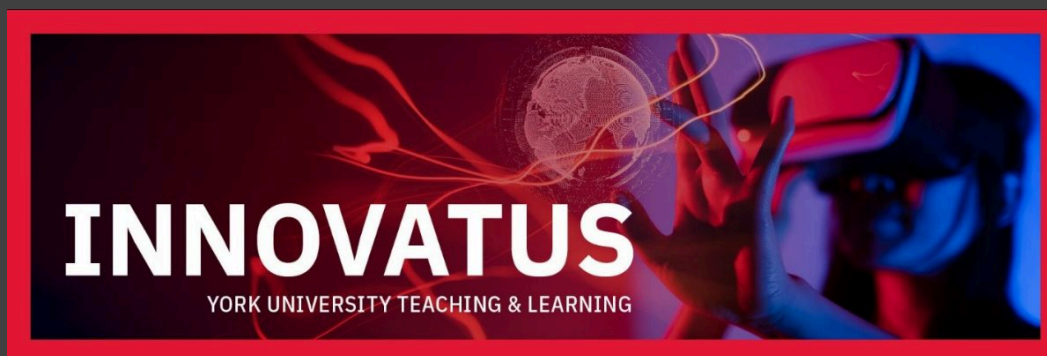


Dean's Round-up: March 2024

FACULTY HIGHLIGHTS



The Faculty of Science was featured in the March 2024 issue of [Innovatus](#), a special issue of YFile devoted to teaching and learning at York University. Stories from our Faculty included:

- [Faculty of Science responds to industry needs in the chemical and bioeconomy sectors](#), which highlighted our upcoming biotechnology programming at the Markham Campus and micro-credentials;
- [Faculty of Science innovates with assist from AIF](#), which highlighted projects focused on improving students' learning experiences in chemistry courses, and improving accessibility in labs;
- [Mathematicians pilot open-access homework platform for students](#), which featured a project to pilot WeBWork, online open educational resource, with our mathematics students;
- [Inaugural GNL project brings students together](#), which featured a globally networked learning (GNL) initiative to connect science students from York University and China.

The story about WeBWork was featured as a top 10 news item on March 18, 2024, by [Academica Group](#).



The **Allan I. Carswell Observatory**, directed by **Elaina Hyde** (Physics & Astronomy), hosted two events leading up to the solar eclipse. On March 9, the Observatory hosted a [Solar Viewing event](#) at Downsview Park, and on March 23, a Solar Education Day at York University Keele Campus; more than 100 people attended the two events.

CONGRATULATIONS

Twenty-six faculty members, including current and emeriti, are among the [top two per cent most cited researchers worldwide](#), according to data compiled by a team at Stanford University. The 2023 list includes the following current and emeriti faculty members from the Faculty of Science: **Thomas Baumgartner, Peter Backx, Samuel Benchimol, Diethard Böhme, Kenneth Davey, Patrick Hall, I. Brent Heath, John Heddle, Sergey Krylov, A.B.P. Lever, Roger Lew, Clifford Leznoff, Christopher Lortie, Peter Moens, Seyed Moghadas, Laurence Packer, William Pietro, Jeffrey Schall, Bridget Stutchbury, Gary Sweeney, Nikolaus Troje, Rui Wang, Andrew White, Hugh Wilson, Jianhong Wu, and Norman Yan.**

Mark Bayfield (Biology) received more than \$920,000 from [CIHR](#) for the project “Regulation of gene expression by the La and La-related proteins.”

Steven Connor (Biology) was renewed for his Tier 2 [Canada Research Chair](#) in the Synaptic Basis of Neurodevelopmental Disorders.

Adam Muzzin (Physics & Astronomy) was awarded two grants totalling \$150K from the Canadian Space Agency to analyze data from his team’s observations with the James Webb Space Telescope. The project aims to look for tiny dwarf galaxies that were the first to ionize the hydrogen in the universe about 500-1000 million years after the Big Bang.

Graduate student **Sunna Withers** (Physics & Astronomy) was awarded a medium program of 44 hours of observing time on the James Webb Space Telescope. **Adam Muzzin** (Physics & Astronomy) is co-PI of the project.

MORE NEWS

Christopher Caputo (Chemistry) was the keynote speaker for the [Toronto Science Fair](#), where he presented a talk entitled “Atoms to Applications – The Infinite Possibilities of Chemistry” to 400 grade 7-12 Students participating in the city-wide event.

Director of International Collaborations & Partnerships **Hugo Chen** was invited to join the selection committee for the 2024 Global Affairs Canada Scholarships at York University.

Ilijas Farah (Mathematics & Statistics) delivered a colloquium titled “[Corona Rigidity](#)” at the Colloque des sciences mathématiques du Québec series at the Centre de Recherches Mathématiques.

Robin Metcalfe (NATS) presented an invited talk titled “Astrosleuthing an Aurora” to the Royal Astronomical Society Mississauga branch.

Iain Moyles (Mathematics & Statistics) presented to a grade 8 class on the value of mathematical modelling all around us, as part of the Ask a Mathematician program organized by the Fields Institute.

Jeffrey Schall (Biology) co-authored the book “[Brain Science for Lawyers, Judges, and Policymakers](#),” published by Oxford University Press.

Ryan Schott (Biology) co-authored the ebook “[Vision in Frogs and Toads](#): an introduction to the diversity of animal eyes, how they are adapted for life in different environments, and current vision research.” The ebook is targeted to high school and undergraduate audiences for learning about vision in frogs, and it’s published by The Frog Vision Research Team.

Sapna Sharma (Biology) moderated a [UNITAR Global Water Academy](#) virtual event titled “Global challenges in water access, developing governance solutions, and applications for alleviating water scarcity.”

RESEARCH HIGHLIGHTS

Conor M.W. Douglas (Science, Technology & Society) and his former MA student **Shir Grunebaum** published [Lessons learned from the Canadian Fabry Disease Initiative for future risk-sharing and managed access agreements for pharmaceutical and advanced therapies in Canada](#) in *Health Policy*.

Adrien Lefauve and **Miles Couchman** (Mathematics & Statistics) published [Data-driven classification of sheared stratified turbulence from experimental shadowgraphs](#) in *Physical Review Fluids*.

Nicolaos Petropoulos, **Miles Couchman** (Mathematics & Statistics), Ali Mashayek, Stephen de Bruyn Kops, and Colm-cille Caulfield published [Prandtl number effects on](#)

[extreme mixing events in forced stratified turbulence](#) in the *Journal of Fluid Mechanics*.

Beatriz Herrera, **Jeffrey D. Schall** (Biology), and Jorge J. Riera published [Agranular frontal cortical microcircuit underlying cognitive control in macaques](#) in *Frontiers of Neural Circuits*.

Graduate student **Lucas M Seaton**, Professor Emeritus **Marshall L McCall**, and graduate student **Neil T McCall** (Physics & Astronomy) published [Flows of Local Sheet dwarfs in relation to the Council of Giants](#) in the *Monthly Notices of the Royal Astronomical Society*.

Former MSc student **Sydney Steiman**, Research Associate **Tetsuaki Miyake**, and **John C McDermott** (Biology) published [FoxP1 Represses MEF2A in Striated Muscle](#) in *Molecular and Cellular Biology*.

For a full list of publications from the Faculty of Science, see our [website](#).

MEDIA

Leading up to the solar eclipse, Professor Emeritus **Paul Delaney** (Physics & Astronomy), **Elaina Hyde** (Physics & Astronomy), **Robin Metcalfe** (NATS) and **Sarah Rugheimer** (Physics & Astronomy) collectively provided commentary for more than 100 media stories or broadcasts about the eclipse and how to view it safely. Highlights included [CBC News](#), [The Star](#), [CTV News](#) and [Global News](#).

Professor Emeritus **Paul Delaney** (Physics & Astronomy) spoke to [CTV News](#) and *AM 900* about the SpaceX Starship rocket that was destroyed during its return to earth.

Jane Heffernan (Mathematics & Statistics) was quoted by the [National Post](#) in a story about rising cases of measles and vaccine hesitancy.

Patricia Lakin-Thomas (Biology) spoke to *Zoomer Radio* about clock changes and the negative effects of the spring-forward to daylight savings time.

Sarah Rugheimer (Physics & Astronomy) was interviewed on the podcast [This Is Going Well, I Think with David Cooper](#) about near-Earth asteroids and new super Earth, and spoke to *Global News* about the nova-c moon landing, to *Newstalk 1010* about the most luminous quasar, and [Quanta Magazine](#) about exoplanet biosignature detection.

EVENTS

May 2: [CoTL End of Term Event](#), 12-1:30 pm on [Zoom](#).

INTERNATIONAL PARTNER INSTITUTION PROFILE

The Faculty of Science has established multiple partnerships with various international institutions. In order to better inform the York Science community of these international partner institutions, we will provide a brief profile of each of them in our Dean's Round-up.



Hanoi University of Science

Hanoi University of Science (HUS), formerly known as the University of Hanoi, was established in 1956 and is a premier center for education and fundamental scientific research in Vietnam. The university is home to 676 full-time equivalent faculty members, 4,120 undergraduate students, 827 graduate students, 271 PhD students, and 1,632 high school gifted students.

With a proud legacy of fostering talents and conducting impactful research, the university boasts a diverse community of faculty and students who have significantly contributed to Vietnam's educational and scientific landscape, particularly in the natural sciences. Notably, many alumni have embarked on successful entrepreneurial ventures, further propelling the country's economic growth.