

# Rohan Alexander

Assistant Professor, Information (51%) and Statistical Sciences (49%), University of Toronto  
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## Academic appointments

- Assistant Professor, Information & Statistical Sciences, University of Toronto      Jul 2020 - *current*
  - Parental leave: From June to August 2021 I was on parental leave.
  - COVID-19: From March to December 2020 I shared full-time childcare duties (0.5 FTE on average). From January 2021 to May 2021, and again from September to December 2021, I shared part-time childcare duties, (0.25 FTE on average).
- Assistant Director, Canadian Statistical Sciences Institute (CANSSI) Ontario      Sep 2021 - *current*
- Senior Fellow, Massey College      Sep 2021 - *current*
- Academic Lead, Short courses, Data Sciences Institute      July 2021 - *current*
  - The DSI offers eight OSAP eligible short courses, each of around 20-30 contact hours: UNIX shell, Git, and GitHub; SQL; Python; R; Sampling; Statistical learning; Visualization; Causal inference. Reproducibility, ethics, and professional skills are integrated into every course.
  - I liaised with industry and internal academic partners; developed curricula; hired and managed a team of nine to create slides, assessment, and other teaching materials.
  - With staff support I have responsibility for hiring and managing instructors and TAs to teach the courses and improve the open-source materials.
- Co-lead, Data Sciences Institute Thematic Program in Reproducibility      Nov 2021 - *current*
- Faculty Affiliate, Schwartz Reisman Institute for Technology and Society      August 2020 - *current*
- Post-doctoral Fellow, Information, supervised by Kelly Lyons      Jul 2019 - Jul 2020

## Education

- PhD (Economics), Australian National University      Feb 2015 - Dec 2019
  - Dissertation title: *Essays on Applied Historical Labour Economics*.
  - Committee: John Tang (chair); Martine Mariotti; Tim Hatton; and Zach Ward.
- M. Economics, Australian National University      Feb 2012 - Nov 2012
- B. Economics, University of Queensland      Feb 2004 - Nov 2008

## Book

- Alexander, Rohan, 2023, *Telling Stories with Data*, Chapman and Hall/CRC.

## Edited book

- Kennedy, Lauren, Rohan Alexander, and Andrew Gelman, (editors), *Multilevel Regression and Post-stratification: A Practical Guide and New Developments*, (accepted by Cambridge University Press in July 2021, expected publication in 2024).

## Peer-reviewed journal articles<sup>1</sup>

- Katz, Lindsay, and Rohan Alexander, 2023, “Digitization of the Australian Parliamentary Debates, 1998-2022”, *Scientific Data*, Accepted.
- Collins, Annie, and Rohan Alexander, 2022, “Reproducibility of COVID-19 pre-prints”, *Scientometrics*, 4 July, <https://doi.org/10.1007/s11192-022-04418-2>.
- Alexander, Rohan, and Zach Ward, 2018, “Age At Arrival and Assimilation In The Age Of Mass Migration”, *The Journal of Economic History*, 78(3), pp. 904-937, <https://doi.org/10.1017/S0022050718000335>.

<sup>1</sup>My work is interdisciplinary and there are different norms for author order and publication venue across disciplines. With regard to author order, Alexander and Ward, 2018, is alphabetical, all others follow the norm of the senior author last. Items in the “peer-reviewed conference proceedings” list—despite being a “conference proceeding”—can be “translated” as equivalent to a peer-reviewed journal article.

## Peer-reviewed conference proceedings

- Ferguson, Sharon, Paula Akemi Aoyagui, Rohan Alexander, Anastasia Kuzminykh, 2022, “A Thematic Comparison of Human and AI Explanations of Sexism Assessment”, *Human Centered AI Workshop at NeurIPS*.

## Other publications

- Horton, Nicholas, Rohan Alexander, Aneta Piekut, and Colin Rundel, 2022, “Editorial: The Growing Importance of Reproducibility and Responsible Workflow in the Data Science and Statistics Curriculum”, *Journal of Statistics and Data Science Education*, <https://doi.org/10.1080/26939169.2022.2141001>.

## Pre-prints

- Kennedy, Lauren, Jonah Gabry, Dewi Amaliah, and Rohan Alexander, 2023, “mrpk: A reproducible, opinionated, workflow for multilevel regression with post-stratification in R”.
- Collins, Annie, and Rohan Alexander, 2022, “History of MRP”, (under review at Kennedy, Alexander, and Gelman, (editors), *Multilevel Regression and Poststratification: A Practical Guide and New Developments*).
- Chiu, Ke-Li, Annie Collins, and Rohan Alexander, 2022, “Detecting Hate Speech with GPT-3”, *arXiv*, 24 March, <https://arxiv.org/abs/2103.12407>.
- Alexander, Rohan, and Monica Alexander, 2021, “The Increased Effect of Elections and Changing Prime Ministers on Topics Discussed in the Australian Federal Parliament between 1901 and 2018”, *arXiv*, 17 November, <https://arxiv.org/abs/2111.09299>.
- Alexander, Rohan, Samantha-Jo Caetano, Haoluan Chen, Michael Chong, Annie Collins, Shirley Deng, Isaac Ehrlich, Paul Hodgetts, Yena Joo, Marija Pejcinovska, Mariam Walaa, and Matthew Wankiewicz, 2021, “An Introduction to DoSStoolkit”, *arXiv*, 19 May, <https://arxiv.org/abs/2105.09347>.
- Chiu, Ke-Li, and Rohan Alexander, 2021, “On consistency scores in text data with an implementation in R”, *arXiv*, 13 January, <https://arxiv.org/abs/2101.05225>.
- Hodgetts, Paul A., and Rohan Alexander, 2020, “cesR: An R package for the Canadian Election Study”, *SocArXiv*, 3 September, <https://osf.io/preprints/socarxiv/a29h8/>.

## R packages

- Alexander, Rohan, and Paul A. Hodgetts, 2021, *AustralianPoliticians*.
- Hodgetts, Paul A., and Rohan Alexander, 2021, *cesR*.
- Alexander, Rohan, and A Mahfouz, 2021, *heapsOfpapers*.

## Awards

- 2022 ANU Australian Politics Studies Centre Visiting Scholar (\$2,500)
- Honourable Mention, 2021 Master of Information Student Council Instructor Awards

## Grants

- SSHRC Partnership Engage Grant Sep 2023 - Aug 2025
  - Project: “Using machine learning to resolve data challenges to improve our understanding of Canadian lobbying activity”
  - Funding: \$24,938
  - PI: Rohan Alexander
  - Partner organization: Investigative Journalism Foundation of Canada
- Mitacs Accelerate Jul 2023 - Jun 2026
  - Project: “Follow the Money: Tracking the Influence of Lobbyists in Canada”
  - Partner organization: Investigative Journalism Foundation of Canada
  - Funding: \$426,666 (Mitacs: \$235K, IJF: \$192K)
  - Supervisor: Rohan Alexander
  - Co-Supervisor: Christopher Cochrane, Raymond Ng

- University of Toronto, Data Sciences Institute, Catalyst Grant Feb 2023 - Jan 2024
  - Project: “Providing data to improve representation by public officials”
  - Funding: \$100,000
  - Investigators: Peter Loewen (Named PI), Rohan Alexander (co-PI), Aya Mitani (co-PI), Elena Tuzhilina (co-PI)
- Canadian Statistical Sciences Institute (CANSSI) Ontario, Data Access Grant January 2023
  - Project: “Developing a large-scale lobbying and political donations dashboard to foster access to and interdisciplinary research on democratic accountability and political donations”
  - Funding: \$5,000
  - Co-PIs: Rohan Alexander, Chris Cochrane
- Australian Research Council (ARC), Discovery Projects Jan 2023 - Dec 2025
  - Project: “Australian Parliamentary Speech: How Deliberative? How Representative?”
  - Funding: \$287,146
  - Chief Investigators: Marija Taflaga, Keith Dowding
  - Partner Investigators: Kenneth Benoit, Rohan Alexander
- University of Toronto, Data Sciences Institute, Data Access Grant Nov 2022 - Nov 2023
  - Project: “Developing a large-scale lobbying and political donations dashboard to foster access to and interdisciplinary research on democratic accountability and political donations”
  - Funding: \$9,993
  - Co-PIs: Rohan Alexander, Chris Cochrane
- SSHRC Connection Grant Oct 2022 - Sep 2024
  - Project: “Follow the money: Mobilizing Canadian political donations data”
  - Funding: \$50,000
  - PI: Rohan Alexander
  - Co-investigators: Jacob Robbins-Kanter, Wing Cheung Michael Wong, Zane Schwartz
- SSHRC Partnership Development Grant Jun 2022 - Jun 2024
  - Project: “Follow the Money: Donors, Donations, and Parties in Canadian Politics”
  - Funding: \$169,855
  - PI: Christopher Cochrane
  - Co-applicant: Harold Jansen, Jacob Robbins-Kanter, Michael Pereira, Randy Besco, Rohan Alexander, Michael Wing-Cheung Wong, Zane Schwartz
- Mitacs Accelerate Jun 2022 - Nov 2022
  - Project: “Follow the Money: Investigating Political Donations in Canada”
  - Partner organization: Investigative Journalism Foundation of Canada
  - Funding: \$48,000
  - Co-PIs: Rohan Alexander and April Lindgren.
- University of Toronto, Data Sciences Institute, Summer Undergraduate Data Science May 2022 - Aug 2022
  - Project: “Disparities in climate-induced health outcomes in the Greater Toronto Area”
  - Funding: \$7,500
  - Co-PIs: Rohan Alexander, Monica Alexander
- University of Toronto, School of Cities, Urban Challenge Grant Jan 2022 - Dec 2022
  - Project: “Disparities in climate-induced health outcomes in the Greater Toronto Area”
  - Funding: \$75,000
  - Co-PIs: Rohan Alexander, Monica Alexander, Karen Smith, Micah Hewer
- University of Toronto, Data Sciences Institute, Data Access Grant Dec 2021 - Apr 2022
  - Project: “Disparities in climate-induced health outcomes in the Greater Toronto Area”
  - Funding: \$10,000
  - Co-PIs: Rohan Alexander, Monica Alexander
- University of Toronto, Faculty of Information, SSHRC Institutional Grant Nov 2021 - Mar 2022
  - Project: “At what cost? Using Hansard data to understand the public policy that went ‘missing’ due to COVID-19”
  - Funding: \$3,500
  - PI: Rohan Alexander

- University of Toronto, Faculty of Arts & Science, Pedagogical Innovation and Experimentation Fund  
Sep 2021 - Mar 2022
  - Project: “Developing the DoSS toolkit”
  - Funding: \$10,000
  - Co-PIs: Rohan Alexander, Samantha-Jo Caetano
- Canadian Statistical Sciences Institute (CANSSI) Ontario, Workshop/Lecture (COWL) Program Feb 2021
  - Project: “Reproducibility of COVID-19 pre-prints”
  - Funding: \$1,000
  - PI: Rohan Alexander
- CANSSI Ontario Multidisciplinary Doctoral (Mdoc) training program Sep 2021 - Sep 2025
  - Funding: \$10,000 annually for five years
  - Co-PIs: Rohan Alexander, Monica Alexander
- Mitacs Accelerate Jun 2021 - Nov 2021
  - Project: “Robust Taxonomy out of Receipt Item Labels”
  - Partner organization: Sensibill
  - Funding: \$30,000
  - Co-PIs: Rohan Alexander, Michael Guerzhoy
- University of Toronto, Faculty of Arts & Science, Pedagogical Innovation and Experimentation Fund  
Sep 2020 - Mar 2021
  - Project: “Developing an applied statistics toolkit”
  - Funding: \$15,000
  - Co-PIs: Rohan Alexander, Samantha-Jo Caetano
- University College London and University of Toronto, Strategic Partner Funds for AI collaborations  
Jul 2020 - Dec 2020
  - Project: “AI Governance: Building ethical frameworks to balance risk and innovation”
  - Funding: \$25,000
  - Co-PIs: Elizabeth Lomas, Kelly Lyons, Jenny Bunn, Rohan Alexander

## Teaching experience

### PHD

- Instructor, “INF3104: Data Science Foundations”, Information Winter 2023

### MASTERS

- Instructor, “INF2178: Experimental Design for Data Science”, Information Winter 2021
- Instructor, “INF2178: Experimental Design for Data Science”, Information Winter 2020

### UNDERGRADUATE

- (*Upcoming*) Instructor, “STA302: Methods of Data Analysis I”, Statistical Sciences Winter 2024
- (*Upcoming*) Instructor, “INF312: Worlds Become Data”, Information Winter 2024
- Instructor, “INF312: Worlds Become Data”, Information Winter 2023
- Instructor, “INF312: Worlds Become Data”, Information Winter 2022
- Instructor, “STA304: Surveys, Sampling and Observational Data”, Statistical Sciences Winter 2022
- Instructor, “STA304: Surveys, Sampling and Observational Data”, Statistical Sciences Fall 2020

## Supervisory experience

### PHD

- Ciara Zogheib, Information Sep 2022 - *current*

### MASTERS

- Inessa De Angelis, Information (thesis supervisor) Sep 2023 - *current*

- Thesis: *Torrential Twitter: Climate Change, Female Politicians, and Harassment*
- Lorena Almaraz De La Garza, Information (academic supervisor) Jun 2022 - Sep 2022
  - Research paper: *Machine Learning Inference for Demographic Features of Political Donors*
  - First placement: Senior AI/ML Model Steward Partner, Thomson Reuters
- Ciara Zogheib, Information (thesis supervisor) Sep 2021 - Jun 2022
  - Thesis: *The “Paper and Pencil” Operations of Interdisciplinarity: Interdisciplinary Integration as Information Practice*
  - First placement: PhD student, University of Toronto
- Elisa Du, Applied Computing (academic supervisor) Mar 2021 - Dec 2021
  - Thesis: *Enriched Understanding of Retail Receipts for Personalized Financial Insights*
  - First placement: Machine Learning Engineer, Sensibill
- Thomas William Rosenthal, Information (academic supervisor) Jan 2021 - Apr 2021
  - Research paper: *A Machine Learning Exploration into the Attributes that Define Single-Origin Coffee*
  - First placement: Data Scientist, Purpose Analytics

#### UNDERGRADUATE

- Connor Glossop, Engineering (senior thesis) Sep 2022 - Apr 2023
  - Thesis: *Analyzing Political Polarization in Canada’s Parliament*
  - First placement: Data Scientist, Intact Insurance
- Callie Moore, Engineering (senior thesis) Sep 2021 - Apr 2022
  - Thesis: *Dyadic Representation in Canadian Parliament*
  - First placement: Data Analyst, Hospital for Sick Children
- Jeremy Hunt, Engineering (senior thesis) Sep 2020 - Apr 2021
  - Thesis: *Study of Software Tool Usage in Academics*

#### Service

##### PROFESSIONAL SOCIETIES

- President-elect, *Data Science and Analytics Section, Statistical Society of Canada* Jul 2023 - Jun 2024

##### EDITORIAL

- Associate Editor, *Journal of Statistics and Data Science Education* Summer 2021 - current

##### REFEREEING

- 2023: *Journal of Statistics and Data Science Education* (x2); *Social Sciences and Humanities Research Council of Canada*; *Archival Science*; *Harvard Data Science Review*; *Demographic Research*.
- 2022: *Chapman and Hall/CRC*; *Journal of Statistics and Data Science Education* (x3); *Political Analysis*; *Records Management Journal*.
- 2021: *Chapman and Hall/CRC* (x3); *Journal of Statistics and Data Science Education* (x2).
- 2020: *Canadian Journal of Political Science* (x2); *Political Analysis*; *Harvard Data Science Review*; *The Economic Record*.

##### OUTREACH

- Co-organizer, *Toronto Data Workshop* Sep 2019 - current
- Organizer, *1st Colloquium on Applications of Large Language Models* 11 Apr 2023
- Organizer, *3rd Toronto Conference on Reproducibility* 23 Feb 2023
- Local host, *Toronto Replication Games* 22 Feb 2023
- Organizer, *Florence Nightingale Day* 18 Feb 2023
- Organizer, *CANSSI Ontario Statistical Software Conference* 10 Nov 2022
- Organizer, *Florence Nightingale Day* 9 Apr 2022
- Organizer, *2nd Toronto Workshop on Reproducibility* 23-25 Feb 2022
- Organizer, *1st Toronto Workshop on Reproducibility* 25-26 Feb 2021
- Co-organizer, *MRP Working Group* Jan 2020 - Nov 2021

## DEPARTMENTAL AND UNIVERSITY COMMITTEES

- Member, Search Committee, ISD/HCDs Assistant Professor, Faculty of Information Aug 2023 - *current*
- Member, Undergraduate Advisory Group, Faculty of Information July 2023 - *current*
- Member, Data Sciences Speaker Series Selection Committee, Data Sciences Institute Mar 2023 - *current*
- Coordinator, Applied Research and Education Seminar Series, Statistical Sciences Jul 2022 - *current*
- Member, Graduate Committee, Statistical Sciences July 2020 - *current*
- Member, BI Recruitment and Admission Committee, Information Jul 2021 - Jun 2023
- Member, Advisory Committee, Dean Search, Faculty of Information Nov 2022 - May 2023
- Co-organizer, *Statistical Sciences PhD Practice Job Talk Day* 12 Dec 2022
- Chair, Data Sciences Speaker Series Selection Committee, Data Sciences Institute Mar 2022 - Mar 2023
- Member, Search Committee, Dalla Lana School of Public Health, Assistant Professor—Data Science Methods for Population Health and Health Systems Jul 2022 - Mar 2023
- Member, Faculty of Arts and Sciences Computation and Data Science Education Working Group Sep 2021 - Jul 2022
- Member, Applied Research and Education Seminar Series, Statistical Sciences Jul 2020 - Jun 2022
- Advisor, *Statistical Sciences PhD Student Research Day* 25 May 2022
- Co-organizer, *Statistical Sciences PhD Practice Job Talk Day* 17 Dec 2021
- Member, U of T Library Technical Skills Outreach Project Jul 2021 - Jun 2022
- Member, Search Committee, Information, HCDs Teaching Stream Assistant Professor, Nov 2021 - Apr 2022
- Member, Search Committee, Information, Learning Hub Director and Teaching Stream Assistant Professor Nov 2020 - Apr 2020
- Member, Awards Committee, Information Jul 2020 - Nov 2020

## THESIS COMMITTEES

- Member, Criminology, PhD Thesis Committee, Jamie Duncan Jan 2023 - *current*  
– Title: *The border as a platform*
- Member, Information, PhD Thesis Committee, Mirai Gendi Jun 2022 - *current*  
– Title: *Data science and process mining with application to digital forensics*

## EXAM COMMITTEES

- Examiner, Statistical Sciences, PhD Applied Research Comprehensive, Fred Song Fall 2023
- Chair, School of Graduate Studies, Final Oral Examination, Amanda Brijmohan 30 Aug 2023
- Member, Statistical Sciences, PhD Final Oral Examination, Blair Bilodeau 14 Apr 2023
- Chair, Statistical Sciences, PhD Oral Exam Committee, Michaël Lalancette 14 Jul 2022
- Second Reader, Information, MI Thesis Defense, June Lim 9 Sep 2021  
– Title: *Gendered Voices in Japanese Popular Music: A Data-Driven Analysis*
- Member, Statistical Sciences, PhD Oral Exam Committee, Alex Stringer 27 Apr 2021
- Member, Statistical Sciences, PhD Oral Exam Committee, Arvind Shrivats 12 Feb 2021
- Member, Statistical Sciences, PhD Oral Exam Committee, Zhen Qin 12 Jan 2021

## Presentations

- *From teaching to practice: Insights from the Toronto Reproducibility Conferences*  
– 8 Aug 2023, Joint Statistical Meetings (JSM), Toronto.
- *Turning Our World Into Data*  
– 19 Jul 2023, Harvard Biostatistics Data Science in Action: Machine Learning for Self-driving cars (online).
- 7 Jul 2021, Harvard Biostatistics Data Science in Action Summer Camp (online).
- *The Making of a Nation: Who Voted for Australian Federation?*  
– 23 Jun 2023, Australia before Federation, Centre for Economic History, Canberra.
- *Climate justice and credible data science*  
– 7 Mar 2023, U of T, Faculty of Information, Guest lecture, “Communities and Values”.

- *Worlds become data*
  - 16 Feb 2023, U of T, Faculty of Medicine, Adventures In Science Mentorship Program.
- *Testing, testing, is this thing right?*
  - 27 Jan 2023, Quantitative Methods Cluster, University of Toronto.
  - 30 Nov 2022, FCT Abuja, Nigeria, UseR Group, (online).
  - 9 Nov 2022, Workshop in Computational & Quantitative Social Sciences, Toronto.
- *The growing importance of reproducibility and responsible workflow in the data science and statistics curriculum*
  - 13 Dec 2022, Panelist, CAUSE/JSDSE Webinar Series (online).
- *Reproducible workflows*
  - 2 Nov 2022, Biostatistics seminar series, Centre for Outcomes Research, McGill University Health Centre – Research Institute (online).
- *Rethinking data science*
  - 6 Oct 2022, Toronto Data Workshop, Toronto.
- *On the role of reproducibility in data science*
  - 4 Aug 2022, Stanford Data Science (online).
- *Integrating reproducibility into undergraduate data science teaching*
  - 14 Jul 2022, Australasian Teaching Economics Conference, (online).
  - 4 Jun 2022, Canadian Economics Association Conference, Carleton University, Ottawa.
- *On the double burden of disadvantage in data science*
  - 17 Jun 2022, We All Count, Talking Data Equity (online).
- *Reproducible Data Science Workflows in R*
  - 11 Jan 2022, Accra R User Ghana R Conference (online)
- *What data science can learn from the James Webb Space Telescope*
  - 17 Dec 2021, University of Toronto Statistics and Machine Learning (SMILE) Journal Club (online).
- *On the privilege of turning our world into data*
  - 16 Dec 2021, Young Irish Statisticians (online).
- *A super opinionated talk about data science, APIs, and grad school applications*
  - 18 Nov 2021, University of Toronto, Undergraduate Statistical Sciences Union Workshop (online).
- *Remarks on data science*
  - 19 Oct 2021, University of Toronto, Trinity College High Table (online).
- *Introduction to Andrew Gelman*
  - 17 Sep 2021, University of Toronto, Data Sciences Institute launch (online).
- *Introduction to R*
  - 22 Dec 2020, University of Toronto, Global Society for Genetics and Genome Biology (online).
- *Choosing the optimal set of co-variables to satisfy competing priorities in multi-level regression with post-stratification*
  - 6 May 2020, MRP Reading Group (online).
- *Forecasting Parliamentary Elections*
  - 10 Dec 2019, Monash University, Department of Econometrics & Business Statistics, Melbourne.
  - 9 Dec 2019, Australian Society for Quantitative Political Science Conference, Melbourne.
  - 2 Dec 2019, Australian National University, Cake for Comments, Canberra.
  - 20 Nov 2019, POP Politics Workshop, Canberra.
  - 17 Oct 2018, University of Toronto, Political Behaviour Group, Toronto.
- *A Word-Count Based Classifier of Politicians in the Australian Federal Parliament (1901–2018)*
  - 4 Sep 2019, European Consortium for Political Research, General Conference, Wroclaw.
  - 22 Jun 2019, European Political Science Association, Annual Conference, Belfast.
  - 18 Jun 2019, Quantitative Text Analysis Workshop, Dublin.
- *The Effect of Elections and Prime Ministers on Discussion in the Australian Federal Parliament (1901–2018)*
  - 11 Jan 2019, Political Methodology Specialist Group, Annual Conference, Warwick.
  - 11 Dec 2018, Max Planck Institute for Demographic Research, Rostock.
  - 22 Nov 2018, University of Toronto, Political Behaviour Group, Toronto.
  - 25 Oct 2018, Australian National University, Research School of Economics, Canberra.
  - 25 Oct 2018, Parliamentary Library, Parliament of Australia, Canberra.

- 24 Oct 2018, Australian National University, School of Politics and International Relations, Canberra.
- *Exploring Australia's Hansard (1901–2017)*
  - (Poster) 7-9 Sep, 2018 Economic History Association Meeting, Montreal.
- *A Surnames-Based Analysis of Tasmanian Social Mobility (1803–2015)*
  - 20 May 2016, UC Berkeley, Economic History Lunch, Berkeley.
  - 2 May 2016, Australian National University, Research School of Economics, Canberra.