

**UNIVERSITY OF TORONTO** 

# STATISTICAL SCIENCES RESEARCH PROGRAM (UTSSRP)

Engage in cutting-edge research projects under the guidance of top statisticians. Gain hands-on experience in statistical theory, data analysis, and software application. 2025

### **About UTSSRP**

The University of Toronto's Department of Statistical Sciences is excited to invite applications for its inaugural Summer Research Program, taking place from June 2–13, 2025. Designed for undergraduates passionate about statistics and mathematics, the UTSSRP provides a unique opportunity to work alongside some of the leading minds in the field. Participants will delve into complex data analysis, theoretical statistics, and contribute to ongoing research projects that have real-world applications.



#### Collaborative

#### **Research Experience**

Students will collaborate in teams to tackle either theoretical or applied research projects under the guidance of our esteemed faculty and mentorship from doctoral candidates. The program culminates with participants presenting their findings through both a lightning talk and a poster session during the final day's celebratory reception.

#### Intensive Short Courses

Our program includes a series of engaging short courses that delve into both theoretical and applied aspects of statistics, delivered by internationally acclaimed faculty members. These courses are designed to provide intensive, graduate-level instruction in key statistical methodologies and frameworks.

#### Research Seminars

Our summer research program features a series of captivating seminars where faculty members will present their cuttingedge research, providing students with a window into the vibrant scholarly environment at the University of Toronto. These seminars not only highlight current scientific inquiries but also explore the varied career paths that our PhD graduates follow.

### **Experience U of T**

Immerse yourself in academic excellence and urban vibrancy this summer at the University of Toronto.

#### Knox College Residence 🤗

Participants will be housed at Knox College Residence, known for its beautiful architecture and central location. Founded in 1844, Knox College is one of the oldest colleges in Toronto, offering a historical backdrop to your summer experience. All accommodations and travel expenses are fully covered by the program.



Toronto in the summer is vibrant with festivals, open-air events, and cultural activities. Beyond the rigorous academic schedule, you'll have ample opportunity to explore the city's rich tapestry of neighborhoods, cuisine, and entertainment.



## Apply

#### Eligibility

To be eligible for the summer school, applicants must:

- Be Canadian citizens or permanent residents.
- Be full-time university students currently in sophomore or junior year
- (starting 3rd or 4th year in Fall 2025).
- Have an average grade of A- (3.7) or above in mathematics and statistics
- courses
- Be available to attend the whole two-week event.

#### **Application**

- UTSSRP Application Form
- A CV or resume
- Transcript(s) (unofficial ones are accepted)
- One reference letter from a professor who can comment on your academic and research abilities and potential. The recommendation letter should be sent by the writer directly to <u>communications.statistics@utoronto.ca</u> by March 21, 2025.
- Select up to 3 preferred supervisors for the research project during the
- program. Note: We do not guarantee that all students will be matched with
- their preferred supervisors . However, all projects will be fun and valuable
- for the students' development.

**To be considered**, please email <u>communications.statistics@utoronto.ca</u> to receive the upload link to a secure folder.

Your full application must be received by March 21, 2025 at 11:59 pm ET.

UTSSRP Application Form download 🔗

# **Supervisors**

Each participant will select a supervisor from a distinguished group of faculty, who will guide their research throughout the program. Below, you will find brief descriptions of our faculty supervisors and their areas of specialization. For more detailed profiles and their complete academic contributions, please visit their profiles on our website.



#### Meredith Franklin 🖉

An expert in spatiotemporal methods, Dr. Franklin focuses on estimating air pollution impacts with precision. Her innovative methods are crucial for environmental health research.



#### Silvana Pesenti 🖉

Dr. Pesenti specializes in risk assessment under model uncertainty. Her work ensures robust decision-making in finance and insurance, particularly under uncertain conditions.



#### Leonard Wong 🖉

Focusing on optimal transport problems, Dr. Wong's research is at the forefront of mathematics, influencing fields from economics to engineering.



#### Stanislav Volgushev 🖉

Dr. Volgushev is known for his deep insights into the statistical properties of complex models. His research interests include robust statistics, causal inference, and the foundations of statistical learning.



#### Piotr Zwiernik 🖉

Dr. Zwiernik specializes in algebraic statistics and its applications to problems in machine learning, focusing particularly on the geometry of statistical models.

# **Research Talks and Courses**

Explore the frontiers of statistical sciences through research talks by our faculty, who will also lead specialized courses throughout the UTSSRP.



#### Gwendolyn Eadie 🖉

Professor Eaddie's teaching emphasizes practical applications and innovative thinking in statistical inference. Applying her expertise to unravel complex problems in astrophysics and other data-intensive disciplines.



#### Jeffrey Rosenthal 🖉

Professor Rosenthal specializes in Markov chains and Monte Carlo methods, crucial for sophisticated statistical computations and simulations. His courses delve into the theoretical underpinnings and practical implementations that are foundational to modern statistics.



#### Dan Roy 🖉

Professor Roy focuses on the dynamics of online learning algorithms, which are pivotal in adapting to evolving data in real time. His research integrates statistical theory with machine learning to develop resilient and efficient predictive models.



#### Nathan Taback 🖉

Professor Taback, Associate Chair of Undergraduate Studies in Statistics is dedicated to the field of causal inference, teaching students to apply statistical methods to uncover causal relationships in complex datasets.



#### Elena Tuzhilina 🖉

Professor Tuzhilina tackles the complexities of analyzing highdimensional data, guiding students through the latest methodologies to handle, visualize, and interpret large datasets. Her courses are designed to equip students with critical skills in data reduction and model selection.





### CONTACT

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