

WAYNE YU WANG

Department of Statistics, University of Michigan
323 West Hall
1085 South University
Ann Arbor, MI 48109

tel: 734.277.5499
web: ywa136.github.io
twitter: @wayneywang
email: wayneyw@umich.edu

Education

2022 (expected)	Statistics, University of Michigan (Advisors: Profs. A.O.Hero and Y.Chen)	Ph.D.
2018	Statistics, University of British Columbia (Advisors: Profs. J.V.Zidek and N.D.Le)	M.Sc.
2016	Actuarial Science, Simon Fraser University	B.Sc.

Research Interests

High-dimensional inference; Graphical models; (approximate) Bayesian inference; Generative models for spatio-temporal processes; Applications in natural sciences

Publications

- Wang, Y., & Hero, A. (2021). Sg-palm: A fast physically interpretable tensor graphical model, In *Proceedings of the thirty-eighth international conference on machine learning (ICML'21)*.
- Wang, Y., Hougen, C., Oselio, B., Dempsey, W., & Hero, A. (2021). "A geometry-driven longitudinal topic model". *Harvard Data Science Review*. <https://doi.org/10.1162/99608f92.b447c07e>
- Wang, Y., Le, N. D., & Zidek, J. V. (2021). "Approximately optimal subset selection for statistical design and modelling". *Journal of Statistical Computation and Simulation*, 1–13. <https://doi.org/10.1080/00949655.2021.1900182>
- Wang, Y., Le, N. D., & Zidek, J. V. (2020). "Approximately optimal spatial design: How good is it?" *Spatial Statistics*, 100409. <https://www.sciencedirect.com/science/article/pii/S2211675320300038>
- Wang, Y., Jang, B., & Hero, A. (2020). The sylvester graphical lasso (syglasso), In *Proceedings of the twenty-third international conference on artificial intelligence and statistics (AISTATS'20)*, PMLR. <http://proceedings.mlr.press/v108/wang20d.html>
- Casquilho-Resende, C., Le, N. D., Zidek, J. V., & Wang, Y. (2018). "Design of monitoring networks using k-determinantal point processes". *Environmetrics*, 29(1), e2483. <https://onlinelibrary.wiley.com/doi/full/10.1002/env.2483>

Presentations

Contributed presentations

- Wang, Y. (2021). Gaussian graphical models for active region modeling and flare prediction, In *Joint statistical meetings (jsm) 2021, seattle, wa*.
- Wang, Y. (2021). A geometry-driven longitudinal topic model, In *2021 symposium on data science and statistics*.

- Wang, Y. (2020). Sylvester graphical models for complex spatio-temporal processes, In *The 4th annual review for the aro-muri: Adaptive exploitation of non-commutative multimodal information structure*, ann arbor, mi.
- Wang, Y. (2020). The sylvester graphical lasso (syglasso), In *Joint statistical meetings (jsm) 2020*, philadelphia, pa.
- Wang, Y. (2020). The sylvester graphical lasso (syglasso), In *Aistats 2020*, palermo, italy.
- Wang, Y. (2018). Uncertainty quantification for minimum and maximum temperature forecast, In *Joint statistical meetings (jsm) 2018*, vancouver, canada.
- Wang, Y. (2018). Determinantal point processes with application to spatial design, In *The 46th annual meeting of the statistical society of canada (ssc) 2018*, montreal, canada.
- Wang, Y. (2017). Determinantal point processes with application to spatial design, In *Sfu/ubc joint statistics seminar*.

Invited presentations

- Wang, Y. (2020). A scalable tool for longitudinal twitter analysis: Understanding the impact of covid-19 on public discourse, In *Covid-19 data science research special webinar series*, michigan institute for data science, ann arbor, mi.

Teaching

Teaching Assistant

University of Michigan | Department of Statistics

- | | |
|------|--|
| 2020 | STATS 551: <i>Bayesian Modelling and Computation</i>
<i>Description:</i> Graduate-level introduction to Bayesian inference.
<i>Course materials:</i> ywa136.github.io/teaching/stats551_2020Winter |
| 2019 | STATS 306: <i>Introduction to Statistical Computing</i>
<i>Description:</i> Senior undergraduate-level introductory statistical computing course based on the R programming language.
<i>Course materials:</i> https://ywa136.github.io/teaching/stats306_2019Fall |
| 2019 | STATS 426: <i>Introduction to Theoretical Statistics</i>
<i>Description:</i> Senior undergraduate-level introduction to theoretical statistics. |
| 2018 | STATS 250: <i>Introduction to Statistics and Data Analysis</i>
<i>Description:</i> Junior undergraduate-level course in applied statistical methodology for data analysis. |

University of British Columbia | Department of Statistics

- | | |
|------|--|
| 2017 | STATS 251: <i>Introductory Probability and Statistics</i>
<i>Description:</i> Introductory statistics and probability course for junior undergraduates major in statistics. |
| 2016 | STATS 200: <i>Elementary Statistics for Applications</i>
<i>Description:</i> Introductory statistics course for junior undergraduates major in arts and social sciences. |

Awards, Fellowships, and Honors

2018 - 2019	Department of Statistics Fellowship, UMich
2018	International Doctoral Fellowship, UBC. (Declined; Five year \$35,000 per year fellowship awarded to the top 15 admitted international doctoral students across the university.)
2017	Travel Award for CBMS Regional Conference on Spatial Statistics.
2016	Statistics & Actuarial Science Endowment Award: Academic Merit, SFU. (Awarded to undergraduate student with the best academic performance across the department in the academic year.)
2015	VP Research - Undergraduate Student Research Award, SFU. (Awarded for the research project “Robust program for automated statistical imputation of the Alzheimer’s Disease Neuroimaging Initiative (ADNI) data”.)
2014	April Allen Memorial Undergraduate Scholarship, SFU.
2014	President’s Honour List, SFU.
2013 - 2016	Dean’s Honour List, SFU.

Services

Reviewer for AISTATS 2021, PLOS ONE, Communications in Statistics - Theory and Methods

Technical Skills

Programming Languages: Python, JAVA, R, Julia, MATLAB • **Tools:** Hadoop, Spark • **Cloud Services:** AWS, GCP