chan School of Public Health
- 2019 to 2023** **Graduate Research Assistant**
Department of Epidemiology and Biostatistics, Western University
- Summer 2017** **Graduate Research Assistant**
Department of Mathematics & Statistics, University of Guelph
- Fall 2016** **Graduate Student Assistant**
Data Resource Centre, McLaughlin Library, University of Guelph

RESEARCH EXPERIENCE

Summer/Fall 2016 Associate Statistical Consultant

Community Engaged Scholarship Institute, University of Guelph

2016 to 2017 Research Assistant

Infectious Disease & Microbiology, St. Joseph's Healthcare Hamilton

Summer 2015 Undergraduate Research Assistant

Department of Mathematics & Statistics, University of Guelph

TEACHING AND MENTORING EXPERIENCE

See [Teaching Dossier](#) for more detail, including teaching philosophy and student feedback.

2024 Co-supervisor, Ph.D. Independent Research Project

Department of Biostatistics, Harvard T.H. Chan School of Public Health

2021 to 2023 Graduate Teaching Assistant

Department of Epidemiology and Biostatistics, Western University

Fall 2022 Guest Lecturer

Department of Family Medicine, Western University

2016 to 2017 Graduate Teaching Assistant

Department of Mathematics & Statistics, University of Guelph

HONOURS AND AWARDS

2021 to 2023 x2	Ontario Graduate Scholarship	Provincial / Research
2020 to 2021	Dean's Research Scholarship	Western University / Research
2019 to 2023 x4	Graduate Research Scholarship	Western University / Academic
2016 to 2017	Canada Graduate Scholarship M	National / Research
2016 to 2017	Graduate Tuition Scholarship	University of Guelph / Academic
Declined	Ontario Graduate Scholarship	Provincial / Research
2015	Gordon Ashton Scholarship	University of Guelph / Academic
2015	Statistics Graduation Prize	University of Guelph / Academic
2014	Tucker Scholarship for Women	University of Guelph / Leadership

ARTICLES UNDER REVIEW

1. **Davies Smith, E.,** Jairath, V., Zou, G. (2024) Rank-based estimators of global treatment effects for cluster randomized trials with multiple endpoints. [Pre-print available on aRxiv.](#)

ARTICLES PUBLISHED IN PEER-REVIEWED JOURNALS

1. Zou, G., **Smith, E.**, Zou, L., Qiu, S., Shu, D. (2023). A rank-based approach to design and analysis of pretest-posttest randomized trials, with application to COVID-19 ordinal scale data. *Contemporary Clinical Trials*, 126: 107085. doi: [10.1016/j.cct.2023.107085](https://doi.org/10.1016/j.cct.2023.107085)
2. Zou, G., **Smith, E.**, & Jairath, V. (2022). A nonparametric approach to confidence intervals for concordance index and difference between correlated indices. *Journal of Biopharmaceutical Statistics*, 32(5): 1-28. doi: [10.1080/10543406.2022.2030747](https://doi.org/10.1080/10543406.2022.2030747)
3. Speicher, D.J., Luinstra, K., **Smith, E.J.**, Castriciano, S., Smieja, M. (2020) Non-invasive detection of IgG antibodies from common pathogenic viruses using oral flocced swabs. *Diagnostic Microbiology and Infectious Disease*. 97(3): 115038. doi: [10.1016/j.diagmicrobio.2020.115038](https://doi.org/10.1016/j.diagmicrobio.2020.115038)

CONFERENCE PROCEEDINGS

1. Lee, C., Kim, P., **Smith, E.** (2017, May 6-9) Outcome of Fecal Microbiota Transplantation for recurrent *Clostridium Difficile* infection on quality of life. *Digestive Disease Week*, Chicago, Illinois. doi: [10.1016/S0016-5085\(17\)33230-4](https://doi.org/10.1016/S0016-5085(17)33230-4)

PRESENTATIONS

1. 2024 Feb. Rank-based estimators of global treatment effects for cluster randomized trials with multiple endpoints. HIV Working Group, Harvard School of Public Health. Boston MA.
2. 2023 Dec. Challenges and opportunities of clinical trials with multiple endpoints. Department of Population Medicine, Harvard Pilgrim Health Care Institute. Boston MA.
3. 2020 Feb. Intro to Shiny for interactive graphics and data visualization. R-Ladies. London ON.
4. 2016 Jul. Quantifying Health: Measuring the Impact of Fecal Microbiota Transplantation on Quality of Life. The Canadian Statistical Sciences Institute Joint Analysis of Neuroimaging Data Meeting. Victoria, BC.

PRE-PRINTS

1. McIntyre, K., Weiner, J., **Davies Smith, E.** (2024) Statistical pitfalls of multiple exposures in causal observational studies and tools to address them. [Pre-print available on medRxiv](#),

PROFESSIONAL DEVELOPMENT

- 2022 Apr.** SAS Certified Business Analyst Using SAS 9: Regression and Modeling
- 2021 Aug.** SAS Certified Specialist, Base Programming Using SAS 9.4
- 2021 Jun.** Project Management, Essential Elements I & II (UWO OYF program)
- 2020 Aug.** Teaching Assistant Training Program (UWO CTL)

PROFESSIONAL EXPERIENCE

2018 to 2019	Data Scientist	Machine Learning / Adknown Inc.
2017 to 2018	Statistical Analyst	Insight & Discovery / Sun Life Financial

ACADEMIC AND ADMINISTRATIVE EXPERIENCE

2020 to 2021	Society of Graduate Students (SOGS) Representative	Western Epidemiology and Biostatistics Student Council
2020 to 2021	Organizer / Facilitator	Western Epidemiology and Biostatistics Journal Club
Summer 2016	Coordinator	Southern Ontario Graduate Mathematics & Statistics Conference
2014 to 2015	Student Representative	Department of Mathematics & Statistics Curriculum Committee
2014 to 2015	Secretary	University of Guelph Mathematics & Statistics Club