

Chi-Kuang Yeh, PhD      

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Assistant Professor – Georgia State University

Department of Mathematics and Statistics

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Research Areas

METHODOLOGY

• Functional data analysis • Statistical machine learning and high-dimensional inference • Dependence modeling • Optimal design of experiments

APPLICATION

• Biomedical and industrial data • Neuroscience • Drug development • Finance • Astronomy and Physics

Education

- 2023 PH.D. in Statistics, University of Waterloo, ON, Canada
Advisor: Gregory Rice & Joel A. Dubin
Thesis: *Methods in Functional Data Analysis: Forecast Evaluation, Robust Serial Dependence Measures, and a Spatial Factor Copula Model*
- 2018 M.Sc in Statistics, University of Victoria, BC, Canada
Advisor: Julie Zhou
Thesis: *Optimal Regression Design under Second-order Least Squares Estimator: Theory, Algorithm and Applications*
- 2016 B.Sc (H.) in Mathematics & Statistics with minor in Computer science, University of Victoria, BC, Canada

Professional Appointment

- 2025– ASSISTANT PROFESSOR, Department of Mathematics and Statistics, Georgia State University (GSU), GA, USA.
- 2026 – ASSOCIATE FACULTY, Brains & Behavior Faculty, Neuroscience Institute, GSU, GA, USA.
- 2025– ASSOCIATE FACULTY, Center for Cosmic Ray Studies, GSU, GA, USA.
- 2024–25 CANSSI DISTINGUISH POSTDOCTORAL FELLOW, Department of Mathematics and Statistics, McGill University, QC, Canada.
Mentor: Peijun Sang, Archer Yi Yang, Qihuang Zhang & Celia M.T. Greenwood
- 2023–24 CANSSI DISTINGUISH POSTDOCTORAL FELLOW, Department of Statistics and Actuarial Science, University of Waterloo (UWaterloo), ON, Canada.
Mentor: Peijun Sang, Archer Yi Yang, Qihuang Zhang & Celia M.T. Greenwood
- 2023–25 ASSOCIATE POSTDOCTORAL FELLOW, Mila – Quebec AI Institute, QC, Canada.
Host: Archer Yi Yang
- 2024 SESSIONAL INSTRUCTOR, UWaterloo, ON, Canada.
- 2018–25 MEMBER, Waterloo Health Data Science Lab, UWaterloo, ON, Canada.
Host: Joel A. Dubin
- 2019–20 STATISTICAL CONSULTANT, Statistical Consulting and Collaborative Research Unit and the Survey Research Centre, UWaterloo, ON, Canada.

Director: Martin Lysy

Publications

* INDICATES STUDENT AUTHOR; + FOR ALPHABETICAL LISTING

Published

- Liu, S., Yeh, C.-K., Zhang, X., Tian, Q., & Li, P. (2025). Positive and unlabeled data: Model, estimation, inference, and classification. *Journal of the American Statistical Association*, 120, 2547–2558. [LINK].
- Yeh, C.-K. & Sang, P. (2025). Variable selection in multivariate functional linear regression. *Statistics in Bioscience*, 17, 17–34. [LINK].
- Yeh, C.-K., Rice, G., & Dubin, J. A. (2023). Functional spherical autocorrelation: A robust estimate of the autocorrelation of a functional time series. *Electronic Journal of Statistics*, 17, 650–687. [LINK].
- Yeh, C.-K., Rice, G., & Dubin, J. A. (2022). Evaluating real-time probabilistic forecasts with application to national basketball association outcome prediction. *The American Statistician*, 76, 214–223. [LINK].
- Yeh, C.-K. & Zhou, J. (2021). Properties of optimal regression designs under the second-order least squares estimator. *Statistical Papers*, 62, 75–92. [LINK].

Preprints

- Kim, M., Rice, G., Zhao, Y., & Yeh, C.-K. *FTSgof: White noise and goodness-of-fit tests for functional time series in R*.
- Yeh, C.-K. & Zhou, J. *CVXSADes: A stochastic algorithm for constructing exact optimal regression designs*. [LINK].
- Wang, X., Li, Y., Wu, H., Lu, Q., Yeh, C.-K., Chang, X.-W., & Song, Z. *Patients-Like-Me: Explainable language modeling by variational expectation maximization*.
- *Zhang, Z., Hung, Y.-T., Ding, L., & Yeh, C.-K. *Quantifying and auditing LLM evaluation via positive-unlabeled learning*.
- Gao, L. L., Yeh, C.-K., Wong, W. K., & Zhou, J. *Further insights into E-optimal regression designs with applications to biomedical problems*.
- Yeh, C.-K., Gao, L. L., Wong, W. K., & Zhou, J. *Equivalence theorems and methods for finding optimal designs under multiple optimality criteria, including E-optimality*.
- Yeh, C.-K., Wong, W. K., & Zhou, J. *Single and multiple objective optimal designs for group testing experiments*. [LINK].

Software

- Yeh, C.-K., Zhou, J. & Hou-Liu, J.. Rpackage “SLSEdesign”. [CRAN] [GITHUB]
- Kim, M., Yeh, C.-K., Zhao, Y. & Rice, G.. Rpackage “FTSgof”. [CRAN] [GITHUB]
- Yeh, C.-K., Tian, Q., Liu, S., Li, P. & Zhang, X. Rpackage “PUEM”. Upon Request.
- Yeh, C.-K., Dubin, J.A. & Rice, R. Rpackage “evalRTPF”. [GITHUB]

Fellowships

- 2023–25 CANSSI Distinguish Postdoctoral Fellowship, Canadian Statistical Sciences Institute (\$ 70,000 CAD/year)

Awards & Honours

- 2025 Best Presentation Award, (Bio)Statistics Research and Career Day, McGill University
- 2021–23 Queen Elizabeth II Graduate Scholarship, Government of Ontario (\$ 30,000 CAD)
- 2020–23 President’s Graduate Scholarship, University of Waterloo (UWaterloo) (\$ 45,000 CAD)
- 2022 Statistics and Actuarial Science Best Research Presentation Prize, SAS Research Presentation day, UWaterloo (\$ 500 CAD)

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| 2020–21 | Ontario Graduate Scholarship, Government of Ontario (\$ 15,000 CAD) |
| 2018–21 | Mathematics Domestic Doctoral Award, UWaterloo (\$ 20,000 CAD) |
| 2018–20 | Mathematics Domestic Graduate Scholarship, UWaterloo (\$ 12,000 CAD) |
| 2019–22 | Statistics & Actuarial Science Chair's Award, UWaterloo (\$ 5,000 CAD) |
| 2019 | University of Waterloo Graduate Scholarship, UWaterloo (\$ 1,000 CAD) |
| 2018 | Student Travel Award, Statistical Society of Canada (\$ 150 CAD) |
| 2018 | Graduate Student Conference Travel Grant, UVic (\$ 500 CAD) |
| 2018 | CUPE Conference Travel Award, UVic (\$ 250 CAD) |
| 2017–18 | Faculty of Graduate Studies Scholarship, UVic (\$ 6,000 CAD) |
| 2017 | Florence and Wallace Wilkinson Memorial Award, UVic (\$ 3,370 CAD) |
| 2016 | University Scholarship, UVic (\$ 4,000 CAD) |
| 2010 | Summit Entrance Scholarship, Simon Fraser University (\$ 3,500 CAD) |

Presentations

* INDICATES FOR STUDENT PRESENTER

PLENARY SPEAKER

2026 **Optimal design of experiment** (Scheduled) February 21, Georgia Scientific Computing Symposium, University of Georgia, GA, USA.

INVITED

2026 **Single and multiple objective optimal design for group testing experiment** (Scheduled) February 26, Departmental Seminar, New Jersey Institute of Technology, NJ, USA.

2025 **Robust serial-dependence measure for functional time series**, May 21, Departmental Seminar, Department of Mathematics and Statistics, Concordia University, Montreal, QC, Canada.

Positive and unlabelled data: model, estimation, inference, and classification, February 19, Departmental Seminar, Department of Epidemiology, Biostatistics and Occupational Health, McGill University, Montreal, QC, Canada.

Methods for dependent functional data in biomedical and industrial applications, February 4th, Departmental Colloquium, Department of Mathematics and Statistics, University of South Florida, Tampa, FL, USA.

Methods for dependent functional data in biomedical and industrial applications, January 31st, Departmental Colloquium, Department of Mathematics and Statistics, GSU, Atlanta, GA, USA.

Methods for dependent functional data in biomedical and industrial applications, January 29th, Departmental Colloquium, Department of Mathematical Sciences, University of Texas El Paso, El Paso, TX, USA.

Methods for dependent functional data in biomedical and industrial applications, January 8th, Departmental Colloquium, School of Mathematical and Statistical Sciences, Clemson University, Clemson, SC, USA.

2024 **Methods for dependent functional data in biomedical and industrial applications**, December 4th, Departmental Colloquium, Department of Statistics, University of Missouri, Columbia,

MO, USA.

Methods for dependent functional data in biomedical and industrial applications, November 26, Departmental Colloquium, University of Manitoba, Winnipeg, MB, Canada.

Evaluating real-time probabilistic forecasts for sports games outcome prediction, June 8, the Sixth ICSA-Canada Chapter Symposium, Crowne Plaza Niagara Falls-Fallsvue, Niagara Falls, ON, Canada.

Mass spectrometry data: a spatial functional data approach, June 5, Statistical Society of Canada Annual Meeting, Memorial University of Newfoundland, St. John's, NL, Canada.

Robust serial dependence measures of a functional time series, February 23, UVic-PIMS data science seminar series, University of Victoria with Online Broadcast, Victoria, BC, Canada.

2023 **Functional spherical autocorrelation: robust autocorrelation estimation of a functional time series**, July 17th, 64th ISI World Statistics Congress, Ottawa, ON, Canada.

Functional spherical autocorrelation: a robust estimate of the autocorrelation of a functional time series, March 8, Institution of Statistics Seminar, Academia Sinica, Taipei, Taiwan.

CONTRIBUTED

2025 **Development of a low-cost, temperature-compensated readout system for global Muon detector network**, December 16, by H. A. Tharindu G. Hettiarachchi*, X. He and E. H. Mudiyanse-lage and V. M. Sadykov¹, T. Singh and Yeh, C.-K.. AGU25, New Orleans Ernest N. Morial Con-vention Center, New Orleans, LA, USA.

East-West Asymmetry in Cosmic Ray Muon Flux as a Probe of Geomagnetic Field Changes, De-cember 16, by E. H. Mudiyanse-lage*, He, X., Hettiarachchi, T., Sadykov, V. M., Singh, T., and C.-K. Yeh. AGU25, New Orleans Ernest N. Morial Convention Center, New Orleans, LA, USA.

Evaluating Real-Time Probabilistic Forecasters for Sports Games Outcome Prediction (*Best pre-sentation award*), May 9, (Bio)Statistics Research and Career Day, McGill University, QC, Canada.

2024 **Positive and unlabeled data: model, estimation, inference, and classification**, September 10, CANSSI Quebec's Postdoc Day 2024, Concordia University, QC, Canada.

2023 **Functional spherical autocorrelation: robust autocorrelation estimation of a functional time series**, August 7, Joint Statistical Meetings, Toronto, ON, Canada.

Functional spherical autocorrelation: robust autocorrelation estimation of a functional time series, May 29, Statistical Society of Canada annual meeting, Carleton University, Ottawa, ON, Canada.

2022 **Functional spherical autocorrelation: a robust estimate of the autocorrelation of a functional time series**, October 15, Third Waterloo Student Conference in Statistics, Actuarial Science and Finance, ON, University of Waterloo (UWaterloo), Canada.

Projection based model validation and identification methods for functional time series, June 2, Statistical Society of Canada Annual Meeting, Virtual.

Projection based model validation and identification methods for functional time series, March 11, Statistics and Actuarial Science Virtual Research Presentation Day, UWaterloo, ON, Canada.

2021 **Evaluating real-time updated probabilistic forecasts with application to National Basketball Association outcome prediction**, June 10, Statistical Society of Canada Annual Meeting, Virtual.

Evaluating real-time updated probabilistic forecasts with application to National Basketball Association outcome prediction (*Best presentation award*), February 5th, Statistics and Actuarial Science Virtual Research Presentation Day, UWaterloo, ON, Canada.

Evaluating the performance of continuously updated probabilistic forecasts with application to National Basketball Association, January 20, Student Seminar Series, Department of Statistics and Actuarial Science, UWaterloo, ON, Canada.

2020 **Evaluating probabilistic forecasts with an application in National Basketball Association**, Health Data Science Lab, UWaterloo, ON, Canada.

2019 **Properties of optimal regression designs under second-Order least squares estimator**, Waterloo Student Conference in Statistics, Actuarial Science and Finance, UWaterloo, ON, Canada.

Current and past research conducted on freely available multi-center (eICU) and single-center (MIMIC's) databases for critical care research, Health Data Science Lab, UWaterloo, ON, Canada.

2018 **Properties of optimal regression designs under second-order least squares estimator (*SSC Student travel award*)**, Sixth Canadian Statistics Student Conference, McGill University, QC, Canada.

Optimal regression designs under the second-order least squares estimator, Joint Statistical Meetings, Vancouver downtown, BC, Canada.

2017 **On particle swarm optimization algorithm to solve statistical problems**, Department of Mathematics and Statistics, UVic, BC, Canada.

Teaching Experience

INSTRUCTOR – GEORGIA STATE UNIVERSITY

Bayesian Data Analysis (2026 Spring)

SAS Programming & Data Analysis (2026 Spring)

Computational Methods in Statistics (2025 Fall, 17 Students, 4.8/5)

INSTRUCTOR – UNIVERSITY OF WATERLOO

Probability (2024 Winter, 4.5/5).

COURSE CODEVELOPER - UNIVERSITY OF VICTORIA

Data Science (2018 Spring)

GUEST LECTURER - UNIVERSITY OF VICTORIA

“Introduction to R Markdown and \LaTeX ” in Stat 353 Applied Linear Regression, Host: Laura L.E. Cowen (2017 Fall).

TUTORIAL INSTRUCTOR

University of Waterloo

Statistics (2019 Spring & Winter).

University of Victoria

Data Science (2018 Spring), **Calculus I – Pathway/ESL** (2017 Fall).

TEACHING ASSISTANT

University of Waterloo

Applied Linear Models (2022 Fall, 2020 Fall & Spring), **Sampling Theory and Practice** (2022 Winter), **Applied Probability** (2021 Fall & Spring) **Forecasting** (2021 Winter & Fall, 2019 Spring), **Experimental Design** (2018 Fall), **Statistics** (2018 Fall, 2019 Winter & Spring), **Theoretical Time Series** (2021 Winter), **Mathematical Statistics** (2019 Winter).

University of Victoria

Statistics for Life Sciences I (2018 Summer, 2014 Fall), **Data Science** (2018 Spring), **Finite Mathematics** (2018 Spring), **Calculus I – Pathway** (2017 Fall, 2015 Spring), **Calculus for Social and Biological Science** (2017 Spring, 2015 Fall), **Introductory to Probability and Statistics I** (2016 Fall), **Calculus II** (2015 Fall), **Logic and Foundation** (2014 Fall).

OTHER - UNIVERSITY OF VICTORIA

2017

Teaching Assistant Conference Certificate, Learning and Teaching Centre (LTC), UVic
Teaching Assistant ProD Certificate, LTC, UVic
Teaching for International Student Certificate, LTC, UVic
Teaching Fundamental Certificate, LTC, UVic.

LANGARA COLLEGE

2012–13

Math & Stats Activity Centre, Math tutor, Langara College, Vancouver, BC, Canada.

Mentoring

AT GEORGIA STATE UNIVERSITY

2025–

Wenpu Ma, PhD student in Biostatistics, Georgia State University, USA (co-supervisor: Gengsheng Qin)

2025–

Zilong Zhang, PhD student in Machine Learning and Data Science, Georgia State University, USA

2026–

Kalen Jinnah, MSc student in Applied Statistics, Georgia State University, USA

2026–

Muhammad Aimal Rehman, MSc student in Applied Statistics, Georgia State University, USA

2026–

Zhili Lu, MSc student in Applied Statistics, Georgia State University, USA

OUTSIDE GEORGIA STATE UNIVERSITY

2025–

Yi Xing Hu, M.Sc. Graduate in Human Genetics, McGill University, Canada

2023–

Mengqi Xu, PhD Student in Statistics (Biostatistics), UWaterloo, Canada.

2023–24

Tatiana Krikella, PhD Candidate in Statistics (Biostatistics), UWaterloo, Canada. Next Position: CANSSI distinguish postdoctoral fellow. [interview]

Service and Outreach

ORGANIZING AND VOLUNTEER SERVICE

2026

SLDS 2026: Inference and Intelligence (Scheduled, Nov 1-3), Session Organizer, Marriott at the Brooklyn Bridge, New York City, NY, USA.

The Seventh ICSA-Canada Chapter Symposium (Scheduled, Aug 7-9), Session Organizer, McGill University, QC, Canada.

- 4th Annual Graduate Conference for Research, Scholarship, & Creative Activity** (Scheduled, Feb 11), Judge, Student Center East, GSU, GA, USA.
- 2025 **2026 SPES + Q&P Student Paper Competition**, Reviewer, Joint Statistical Meetings, Boston, MA, USA.
- Statistical Inference Discussion Group**, Sep–Dec, Organizer, GSU, GA, USA.
- Graduate Program Fair**, Departmental Representative (along with R. Jeter, I. Belykh, Z. Li and M. Grinshpon), Oct 29, Session Organizer, GSU, GA, USA.
- 2023–24 **Transfer Learning reading group**, Co-organizer, UWaterloo, Canada.
- 2024 **The Sixth ICSA-Canada Chapter Symposium**, Volunteer, Crowne Plaza Niagara Falls-Fallsview, Niagara Falls, ON, Canada.
- The Statistics Society of Canada Annual Meeting**, Student poster judge, St. John’s, Newfoundland and Labrador, Canada.
- The Twelfth Annual Canadian Statistics Student Conference**, Judge, St. John’s, NL, Canada.
- 2023 **Fourth Waterloo Student Conference in Statistics, Actuarial Science and Finance**, Judge, UWaterloo, ON, Canada.
- 2020–23 **Student Seminar Series**, Organizer, Departmental Statistics and Actuarial Science, UWaterloo, ON, Canada.
- 2022 **Third Waterloo Student Conference in Statistics, Actuarial Science and Finance**, Organizing Committee and Session chair, UWaterloo, ON, Canada.
- 2022 **ASA Datafest**, Mentor, American Statistical Association, UWaterloo, ON, Canada.
- 2020 **Second Waterloo Student Conference in Statistics, Actuarial Science and Finance**, Organizing Committee and session chair, UWaterloo, ON, Canada.
- 2019 **First Waterloo Student Conference in Statistics, Actuarial Science and Finance**, Organizing Committee and session chair, UWaterloo, ON, Canada.
- 2018 **ICSA Booth at Joint Statistical Meeting**, Volunteer, Vancouver, BC, Canada.

GRADUATE STUDENT THESIS COMMITTEE

- 2026– **Enosh Herath Mudiyansele**, PhD Candidate in Physics, Supervisor: Xiaochun He, Georgia State University.
- 2025– **Si Han Jia**, PhD Candidate in Biostatistics. Supervisor: Gengsheng Qin, Georgia State University.

JOURNAL REFEREE

- 2026 Statistics and Computing, Journal of Statistical Computation and Simulation
- 2025 Canadian Journal of Statistics, Journal of Computational and Graphical Statistics, Journal of Nonparametric Statistics, Entropy
- 2024 The American Statistician, Statistical Papers
- 2023 Computational Statistics & Data Analysis, The American Statistician
- 2022 TEST

Membership

- 2018– Statistical Society of Canada
- 2018– International Chinese Statistical Association
- 2018– American Statistical Association
- 2018–2022 Western North American Region of the International Biometric Society
- 2019–2024 Eastern North American Region of the International Biometric Society

Media Coverage

- 2023 CANSSI Distinguish Postdoctoral announcement

Reference

Available upon request.

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https://chikuang.github.io/CV_YCK_Sep2_25.pdf