



# COMPUTATIONAL MATHEMATICS

In the era of big data and ever-increasing computer power, Computational Mathematics methods are key drivers of progress and innovation in many areas of application that include finance, data science (including machine learning), science and engineering, and numerous other areas of industry and government. Our interdisciplinary Master's program is taught by professors from each of the five academic units in the Faculty of Mathematics.

Graduates will be able to effectively deploy a wide range of mathematical, statistical and computational techniques to solve large problems in science, industry, big data and commerce; to develop, enhance and maintain the relevant software tools; and to communicate results of complex methods and models to end-users.

## PROGRAM

### MASTER OF MATHEMATICS (MMATH) IN COMPUTATIONAL MATHEMATICS

Research option

Coursework option

Co-op available

- › Twelve-month, intensive Master's program in interdisciplinary computational mathematics.
- › A fast track to PhD studies or to a high-end creative job in banking, technology, data science, manufacturing, biomedical applications, etc.
- › **Research option:** Six courses in the first two terms, and a supervised research project in the third term; this research-based program option is fully funded.



UNIVERSITY OF  
**WATERLOO**

FACULTY OF  
MATHEMATICS

- > **Coursework option:** Eight courses over twelve months, not funded.
- > **Co-op option:** Students can apply computational mathematics methods to real-life problems in the world of banking, machine learning, insurance, data science, manufacturing, or government. Co-op adds one term to the program duration.
- > Our program features core courses in the following areas:
  1. Discrete computational mathematics
  2. Numerical methods
  3. Computational statistics and machine learning
  4. Scientific computing
  5. Computational optimization

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## ADMISSION REQUIREMENTS

An overall 78% average or its equivalent for undergraduate work; A four-year Honours Bachelor's degree with a specialization in some area of the mathematical, statistical and computer sciences, or in another program with a strong mathematical component, including engineering, economics, or any of the physical sciences.

### Application materials

- > Résumé
- > Supplementary information form
- > Transcript(s)
- > Three academic references
- > English Language Proficiency (ELP)

## DEADLINE

**FALL 2021**  
January 15, 2021

## CONTACT US

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