

Dean's Round-up: June 2024

FACULTY HIGHLIGHTS



Congratulations to all of the students who graduated in the Faculty of Science Spring Convocation ceremonies, as well as the faculty members and staff who supported our students in their studies and research activities. Highlights from the Science ceremonies included

- our first cohort of Neuroscience graduates;
- undergraduate students **Karina Kofman** and **Claire Del Zotto** (Biology) receiving the Faculty of Science Gold and Silver Medals, respectively;
- PhD graduate **Jennifer Porat** (Biology) receiving a [Governor General's Gold Medal](#); and
- **Mike Wessinger**, co-founder and executive Chair of PointClickCare, receiving an [Honorary Doctorate](#).



The **Science Engagement Programs** (SEP) team welcomed 100 high school science students from Northview Heights Secondary School onto campus to participate in workshops including Blood Science & Disorders and an Aspirin Synthesis Lab. As well, SEP delivered two days of fully-subsidized workshops at Oakdale Park Middle School where students had the opportunity to learn introductory physics and digital literacy.

CONGRATULATIONS

Thirty-three researchers in the Faculty of Science received a total of nearly \$8.3 million from the NSERC Discovery Grants, Discovery Launch Supplements, and Sub-atomic Physics Discovery Grants programs. See the full list of recipients on the [Faculty of Science website](#).

Jade Atallah (Biology), Associate Dean **Hovig Kouyoumdjian** (Chemistry), and **Luz Adriana Puentes Jácome** (Biology) received funding from the [Ontario Ministry of Colleges & Universities](#) (\$50,000 from the Micro-credentials Challenge Fund, and \$75,000 from the Training Equipment and Renewal Fund) to launch a new micro-credential in Vaccine Production and Quality Assurance in winter 2025.

Postdoc **Matteo Dunnhofer** (University of Udine, Italy) secured a [Marie Skłodowska-Curie Fellowship](#), funded by the European Commission, and will be joining **Kohitij Kar's** (Biology) lab for a two-year term starting November 2024. His project will study algorithms at the intersection of artificial intelligence and neuroscience in the field of visual object tracking.

A STEAM project team supervised by **Hovig Kouyoumdjian** (Chemistry) received the Sustainability Award at the Spring Capstone Day; the team was composed of students from different disciplines and one undergraduate Science student **Mahogany Lopez** (Biology), who was quoted in a [YFile article](#) about the event and award winners. **John McDermott** (Biology) received a \$265,000 grant from the Heart and Stroke

Foundation of Canada for the project "Regulation and Function of Cardiac Transcription Factor Networks."

Sandra Rehan (Biology) was appointed as a [York Research Chair](#) in Molecular Ecology and Behavioural Genetics.

Jeffrey Schall (Biology) was appointed as a Tier I [Canada Research Chair](#) (CRC) in Translating Neuroscience, and **Joel Zylberberg** (Physics & Astronomy) was renewed for his Tier II CRC in Computational Neuroscience.

Our researchers received grants from the [New Frontiers in Research Fund](#) (NFRF), International Joint Initiative for Research in Climate Change Adaptation and Mitigation competition:

- University Professor **Dawn Bazely** (Biology) is co-principal investigator of the project "BioCAM4 – Biodiversity Integration in Climate Adaptation and Mitigation Actions for Planet, People, and Human Health," which received \$1.5 million from NFRF and another \$1.6 million in partner funding from German Research Foundation and UK Research Innovation – Economic and Social Research Council. Principal investigator is Idil Boran (LA&PS).
- **Sapna Sharma** (Biology), principal investigator, received \$3.1 million for the project "Climate changed transportation: holistic and Indigenous informed responses to transportation infrastructure, food security and community well-being in the Arctic."

MORE NEWS



Bethune College Council (BCC), with the support of the Bethune Head Office, continued its sustainable development-related project focused on converting the gardens around the Bethune courtyard into native plant, pollinator-friendly spaces. BCC obtained external funding to host two gardening days in June as part of a larger

university-wide sustainability initiative to better use space and preserve the environment. BCC Outreach Directors **Claire Del Zotto** and **Taline Apelian-Sutor** led this initiative.

Students in the course NATS1560 Understanding Food compiled a [cookbook](#) of their favorite recipes.

The **Global Leaders of York Science (GLYS)** and **York Science Hainan Learning Centre** organized the “York Science SDGs Dialogue,” featuring a presentation by York University UNESCO Chair Professor Charles Hopkins and Executive Coordinator to the UNESCO Chair Katrin Kohl. The event encouraged our students to explore the intersections of science with economics, politics, social sciences, and humanities, fostering a comprehensive understanding of global challenges. Participants included students from our international partners, including universities from Australia, China, the USA, and the UK.

Miles Couchman (Mathematics & Statistics) participated in Stanford University's [Center for Turbulence Research Summer Program](#) as a visiting scholar.

Jairo Diaz-Rodriguez (Mathematics & Statistics) presented “Differentially private boxplots” at the Statistical Society of Canada Annual meeting at St. John's, Newfoundland, where he also won the New Investigators Best Presentation Award. He was also invited as guest speaker at Universidad del Norte (Barranquilla, Colombia), where he gave a keynote lecture on “Data Science, Artificial Intelligence and Machine Learning.”

Jane Heffernan (Mathematics & Statistics) was a plenary speaker at the China Society for Mathematical Biology meeting, June 23-28. She is president of the Society for Mathematical Biology, which hosted its Annual Meeting in Seoul, South Korea, from June 30-July 5. She was also appointed to the NSERC Math & Stats Evaluation Group.

Graduate students **Laura Keane**, **Zahra Khanzad**, **Tamara Kostyuk** and **Sarah Machado-Marques** (supervised by **Iain Moyles**, Mathematics & Statistics) presented at 2024 Annual Meeting of the Canadian Applied and Industrial Mathematics Society.

Robin Metcalfe (NATS) was appointed co-director of the Cross-Campus Capstone Classroom (C4) program at York.

As the co-director of the Canadian Institute for Advanced Research's Future Flourishing Program, **Hélène Mialet** (Science, Technology & Society) organized and participated in an international workshop at the British Academy in London on June 26-28.

Iain Moyles (Mathematics & Statistics) was invited to deliver a six-hour workshop on Disease Modelling at the Statistical Society of Canada Annual Meeting in St. John's, Newfoundland. He presented “Mathematics are Everywhere” to a grade 7 class as part of the Field's Institute's Ask a Mathematician program. He organized and presented at the mini-symposium “Mathematical Modelling of Behaviour” at the 2024 Annual Meeting of the

Canadian Applied and Industrial Mathematics Society (CAIMS); his talk was entitled “Asymptotic limits of fear in a behaviour-modified disease model.” He was also elected to the CAIMS Executive Committee as Communication Officer for a three-year term.

Kelly Ramsay (Mathematics and Statistics) presented a contributed talk, “Changepoint Detection in the Variability of Multivariate and Functional Data,” at the Statistical Society of Canada Annual Meeting. She also gave an invited talk titled “SIMEXploring Local Differential Privacy and Measurement Error” at The Sixth ICSA-Canada Chapter Symposium.

Robert Tsushima (Biology) represented the Faculty of Science at the 20th anniversary celebration of our partner Sup'Biotech in France.

Huaiping Zhu (Mathematics & Statistics) presented the [Industrial Research Prize Lecture](#) at the Annual Meeting of the Canadian Applied and Industrial Mathematics Society.

RESEARCH HIGHLIGHTS

PhD graduate **Khulod Almontashery** and **Paul J. Szeptycki** (Mathematics & Statistics) published [Semi-proximal spaces and normality](#) in *Topology and its Applications*.

Patrick B. Hall (Physics & Astronomy) and co-authors published [The SDSS-V Black Hole Mapper Reverberation Mapping Project: CIV Broad Absorption Line Acceleration in the Quasar SBS 1408+544](#) in *The Astrophysical Journal*. [READ THE PRESS RELEASE FROM YORK UNIVERSITY](#).

Kohitij Kar (Biology) and James J. DiCarlo published [The Quest for an Integrated Set of Neural Mechanisms Underlying Object Recognition in Primates](#) in *Annual Review of Vision Science*.

Postdoc **Hamidreza Ramezanzpour**, Christopher Giverin, and **Kohitij Kar** (Biology) published [Low-cost, portable, easy-to-use kiosks to facilitate home-cage testing of non-human primates during vision-based behavioral tasks](#) in the *Journal of Neurophysiology*.

Research Associate **Tetsuaki Miyake** and **John C McDermott** (Biology) published [Functional analysis of protein interactions using coupled bi-fluorescence complementation/GFP nanobody techniques](#) in *Nucleic Acids Research*.

MSc student **Khara W. Stephen**, postdoc **Katherine D. Chau**, and **Sandra M. Rehan** (Biology) published [Dietary foundations for pollinators: nutritional profiling of plants for bee health](#) in *Frontiers in Sustainable Food Systems*. [READ THE PRESS RELEASE FROM FRONTIERS](#).

John L Boyette, Rayna C Bell, Matthew K Fujita, Kate N Thomas, Jeffrey W Streicher,

David J Gower, and **Ryan K Schott** (Biology) published [Diversity and Molecular Evolution of Nonvisual Opsin Genes across Environmental, Developmental, and Morphological Adaptations in Frogs](#) in *Molecular Biology and Evolution*. [READ THE PRESS RELEASE FROM YORK UNIVERSITY.](#)

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

MEDIA

Dasantila Golemi-Kotra (Biology) was interviewed by [CTV News](#) about the symptoms of whooping cough.

Elaina Hyde (Physics & Astronomy) spoke to *AM 900* and *Newstalk 1010* about space junk from SpaceX; [The Hamilton Spectator](#) about June's strawberry full moon; *CTV News* about the northern lights and auroral activity; [This is going well, I think with David Cooper](#) about the hole on the surface of Mars, the 6 planet conjunction and Boeing Starliner leaks; [Global News](#) on the Boeing Starliner leaks and delay in its return to Earth; and the *Kelly Cutrara Show* about summer solstice.

[Earth.com](#) and [EcoWatch](#) featured research by **Sandra Rehan** (Biology) on the nutritional needs of bees and the plants that can provide them with a well-rounded diet.

Sarah Rugheimer (Physics & Astronomy) spoke to [Live Science](#) about extraterrestrial life and what it would likely look like, to *CTV News* about the delay of the return of two astronauts aboard the Starliner, and to *Newstalk 1010* about special relativity.

Patricia Lakin-Thomas' (Biology) research program on biological clocks was featured [The York University Magazine](#).

EVENTS

August 15: [Summer 2024 Undergraduate Research Conference](#)

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.



COLUMBIA
INTERNATIONAL
COLLEGE®
Hamilton, Ontario, Canada

Columbia International College is a leading private boarding secondary school based in Hamilton, Ontario. Founded in 1978, Columbia International College prepares international students for university studies in English, currently enrolling around 2,000 students from over 70 countries in grades 9-12. The College's graduates have a strong track record of being admitted to universities across Canada and often earn scholarships for their academic excellence.

York University and Columbia International College have established a new agreement to enhance educational opportunities for international students. This partnership guarantees admission to Columbia graduates who meet York's minimum requirements, waives the IELTS requirement for students with strong English grades, and offers entrance scholarships ranging from \$1,500 to \$2,000 for eligible students. Effective from May 1, 2024, for three years, this agreement underscores the commitment of both institutions to support academic excellence and leadership development among international students.