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I am excited by the work at the Rotman Institute of Philosophy ...

... which brings together philosophical and scientific perspectives to address deep and wicked problems. In the past year, the institute facilitated, through think tanks and reading groups, energetic and productive interdisciplinary discussions on topics that include the role of the state in public health crises, the ethical issues associated with artificial intelligence, and the philosophy of psychiatry.

The institute also hosted the 2022 Quantum Information Structure of Spacetime conference (QISS) at Western, bringing together presenters from across the world with an audience (virtual and face-to-face) of almost three hundred to discuss issues related to quantum space time and quantum information in an innovative format that combined fifteen-minute 'lightning

talks' with extended moderated discussions involving presenters and audience members. The hallmarks of these and other institute initiatives are dialogue and exchange, and the results are tangible interdisciplinary research successes in the form of awards, grants, and publications, as well as contributions to public, scientific, and political dialogue on critical issues.

The Institute has benefited tremendously from the contributions of outgoing Director Christopher Smeenk, and we are thrilled to welcome Mike Anderson into the interim director role. I look forward to the exciting projects and developments we will see under his leadership, including the development of new research and exchange partnerships with international partners.

JACQUELYN BURKELL
*Associate Vice-President (Research),
Western University*

A Message from the Acting Vice-President of Research

Our Western Research institutes – The [Bone and Joint Institute \(BJI\)](#), the [Institute for Earth and Space Exploration \(Western Space\)](#), the [Institute for Neuroscience \(WIN\)](#), and the [Rotman Institute of Philosophy \(Rotman\)](#) – have come together to support researchers who advance excellence in interdisciplinary research. This important work complements the strong faculty-based research programs at Western, thereby amplifying research impact and elevating the university's reputation locally, nationally and globally.

Institute programs and services enable institute members to participate in research that would otherwise not be achieved

through more traditional individual or team research work. With multiple mechanisms in place to identify important interdisciplinary research questions, support knowledge exchange, enhance interdisciplinary research training, and explore unique perspectives within and outside academia, our institutes have created a research environment that welcomes new ways of being, doing and thinking.

I look forward to seeing what they do next and encourage you to read the highlights from 2022 and to reach out to learn more about current activities as well as ways to get involved.



BRIAN NEFF
*Acting Vice-President (Research),
Western University*

A Message from the Rotman Institute's Director

Rotman's prominence as one of Western's four interdisciplinary research institutes has spurred a significant year of growth and intellectual leadership. We have established competitive internal funding programs to catalyze new ideas and research projects – some of which you'll learn more about in this report. These programs put philosophy into action by empowering our members to assemble interdisciplinary teams, ready to devise nimble responses to complex societal issues.

As pandemic-era travel restrictions have come to an end, we have also reclaimed our position as a global research destination. Through its leadership role in the Quantum Information Structure in Spacetime (QISS) consortium, the Rotman Institute has become one of the main global hubs for collaborations between philoso-

phers and physicists pursuing questions about fundamental physics. In June 2022, the institute brought leading researchers from across the world to London by hosting the QISS Conference, which adopted an innovative format and was enthusiastically praised by its participants.

Looking forward, Western's support and our global stature will lead to continued growth and expansion of our style of interdisciplinary research. The Rotman Institute will continue to harness the distinct capacities of philosophy in collaboration with experts from other disciplines to develop novel solutions to pressing challenges.

CHRISTOPHER SMEENK
*Director (Rotman Institute of Philosophy)
Western University*

Rotman Institute of Philosophy

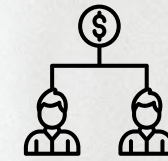
The Rotman Institute of Philosophy supports projects that merge philosophical inquiry and science to address the most difficult questions facing humanity: What is consciousness, and where and how does it manifest? When and how is the use of medical or other forms of technology ethical? How should we prepare for the emerging wave of intelligent technologies? How can we create sustainable models of living on this planet? How can we understand the origins of the universe?

The institute's workspace in the Western Interdisciplinary Research Building (WIRB) has been a hub and collision space for groups of scholars from diverse disciplines tackling these questions.



123

members total, including **64** faculty, **58** trainees, and **1** staff member



4

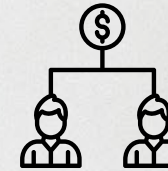
new Tri-agency grants, totaling **\$52K**

1.1% of all Tri-agency grants at Western



16

prestigious awards, including **3** Research Chairs, **6** Fellows of the Royal Society of Canada, **3** Distinguished University Professors, and **4** Faculty Scholars



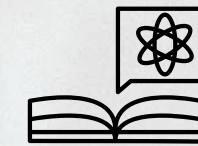
\$25.1M*

in multi-year funding



8

faculties are represented through members: **Arts & Humanities, Social Science, Science, Health Sciences, Schulich, Information & Media, Law, and Ivy**



192

publications captured in InCites in 2022

average category normalized citation impact is **1.24 times the world average benchmark**

citation counts higher than 30% of 2022 publications in Web of Science

132 publications tracked by **Altmetric**; 93% attracted 7,586 mentions in social media and 321 references in news stories

76 publications co-authored with one or more international scholars across 71 countries/regions with an average category normalized citation impact **above the world average at 1.98**



432*

grants held by members (**234** external grants and **198** internal grants)

*This data does not include grants located at or shared with other institutions or institutes.

The COVID-19 Pandemic: What is Governments' Role in Protecting Public Health?

A new interdisciplinary think tank helps Western researchers explore what role the state should play in public health crises.



MAXWELL SMITH
School of Health Studies,
Faculty of Health Sciences

The COVID-19 pandemic has been one of the most divisive issues of our decade. From lockdowns and school closures to vaccination mandates and travel restrictions: government policies enacted – or not enacted – have created divisions between individuals, families, and communities.

For School of Health Studies professor and Rotman Institute of Philosophy associate director Maxwell Smith, views on public health measures all come down to one central question – what is the role governments should play in protecting public health?

“For many people, this is really the first time they are considering this question.

And for people who were already thinking about this, the pandemic might have fundamentally changed their views,” says Smith. “We are at a critical point where we really need to examine how governments have and should intervene during pandemics, or any other public health crisis.”

To explore this question with interdisciplinary scholars across Western University, Smith started a think tank in 2022 supported by the institute.

To address a wide array of questions in public health policy from multiple angles, his think tank brought together researchers from across Western with expertise in a wide range of areas, including public health, ethics, information and communication, social inequities, and law. The team will tackle complex issues such as the use of coercion in protecting public health or how our experience during the pandemic has shaped the way we see governments play a role in other pressing societal issues, such as climate change.

Think tanks across Western Research institutes have brought forth high-impact research questions and led to major funding to tackle some of society’s most difficult and pressing challenges. Smith hopes the same will be true for this think tank. The team has already met once to explore

interests, disciplinary perspectives, and research questions. The conversation will continue to build momentum in 2023.

“Honestly, the people I collaborate with that come to Rotman and have these discussions, they’re not as familiar with Rotman because they’re just coming in for these think tanks. They tell me how refreshing it is and this is what a university should be like.”

In addition to enhancing research and increasing knowledge, Smith says his motivation for starting this think tank was to bring people across disciplines together to work on shared challenges and establish Rotman as a hub for transdisciplinary innovation: “There are areas like AI and ethics, where it seems like everyone on campus is a little bit involved. By having a formal think tank within an institute, people can say, ‘Oh, folks thinking about ethical issues in public health, that’s over at Rotman!’ It solidifies Rotman as the location where those conversations are happening.”

It may seem trivial to some, but having an organization, a place specifically designed for providing a research environment that expands on disciplinary strengths by enabling the coming together of people and by facilitating the exploration of unique perspectives is valuable and empowering, says Smith.

“Honestly, the people I collaborate with that come to Rotman and have these discussions, they’re not as familiar with Rotman because they’re just coming in for these think tanks. They tell me how refreshing it is and this is what a university should be like.”

Things are looking up through this mechanism to advance thinking of important societal issue like the role of governments in public policy, but also to benefit researchers and partners in their quest to contribute in a more interdisciplinary and collaborative way.

QISS 2022

A Meeting of Great Minds from Across the World

There is no doubt that the COVID-19 pandemic took a toll on the productivity and mental health of researchers. Student education and research projects were disrupted, and, like the rest of the world, the research community had to endure the loneliness brought on by “bubbling” and self-isolation. In-person conferences, a staple for networking and knowledge exchange, came to a screeching halt, and were sorely missed by many.

For some researchers, the 2022 Quantum Information Structure of Spacetime (QISS) Conference hosted at Western University by the Rotman Institute of Philosophy was the first experience of “life back to normal” since the beginning of the pandemic. *(Continues on next page.)*



QISS 2022

BY THE NUMBERS

279 people registered to attend in person or virtually

16+ participants came from universities in 16+ different countries across the world

13+ prestigious higher-ed institutions were represented through speakers and session chairs:

- Aix-Marseille University, Center for Theoretical Physics
- Bard College, New York
- Cambridge Quantum Computing
- Free University of Brussels, Center for Quantum Information and Communication
- National Autonomous University of Mexico, Center for Mathematical Sciences
- Okinawa Institute of Science and Technology
- Penn State University, Institute WWfor Gravitation and the Cosmos
- Perimeter Institute for Theoretical Physics
- Rome La Sapienza University, Quantum Information Laboratory
- University of California San Diego, Department of Physics
- University of Oxford, Clarendon Laboratory and Quantum Group
- University of Vienna, Institute for Philosophy
- Western University, Rotman Institute of Philosophy

“Lots of PhD students came to the conference. For many of them, it was the first time to go to a conference since the start of the pandemic. We had about 100 people in-person, so that was a great success,” says philosophy and physics professor Francesca Vidotto, one of the organizers of the conference and a Canada Research Chair in Foundations of Physics.

Theorists, philosophers and experimentalists with an interest in quantum spacetime, and the relevance of quantum information, jumped at the chance to exchange ideas, forge new collaborations, and engage in lively discussions on six foundational questions relevant to all three disciplines.

“Western has had a strong research tradition in philosophy of physics going back 50 years,” says philosophy professor and Rotman Direc-



tor Christopher Smeenk. “Although this history includes many collaborations between philosophers and physicists, this was the largest interdisciplinary conference Western has ever hosted in this thematic area. It was particu-

larly striking how many leading physicists were in attendance.”

To shake things up, the organizer team decided to adopt an innovative concept for QISS2022, says Vidotto: “Instead of having one hour-long talk after the other, we decided to do lightning talks that lasted only 15 minutes. After each lightning talk, we had two hours of moderated discussions, and they turned out to be really lively. There wasn’t a moment of silence because people were so engaged.”

The event ran the gamut of topics in philosophy of physics, quantum information, and quantum gravity, and



culminated in a banquet at Westerns’ Thames Hall Atrium, and a trip to the Pinery to give participants an opportunity for informal discussions and reflections from the

week’s presentations.

The conference was enthusiastically appreciated and praised by all participants, and all around a huge success, says Smeenk.

“This conference was carefully organized to encourage the creation of new research collaborations between quantum information and quantum gravity, with philosophers playing the role of simultaneous translators between these communities. It was a challenging and stimulating conference, forcing the participants to see familiar problems from new angles, and it exemplifies the kind of interdisciplinary response to deep problems that the Rotman Institute supports.”

WHAT IS QISS?

QISS is an interdisciplinary initiative in Quantum Information and Quantum Gravity, bringing together theorists, experimentalists and philosophers. The research program aims to unravel the Quantum Information Structure of Spacetime.

Under the leadership of Western philosophy and physics professor Francesca Vidotto, the Rotman Institute has become a central node in this international collaboration, due to the institute’s strong support for QISS, and its reputation for excellence in philosophy of physics.

Integrating Patient Perspectives in Research and Treatment

An interdisciplinary research team explores the role of patient perspectives in anorexia diagnoses and treatment.



SARAH ARNAUD
Postdoctoral Fellow,
Rotman Institute of Philosophy

Sometimes a small initiative can lead to big impact. That's certainly true for Rotman's Feelings and Psychiatry reading group, started by Sarah Arnaud, a postdoctoral fellow at the Rotman Institute. Back in 2022, she decided to bring people across disciplines together to discuss recent works in the philosophy of psychiatry. Little did she know that her reading group would lead to a number of important interdisciplinary research collaborations.

"It's the people in the group that made the group what it is now," says Arnaud. "There are PhD students, postdocs, and faculty from philosophy, psychology, psychiatry and neuroscience. It's a pretty open concept. We take directions that we want to take, and we read things that we want to read."

One shared interest that quickly emerged was the overlooked role of first-hand patient perspectives and the important role patients can play in improving how eating disorders are described, diagnosed, and treated.

The National Eating Disorder Centre (NEDIC) estimates that from 2000 to 2018 between 840,000 and 1,750,000 people in Canada have symptoms of eating disorders at any given time. These numbers are likely even higher today as eating disorders have skyrocketed since the beginning of the pandemic. Even worse, eating disorders have the highest mortality rate of any mental illness, and treatment success rates especially for anorexia nervosa are poor with only 21 percent of patients making a full recovery.

Changing practitioners' way of thinking could ultimately lead to better patient outcomes and reduce stigma, says Arnaud: "There are differences in how anorexia patients perceive the body versus the clinical description. ...If the definition and understanding of anorexia were improved, treatment might get better, too."

The group's discussions led to three papers, an empirical research project, and funding for an international transdisciplinary conference at Western University. The trio of papers began with a collabora-

tion between philosophy and psychiatry researchers, which led to a paper on the roles of internal sensory body feedback, emotion, and self-control in anorexia nervosa patients.

"In the paper...we're going against the unification of anorexia under one phenomenon," explains Arnaud. "We're trying to be a little bit more pluralistic and explain how emotions, self-control, and interoception [the representation of sensations from one's body] are interrelated in the understanding of anorexia."

To further explore this, an empirical research project was launched working directly with patients to better understand the experience of having an eating disorder.

"It's the people in the group that made the group what it is now. There are PhD students, postdocs, and faculty from philosophy, psychology, psychiatry and neuroscience."

Arnaud also teamed up with Jacob Neal, a postdoctoral associate at Rotman, Amy MacKinnon, and Hershy Jaiprakash, both PhD students in philosophy at Western, to write a paper on the complexity of treating eating disorders and the importance of incorporating patients' values and viewpoints in treatment. They recently lead a session based on their paper at the annual conference of the Canadian Society for the History and Philosophy of Science (CSHPS).

"There are differences in how anorexia patients perceive the body versus the clinical description. If the definition and understanding of anorexia were improved, treatment might get better, too."

To effectively develop and implement unbiased interventions on weight stigma, obesity, and eating disorders, Arnaud, Neal, and researchers in the department of psychology and Western Law, embraced the interdisciplinary collaborative approach that the institute promotes and supports by inviting researchers, scholars, clinicians, and activists to learn from each other. With catalyst grant support from the institute, the team will host an interdisciplinary conference at Western that will mobilize experts from all over the world.

"I think the conference is going to be fantastic for Western, but it will also be seen outside of the university, because we're gathering experts in the field from other institutions" says Arnaud. "It's a win-win all around."



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