

Dean's Round-up: October 2024

FACULTY HIGHLIGHTS



Our Faculty launched a new promotional video that highlights the learning, research and campus life experiences and opportunities available to students who choose to study at York's Faculty of Science. The project was led by Communications Manager **Margaret Mroziejcz**.

Faculty and staff are invited to view the video and use it for their promotional and recruitment activities.

[View it on YouTube.](#)



In partnership with Skills for Change through the Black Youth Access Program, our **Science Engagement Programs (SEP)**, led by Managers **Cora Reist** and **Kimberly Tran** hosted a series of dynamic online workshops for the program's third cohort. The free sessions empowered participants with valuable skills in integrating technology and science; the cohort will attend in-person workshops and events in November. Additionally, SEP's In-School and Community Workshop Program saw a surge in interest, reaching over 75 students across the Greater Toronto Area in October. New workshops like "Orbiting the Earth" and "Earthquakes: Let's Shake, Rattle, and Roll" sparked enthusiasm and curiosity, making science both fun and accessible.

The **Department of Physics & Astronomy** hosted more than 40 local physics teachers for its annual High School Teachers Night. Organized by Operations Manager **Wayne Gordon**, Administrative Assistant and Graduate Program Assistant **Cristal Del Biondo**, Undergraduate Program Assistant **Janaki De Camillis**, and Professor **Nikita Blinov**, the evening included dinner and engaging research talks by **Paul Scholz**, **Bruce Howard**, and **Charles-Édouard Boukaré**. As part of the yearly tradition, teachers had access to a diverse selection of Physics and Astronomy materials donated by faculty. The event ended with a guided tour of the Allan I. Carswell Astronomical Observatory, led by **Elaina Hyde** and her students.

CONGRATULATIONS

PhD student **Bakhtiyar Taghizada** (Cheung lab, Biology) was awarded one of four top poster prizes at the Canadian Epigenetics, Environment & Health Research Network's Conference on Epigenetics.

Jianhong Wu (Mathematics & Statistics), **Sergey Krylov** (Chemistry) and **Derek Wilson** (Chemistry) received the [Synergy Award for Innovation](#) from NSERC.

MORE NEWS

The Office of International Collaborations and Partnerships hosted and participated in several activities, including:

- On October 3, Global Leaders of York Science members **Amna Imran**, **Gina Quan** and other members, as well as Science International Recruiting Coordinator **Mingming Li**, represented the Faculty of Science at the Go Global Fair, hosting an interactive engagement event with students.
- On October 15, Science International Recruiting Coordinator **Mingming Li** and Communications and Marketing Assistant **Gina Quan** hosted an information session at Ace Acumen Height.
- October 16, Director, International Collaborations & Partnerships **Hugo Chen** represented Science at the International Scholarship Faculty Meet & Greet, where five international students from Science were recognized: Caio Bianchini, Keren Deti, Gia Linh Do and Caroline D'sa received the President's International Scholarship of Excellence; Daniil Sinitsyn was awarded the Tentanda Via Award.
- On October 24, Science International Recruiting Coordinator **Mingming Li**, along with Recruitment & Campus Ambassador Leads **Amna Imran** and **Tien Hoang** welcomed a group of prospective students from Bermuda with an exclusive science-focused tour at York University.

The Faculty of Science has introduced two new scholarships for international students, funded by Ace Acumen Heights. The Ace Acumen Heights Scholarship, valued at \$7,500, will support five incoming international undergraduate students with strong academic records and financial need, prioritizing graduates from Ace Acumen Heights high schools. Additionally, the \$6,000 Ace Acumen Heights Research Scholarship will provide one international student with a paid, 16-week summer research position in a York University lab.

Elizabeth Clare (Biology) and her research program on airborne eDNA was profiled in the [York University Magazine](#).

Amenda Chow (Mathematics & Statistics) presented “Teaching Hysteresis” at the University of Waterloo Math Teaching Seminars on October 22. Her talk explored approaches and examples of teaching advanced mathematical concepts at an introductory level, focusing on the phenomenon known as hysteresis, which she has summarized in a [YouTube video](#) created with a collaborator at the University of Waterloo.

The *Aspire* magazine, published by York's VPRI Office, highlighted work by **Conor Douglas** (Science, Technology & Society) to advance [drug development for rare diseases](#).

Elaina Hyde (Physics & Astronomy) led the **Allan I. Carswell Observatory** crew in hosting a Halloween event called “Spooky Stars,” which was open to the York community and general public. She also launched York’s first astronomy podcast, which provides an astronomy adventure in history, news, and telescope viewing every Monday night. The podcast is linked from the [Observatory website](#) and can also be streamed via RSS, Spotify, Amazon, Apple and more.

The *Aspire* magazine, published by York's VPRI Office, highlighted PhD student **Gliselle Marin's** (Biology) [research on bats](#).

On October 7, **Robin Metcalfe** (NATS) hosted a special episode of YorkUniverse featuring eight York science alumni and former teammates of the FSc intramural softball team, the Infrared Sox. The guests discussed their time at York and how it contributed to their diverse range of careers, from academia to pharma to museums to civil service to Bay Street. [Listen to the podcast](#).

Jesse Rogerson (NATS) co-authored a new book, [Daydreaming in the Solar System](#) (MIT Press), which takes readers on adventures to distant planets, moons, asteroids, and comets. Each chapter is a tale about a unique escapade, with accurate descriptions rooted in science and watercolour illustrations by student **Michelle Parsons** (Biology).

Divya Sharma (Mathematics & Statistics) organized a session on “Advancing Healthcare with Data Science and Machine Learning” at the International Day of Women in Statistics and Data Science on October 8. During this session, she also delivered a talk on “Harnessing Data Science and Machine Learning for Personalized Osteoarthritis Treatment.”

Sapna Sharma (Biology) designed the curriculum for a pioneering virtual course titled “Introduction to Big Data for Water Sustainability,” run by the United Nations Institute for Training & Research (UNITAR) Global Water Academy. [Read the story in YFile.](#)

MSc student **Sunna Withers** and PhD student **Anna Skrinnik** (Physics & Astronomy) completed a combined tenure in the [Astronomer in Residence program](#) hosted by the Allan I. Carswell Observatory and Killarney Provincial Park.

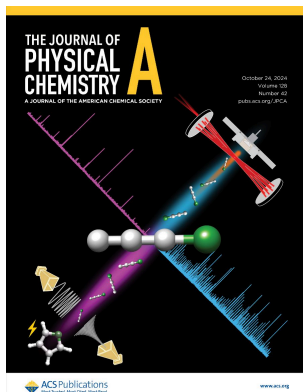
Jihyeon Jessie Yang (Mathematics & Statistics) hosted a booth at the event Dreamer Day 2024 with Assistant Director, Markham Student Recruitment Adam Duncan on October 22; their booth facilitated activities under the theme of “Music meets Math.” The event was for high school-aged women students to explore career paths in business and STEM.

A press release from York University highlighted [recent research by Cora Young](#) (Chemistry) and her team to develop a technique to measure per- and polyfluoroalkyl substances in the atmosphere, and to measure perfluoroalkyl acids in ice cores in the Arctic.

RESEARCH HIGHLIGHTS

Stephanie E. Hampton, Stephen M. Powers, Hilary A. Dugan, Lesley B. Knoll, Bailey C. McMeans, Michael F. Meyer, Catherine M. O’Reilly <https://orcid.org/0000-0001-9685-3697>, Ted Ozersky, **Sapna Sharma** (Biology), David C. Barrett, Sudeep Chandra, Joachim Jansen, Ryan P. McClure, Milla Rautio, Gesa A. Weyhenmeyer, and Xiao Yang published [Environmental and societal consequences of winter ice loss from lakes](#) in *Science*.

PhD student **Jinghan Tan**, Susanne Neupert and **Jean-Paul Paluzzi** (Biology) published [Functional characterization of CCHamides and deorphanization of their receptors in the yellow fever mosquito, *Aedes aegypti*](#) in *General and Comparative Endocrinology*.



Thomas Salomon, Wesley G.D.P. Silva, John B. Dudek, Jürgen Gauss, Stephan Schlemmer, **Jennifer van Wijngaarden** (Chemistry) and Sven Thorwirth published [High-Resolution Spectroscopy and Structure of Heavy Carbon Subchalcogenides: Tricarbon Selenide, C₃Se](#) in *The Journal of Physical Chemistry A*. The research was also featured on the [journal's cover](#).

Rosa Orellana, Franco Saliola, Anne Schilling and **Mike Zabrocki** (Mathematics & Statistics) published [From Quasi-Symmetric to Schur Expansions with Applications to Symmetric Chain Decompositions and Plethysm](#) in *The Electronic Journal of Combinatorics*.

Shanshan Qin, PhD student **Guanlin Zhang**, **Yuehua Wu** (Mathematics & Statistics) and Zhongyi Zhu published [Bayesian grouping-Gibbs sampling estimation of high-dimensional linear model with non-sparsity](#) in *Computational Statistics & Data Analysis*.

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

MEDIA

Professor Emeritus **Paul Delaney** (Physics & Astronomy) was interviewed by *CTV News* and *AM640* about the rocket Europa Clipper heading to one of Jupiter's moons, by *Newstalk 1010* about a recent sungrazer comet that disintegrated and about the Draconids and Orionids Meteor showers, and by *Newstalk 800 CJAD* about the night sky.

Patricia Lakin-Thomas (Biology) spoke to *Zoomer Radio* about daylight savings time, how it evolved over the years, and how it affects people.

Jesse Rogerson (NATS) spoke to *CBC Radio* about the mini-moon 2024 PT5, which entered the Earth's orbit, and about his new book "Daydreaming in the Solar System." [CTV News](#) also profiled the new book.

Sarah Rugheimer (Physics & Astronomy) spoke to *Shane Hewitt and The Night Shift* (iHeartRadio) about a [giant meteorite that hit Earth](#) billions of years ago and about [leaks on the ISS](#).

Sapna Sharma and postdoc **Joshua Culpepper** (Biology) authored an article titled "[Climate change is causing algal blooms in Lake Superior for the first time in history](#)." in *The Conversation*. [The Washington Post](#) also covered research by Sharma and Culpepper on declining lake ice quality as the climate warms.

EVENTS

December 9: Faculty of Science Holiday Potluck & Service Recognition, 12-2pm in Lumbers Lunchroom 305 / Lumbers 306. [RSVP by December 2](#).

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.



Chulalongkorn University

Founded in 1917, Chulalongkorn University (CU) is Thailand's premier and oldest institution of higher education, consistently ranked as one of the top universities in Asia and globally recognized for its academic excellence, impactful research, and dedication to societal development.

CU offers a diverse range of programs across its 19 faculties and numerous research institutes, encompassing sciences, humanities, engineering, medicine, business, and more. It is known for pioneering research in areas such as environmental science, sustainable energy, public health, and artificial intelligence.

Chulalongkorn University is an influential academic institution in Southeast Asia with a commitment to excellence, sustainability, and global impact. Its interdisciplinary programs and active research agenda make it an excellent partner for York University. Collaborating with CU offers York a unique opportunity to deepen its engagement in Asia, expand academic and research initiatives, and support students and faculty in gaining meaningful international experiences.