

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: <i>Methods in Functional Data Analysis: Forecast Evaluation, Robust Serial Dependence Measures, and a Spatial Factor Copula Model</i>
2018	M.Sc in Statistics, University of Victoria, BC, Canada Advisor: Julie Zhou Thesis: <i>Optimal Regression Design under Second-order Least Squares Estimator: Theory, Algorithm and Applications</i>
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)

2020-21	Ontario Graduate Scholarship, Government of Ontario (\$ 15,000 CAD)
2018-21	Mathematics Domestic Doctoral Award, UVic (\$ 20,000 CAD)
2018-20	Mathematics Domestic Graduate Scholarship, UVic (\$ 12,000 CAD)
2019-22	Statistics & Actuarial Science Chair's Award, UVic (\$ 5,000 CAD)
2019	University of Waterloo Graduate Scholarship, UVic (\$ 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

### PLINARY 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-Fallsview, 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. Mudiyanselage and V. M. Sadykov1, T. Singh and Yeh, C.-K.. AGU25, New Orleans Ernest N. Morial Convention Center, New Orleans, LA, USA.

**East-West Asymmetry in Cosmic Ray Muon Flux as a Probe of Geomagnetic Field Changes**, December 16, by E. H. Mudiyanselage\*, 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 presentation 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 dorecasts 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 L<sup>A</sup>T<sub>E</sub>X”* 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), Waterloo, Canada.

2023-24

**Tatiana Krikella**, PhD Candidate in Statistics (Biostatistics), Waterloo, 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 Mudiyanseilage**, PhD Candidate in Physics, Supervisor: Xiaochun He, Georgia State University.

**2025- Sihan 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.*

