#### **YOU+WATERLOO** *Co-create* the future.

# YOU BELIEVE DATA SAVES LIVES



### **HE DOES TOO**

Waterloo professor Chris Bauch combines new data sources, including social media and mobility data, with game theory to create innovative mathematical models that accurately predict the spread of infectious diseases like COVID-19.

"Big data has been compared to the invention of the microscope several centuries ago, which completely opened up a new world

of microbiology. And in the same way, we now have enormous amounts of data that we can analyze. But we need mathematics to help us interpret what's happening."

#### **MATHEMATICS 4 (M4)**

Fueling advances in data science to solve global problems

#### **IMPACT**

- Create data-based solutions in health care, environment, and business
- Launch dynamic data-based start-ups
- Develop graduates fluent in the language of data analytics





#### We're in the midst of a data revolution

Vast amounts of data are being generated every second. When effectively mined, secured, and analyzed, this data can yield profound insights into the world around us. It can help us to improve health care, fight climate change, spark economic growth and build smart, resilient cities. Yet, the full promise of the data revolution has yet to be realized.

### The University of Waterloo is leading the data revolution

As North America's only dedicated Faculty of Mathematics, we are unique in bringing together the three disciplines crucial to data science: computer science (through the Cheriton School of Computer Science) statistics and mathematics. Leveraging expertise in each of these areas, we are driving innovation at every stage of the data processing lifecycle — from data cleaning to security to analytics to entrepreneurship.

#### We will create Mathematics 4 (M4), a stunning space designed to accelerate research, education and entrepreneurship in data science

M4 will facilitate greater collaboration amongst researchers in different fields of data science, equip faculty and students with stateof-the-art computational resources, expand our entrepreneurship and outreach programming and create vibrant new student experiences that foster wellness and community. It will become a meeting place for academia, government and industry partners seeking to harness data to fuel prosperity.

## Together, we can unlock the insights in data for a better world

By supporting M4, you will create data-based innovations in health care, environment and business, disruptive start-ups and data-fluent, etrepreneurial leaders of the future.



#### GIVE TO M4

Harness the power of data to develop solutions to the world's biggest challenges in health, sustainability, business and society.



Alex Lippert Director of Advancement, Faculty of Mathematics



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