

**THIS IS**  
**THE TRENT CAMPAIGN FOR**  
**MOMENTOUS**  
**CHANGE**

**FACULTY OF SCIENCE**

Case for support

# **mo-men-tous**

of great importance or significance, especially in its bearing on the future.



# A TIME FOR MOMENTOUS CHANGE

From the health of our planet to the sustainability of our economies to the strength of communities, momentous change is happening right now, all around us.

Built on a history of progress, at Trent University we are driven to **understand, activate, and steer** change for good. Trent students, faculty, and staff join this scholarly community because of their deep desire to participate in – and lead – momentous change. Their research and learning are important, and it requires support and investment from individuals and organizations near and far.

The world is changing at a rapid rate and needs bold, innovative leaders who can draw from multiple science and social disciplines to address complex challenges.

Trent's Faculty of Science attracts individuals who value our interdisciplinary, creative, experiential, and inclusive learning environment – students and faculty with the curiosity to explore new avenues of understanding, the courage to question their own beliefs and knowledge systems, and the desire to draw from both Indigenous and Western knowledges.

**The Campaign for Momentous Change will enable discovery in the Sciences through collaborative and interactive teaching and learning. Students will engage with real-world problems and develop innovative solutions in inspiring places with the latest technologies and tools at their fingertips.**

**“ Trent students, researchers and faculty push the boundaries of what’s possible. Through **scientific research, experiential learning, and community engagement**, they are applying their knowledge to **solve the world’s most significant challenges.**”**

**Dr. Holger Hintelmann**  
Dean of Science



# THE PILLARS OF MOMENTOUS CHANGE

Trent University's most ambitious and comprehensive philanthropic campaign is built on three consequential pillars that shape and inspire momentous change.

## Discovery

Momentous change happens when the Sciences become a powerful catalyst for new discoveries. The Faculty of Science emboldens students to advance scientific knowledge and understanding for an optimistic vision and sustainable future.

## Students

Momentous change happens when financial barriers to education are removed, exemplary students are celebrated, collaboration is enabled, and student wellness is prioritized.

## Places

State-of-the-art facilities strengthen our capacity to address the world's complex challenges to deliver momentous change. To position the Faculty of Science at the forefront of discovery, we need to invest in an ecosystem for idea generation.

# MOMENTOUS CHANGE THROUGH DISCOVERY

At Trent, we believe that tackling today's highly complex scientific problems requires scientists who want to see and do things differently. It requires individuals who understand that the challenges we face are often intertwined with other disciplines.

For this reason, the Faculty of Science is differentiated by our innovative and multidisciplinary teaching, learning and research that empowers students to explore the world beyond their area of study.

We believe that students develop incomparable perspectives through learning beyond the classroom. Students conduct consequential research with leading professors, including six Canada Research Chairs and two prestigious named chairs in the Sciences, on our extensive campus lands, in our communities and around the globe.

For example, Trent students and faculty are creating models to better understand

neurological diseases, conserving wildlife through genomics and developing clean sustainable energy solutions as alternatives to fossil-based petrochemicals.

With your support, the Faculty of Science can bolster experiential learning opportunities for students; attract world-class scholars to supercharge growing disciplines such as health and data sciences; create new and powerful academic programs with national and global distinction; and prepare students to lead change in unexpected areas.

Addressing complex problems requires unrestrained discovery. This is only possible when students get to experience the world, explore without limits, and search beyond the lab and classroom.

The Trent Campaign for Momentous Change provides opportunities to support discovery within the Faculty of Science through new programs, experiential learning opportunities, endowed chairs, and more.

To learn more, visit [trentu.ca/momentous](https://trentu.ca/momentous)





SPOTLIGHT

# CLIMATE CHANGE

## Tackling the World's Leading Environmental Issue

Climate change is the leading global environmental issue of our time, and its impact permeates every aspect of life – business operations, politics and policy development, social justice movements, healthcare, law, and more.

To understand the intricate systems that drive climate change, we need collaboration, climate science experts, and innovators. We need immediate action.

Identifying new ways to mitigate and reverse the impacts of climate change is a focus of students in many disciplines within the Sciences.

From developing novel chemical processes that turn carbon-rich waste into activated carbon, to addressing food insecurity through sustainable agriculture practices or exploring the health of our lakes and forests – Trent students are leading change towards a sustainable future in our communities – locally and across the globe.

With your support, we can lead the discovery of sustainable climate solutions for a greener future through the creation of eco-preneurship opportunities and new computational and laboratory spaces that bring together academic, entrepreneurial and community collaborators.

Learn more about how addressing climate change leads to momentous change and ways you can support Trent's Faculty of Sciences at [trentu.ca/momentous](https://trentu.ca/momentous)

# MOMENTOUS CHANGE POWERED BY STUDENTS

The Faculty of Science is empowering a new generation of scientists, researchers, and changemakers who will bring about momentous change where it is needed the most – in our communities, locally, nationally and globally.

By investing in Science students, you are removing barriers to education, providing opportunities for new ideas to flourish, and enabling students to participate in research where interdisciplinary cross-pollination sparks new scientific discoveries.

At its heart, Trent's Faculty of Science pushes the boundaries of what's possible. Through scientific research, experiential learning, and community engagement, our students are helping to develop solutions to challenges like the health of aging communities, reduction of chemical pollutants, saving rivers and lakes, and more.

With your support, we can celebrate our students' groundbreaking discoveries, overcome traditional academic barriers, and create dynamic new synergies across disciplines to empower tomorrow's change leaders.

Addressing our complex global problems requires new ways of thinking – and new ways of thinking require investment in Science students who can bring a human-centered perspective to our technology and data-driven world.

The Trent Campaign for Momentous Change provides opportunities to support students in the Faculty of Science through scholarships, bursaries, travel funds, student wellness and more.

To learn more, visit [trentu.ca/momentous](https://trentu.ca/momentous)







SPOTLIGHT

# DEVELOPING DYNAMIC DATA SCIENCE

## Look Within (and Beyond) The Data

Virtually every organization and field of study relies on a plethora of complex datasets that address some of society's biggest challenges. Regardless of the problem you are trying to solve – climate change, sustainable development, healthcare, and beyond – if the ability to mine and analyze data doesn't exist, opportunities are missed.


Analyzing information requires more than the mere ability to crunch numbers. If you're not looking at data in a meaningful way, it is impossible to see an effective path forward for consequential change. It requires broad thinkers, and graduates who can activate both their creative and scientific understanding.

In Trent's Faculty of Science, students and faculty across disciplines approach big data from a collaborative lens to diversify their understanding and shift the way in which these complex issues are approached.

From analyzing wastewater data in the global fight against the COVID-19 pandemic, to looking at genome data to guide conservation efforts of species at risk, and working on big datasets to better understand the universe – students in the Sciences are uncovering new and effective pathways to momentous change in our data-driven world.

With your support, we can harness the insights that data science can bring to climate change mitigation, health sciences, business and more. Your investment in data sciences at Trent will support the development of high-tech computational facilities and will draw top scholars and students from across the globe to explore this growing field that is revolutionizing the way we look at the world.

Learn more about how quality data leads to momentous change and ways you can support Trent's Faculty of Sciences at [trentu.ca/momentous](https://trentu.ca/momentous)

A portrait of Dr. Wesley Burr, a man with a beard and glasses, wearing a blue blazer over a pink shirt. He is looking directly at the camera with a slight smile. The background is a blurred indoor setting with a lamp and a window.

**“ The developments we face in the next lifetime or two will define who we are as humans. We need to be prepared for that, and to be ready for the fact that our students will be graduating into a world that is not the same.”**

**Dr. Wesley Burr**  
Chair of Mathematics at Trent



# MOMENTOUS CHANGE FROM HERE

From the soils in a greenhouse to the stars of an observatory, the challenges tackled by science are found everywhere.

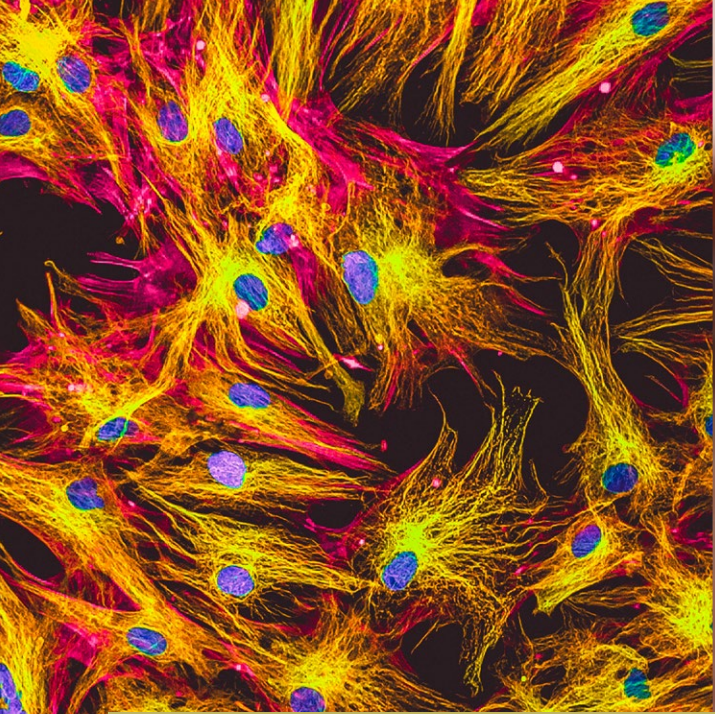
These places, and the state-of-the-art equipment they hold – like Trent’s world-class Water Quality Centre and Biomaterials Research Lab – are the origins of tomorrow’s achievements. From major advancements in climate change to revelations under a microscope, these discoveries will be traced back to the investments made in Trent’s places of research and learning.

With your support, the Faculty of Science can create new facilities that house the latest technologies, enabling Trent to become a powerful incubator of new discoveries. This investment will empower our world-leading researchers and students to explore how we can build sustainable, symbiotic relationships with our planet and with each other.

Our world is rapidly changing. Facing these changes requires inspiring places that foster collaborative research and innovation, while sparking curiosity and discovery.

The Trent Campaign for Momentous Change provides opportunities to support the places of the Faculty of Science through capital investments in labs and equipment and endowments to maintain Trent’s outdoor learning spaces.

To learn more, visit [trentu.ca/momentous](https://trentu.ca/momentous)



SPOTLIGHT

# HEALTH SCIENCES

## Redefining Healthy Living

Understanding mental and physical health is complex. It requires a deep understanding of the drivers of human behaviour, lifestyle patterns and socio-economic factors. It requires a holistic approach to health that encompasses our entire lifecycle.

At Trent, students and faculty collaborate across disciplines to explore all facets of health and well-being. Here, students are working alongside world-renowned researchers to learn how to fight neurodegenerative disease; study the impact of exercise and physical activity on those with chronic conditions; explore the social determinants of health; solve healthcare puzzles through forensic science, and more.

Our exploration of health and well-being is underpinned by compassion, curiosity and the interplay between Indigenous and Western

knowledge systems. We believe that exploring new frontiers in the health sciences requires cutting-edge infrastructure, a breadth of vision, and wide collaboration.

With your support, the Faculty of Science can invest in the latest state-of-the-art equipment such as a confocal microscope, nuclear magnetic resonance spectrometer, or a new mass spectrometer. Your support can also create and revitalize laboratory spaces and create and revitalize laboratory spaces in which to train future-ready health professionals and health scientists.

To promote healthy communities, we need to understand the complexities that shape human health and well-being, and to understand those the world needs scientists who understand the social determinants of health.

Learn more about how health sciences lead to momentous change and ways you can support Trent's Faculty of Sciences at [trentu.ca/momentous](https://trentu.ca/momentous)

**“ My Trent experiences have positively shaped my research into brain disease. Trent’s small, close-knit community allows me to interact frequently with my supervisor and to independently develop new ideas for my cutting-edge research, which I hope one day will provide a piece to the puzzle.”**

**William Kim**

Environmental and Life Sciences Ph.D. student, researching in cooperation with the Harvard Medical School Department and Massachusetts General Hospital



**THIS IS A CALL TO THOSE  
WHO BELIEVE COMPLEX  
PROBLEMS REQUIRE SCIENCE,  
INTERDISCIPLINARY THINKING,  
AND REAL-WORLD EXPERIENCE.**

**THIS CAMPAIGN IS INSPIRED BY  
TRENT'S HISTORY OF SIGNIFICANCE,  
OUR FUTURE OF OPTIMISM, AND THIS  
MOMENT OF MOMENTUM.**

**THIS IS TRENT UNIVERSITY'S CAMPAIGN  
FOR MOMENTOUS CHANGE.**



# FACULTY OF SCIENCE

## Schools

Trent School of the Environment

## Departments

Biology

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Chemistry

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Computer Science

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Forensic Science

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Kinesiology

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Mathematics

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Physics and Astronomy

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Psychology

## Research Centres & Institutes

The Research Centres and Institutes at Trent play a critical role in our pursuit of research excellence with national and international recognition, diversity of research across scholarly disciplines, an emphasis on interdisciplinary research, and the involvement of students in research.

### Institutes

Indigenous Environmental Institute

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Institute of Integrative Conservation Biology

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Institute for Watershed Science

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International Institute for Environmental Studies

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Trent Biomaterials Research Program

### Centres

Canadian Environmental Modelling Centre

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Natural Resources DNA Profiling and Forensic Centre

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Trent Centre for Communicating Conservation

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Trent Centre for Materials Research

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Water Quality Centre



Be part of the momentous change.  
Join the campaign today.

**TRENTU.CA/MOMENTOUS**

**TO DISCUSS HOW YOU CAN MAKE  
MOMENTOUS CHANGE, CONTACT**

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