

## Dean's Round-up: May 2022



The Faculty hosted an in-person [Science Open House](#) at the Life Sciences Building. It was the first time since 2019 that high school students could visit the campus to learn more about the Faculty of Science. Nearly 200 visitors, including students who received admission offers for 2022-2023 and their family members attended the event.



**Science Engagement Programs** (SEP) joined forces with the City of Markham to host Science Rendezvous, an annual family festival that takes science out of the lab and onto the streets across Canada. Attendees enjoyed hands-on activities, live on-stage science magic shows, robot competition demonstrations by the Markham Firebirds, and more. The SEP team also hosted a [virtual Science Rendezvous](#).

SEP is also hosting in-person and online [Science Explorations Camps](#) (Grade 3-8) and [Spark Lab Courses](#) (Grade 9-12) this summer, July 4 to August 26.

## CONGRATULATIONS

**Kyle Belozarov** and **Derek Jackson** (Chemistry) secured nearly \$100,000 in funding to establish and advance Virtual Reality educational tools for the Faculty of Science. Belozarov was awarded an eCampus Ontario Virtual Learning Strategy grant to develop interactive VR teaching materials. Jackson

received an Academic Innovation Fund Category I grant to establish a VR Learning Facility in the Department of Chemistry. The team will collaborate with educators from the University of Toronto to leverage the potential of this exciting new technology.

Postdocs **Vinicius de Oliveira Rodrigues** and **Cesar Corral Rojas** (joining York in July and supervised by **Paul Szeptycki**, Mathematics & Statistics) received Fields Postdoctoral Fellowship funding connected to the upcoming Thematic Program on Set Theoretic Methods in Algebra, Dynamics and Geometry at the Fields Institute (January - June 2023).

**Jane Heffernan** (Mathematics & Statistics) was elected [President](#) of the Society for Mathematical Biology. She also received \$250,000 from the Government of Canada's New Frontiers in Research Fund (Exploration stream), for her project "Mathematical mobilization of vaccine development."

**Jude Kong** (Mathematics & Statistics) received \$250,000 from the Government of Canada's New Frontiers in Research Fund (Exploration stream), for his project "Novel Approaches to Sustainability, Governance, Climate Resilience, and Equity: supporting recovery and renewal in a post-pandemic world."

**Hélène Mialet** (Science & Technology Studies) received nearly \$220,000 from the Social Sciences and Humanities Research Council Insight Grant program, for her project "Sensors, Senses and Sensibility: An Ethnographic Study of 'Control' in Type 1 Diabetes."

Undergraduate students **Abhinab Mukhopadhyay** and **Craig White** received the 2022 Iristel Undergraduate Scholarships in the Department of Physics and Astronomy. These scholarships reward academic performance and lab proficiency and encourage students in their 3rd and 4th year of study to pursue a career in experimental physics or biophotonics.

**Tom Salisbury** (Mathematics & Statistics) was elected President of the Probability Section of the Statistical Society of Canada.

**Bridget Stutchbury** (Biology) received the [2022 Elliott Coues Award](#) from the American Ornithological Society.

A team of students, including **Octavia Wong**, **Jing Guo**, **Yongwen Pan**, and **Vi Nguyen** won the Critical Care Award from the Statistical Society of Canada

2022 Case Study Competition, for their project "Are they enough for assessing physician performance in critical care?" The team was mentored by **Augustine Wong** (Mathematics & Statistics).

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## MORE NEWS

**Chris Caputo** (Chemistry) was selected as a Delegate for Science Meets Parliament, an event organized by the Canadian Science Policy Centre and the Office of the Chief Science Advisor. He travelled to Ottawa to meet with Canada's Chief Science Advisor and spent a day with MPs on Parliament Hill discussing the importance of science in policy and decision making.

**Gordon Craig** (Mathematics & Statistics) presented "Tasty Morsels of Economics for Math Teachers" at the Ontario Colleges Mathematical Association conference in Ramara. He is also serving as treasurer of the Seaway Section of the Mathematical Association of America.

The **Risk and Insurance Studies Centre**, led by **Ed Furman** (Mathematics & Statistics), is launching the second iteration of its Hybrid Academia-Industry Internships via Virtual Engagement (HAIIVVE). Under HAIIVVE, students from any discipline have the opportunity to secure a paid internship term in the area of risk management and insurance, working on real problems under the supervision of real industry managers. Furman was also selected to serve on the Scientific Committee for the Actuarial Research Conference 2022, organized by the University of Illinois.

**Jude Kong** (Mathematics & Statistics) organized a collaborative workshop on big data analysis of COVID-19, in partnership with the South African Council for Scientific and Industrial Research, the Africa-Canada Artificial Intelligence and Data Innovation Consortium and the University of Pretoria; he also presented at the event. He chaired the organizing committee of the Canadian Center for Disease Modelling Incubation Day 2022, and joined the steering committee of the Canadian Black Scientist Network as the regional node liaison. Additionally, he continued doing his Weekly Ask a Mathematician visits to elementary, middle and high schools.

**John McDermott** (Biology) was invited to present a seminar, "Nucleolar Protein Localization and Reorganization in Myogenic Cells," at La Sapienza in Rome, Italy.

**Kevin McGregor** (Mathematics & Statistics) was on the organizing committee for the SORA-TABA Annual Workshop & Dalla Lana School of Public Health Biostatistics Research Day.

**Iain Moyles** (Mathematics & Statistics) gave two presentations on his work modelling of mRNA vaccines. He was an invited speaker to the: International Symposium on Biological Mathematics and Medical Applications, hosted virtually by Nanjing, China; and Applied Mathematics Seminar at the University of California Riverside. He was also elected to the board of directors for the Canadian Applied and Industrial Mathematics Society.

The York-Fields Math Circle, an outreach and enrichment program for high school students from across the GTA, ran on Saturdays from October 2021 to June 2022. The Math Circle is led by **Varvara Nika** (Mathematics & Statistics), along with graduate student **Robert Jordan** and Corina Georgescu (Bishop Allen Academy Catholic Secondary School). Guest speakers included Mathematics & Statistics faculty members **Ilijas Farah**, **Iain Moyles**, **Andrew McEachern**, **Ada Sze Sze Chan**, and **Phillip Morenz**, and PhD student **Andrew Fleck**.

An undergraduate student team comprised of **Jonghoon Park** and **Son Dinh** and supervised by **Xin Gao** (Mathematics & Statistics) participated in the 2022 Statistical Society of Canada Case Study competition.

With their colleague Aarthi Ashok (University of Toronto), **Lisa Robertson** (Biology) and **Tamara Kelly** (Biology) organized and hosted the annual Open Consortium of Undergraduate Biology Educators' May UnConference. This event brought together Biology educators from institutions across Canada.

**Walter Tholen** (Mathematics & Statistics) was invited to present "Another look at monoids, quantales, metrics, etc." at the Workshop on Categorical Algebra 2022 organized by the University of Milan at Gargnano del Garda, Italy.

Dean **Rui Wang** and **Hugo Chen** met virtually with the newly appointed Education Counselor (Li Renzhu) from the Consulate General of the People's Republic of China in Toronto, joined by Education Consul Han Wenjin. Dean Wang used the meetings to introduce the Faculty of Science and discuss collaboration and student recruitment opportunities.

The Faculty collaborated with York International to host a virtual orientation for new international students. The event included pre-recording presentations by **Paula Wilson** (Biology, Bethune) and Dean **Rui Wang**. It was facilitated by Director of International Collaborations and Partnerships **Hugo Chen** and Science Academic Advisor **Miranda Ramnaraine**, and joined by International Recruitment Coordinator **Mingming Li**, Special Projects Assistants **Daniela Escobar** and **Zixin Li**, Global Leaders of York Science (GLYS) Lead **Arghavan Sammak Moghaddam**, and two GLYS student volunteers, **Chenyang Yue** (Biology) and **Anna Agazzi Migotto** (Biology).

**Jihyeon Jessie Yang** (Mathematics & Statistics) presented "SDG-tasting: An Experiential Interdisciplinary Smorgasbord - Mathematics" at the first UN Sustainable Development Goals Teach-In Day, which was the pre-conference event for TiF 2022 (Teaching in Focus Conference) at York University.

The **Canadian Centre for Disease Modelling**, directed by **Huaiping Zhu** (Mathematics & Statistics) hosted the 2022 Incubation Day. The hybrid event connected close to 200 postdocs, graduate students and undergraduate students around the world. See the [yFile story](#).

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## RESEARCH HIGHLIGHTS

PhD student **John Maxwell Campbell** (Mathematics & Statistics) published [Solution to a Problem Due to Chu and Kiliç](#) in *Integers*.

Sylvain Sardy, **Jairo Diaz-Rodriguez** (Mathematics & Statistics), and Caroline Giacobino published [Thresholding tests based on affine LASSO to achieve non-asymptotic nominal level and high power under sparse and dense alternatives in high dimension](#) in *Computational Statistics & Data Analysis*.

**Robert Reynolds** and **Allan Stauffer** (Mathematics & Statistics) published [A quintuple integral involving the product of Hermite polynomial  \$H\_n\(\beta x\)\$  and parabolic cylinder function  \$D\_\nu\(\alpha t\)\$ : derivation and evaluation](#) in *AIMS Mathematics*; and [Sum of the Hurwitz-Lerch Zeta Function over Natural Numbers: Derivation and Evaluation](#) in the *Journal of Mathematics*.

Former PhD students **Paige Whyte-Fagundes**, **Daria Taskina**, **Nickie Safarian**, Research Assistant **Christiane Zoidl**, Peter L. Carlen, **Logan W. Donaldson**, and **Georg R. Zoidl** (Biology) published [Panx1 channels promote](#)

[both anti- and pro-seizure-like activities in the zebrafish via p2rx7 receptors and ATP signaling](#) in *Communications Biology*.

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

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## MEDIA

**Dawn Bazely's** (Biology) in-person plant ecology field course on Manitoulin Island was profiled by [The Manitoulin Expositor](#); the story was republished by [The Star](#).

Professor Emeritus **Paul Delaney** (Physics & Astronomy) spoke about the lunar eclipse, Milky Way black hole, meteor showers, SpaceX activities and UFO sightings with a number of media outlets, including *CTV News*, *Global TV*, *AM640*, *580CFRA*, *NewsTalk1010*, *960AM*, and *AM900*.

**Sandra Rehan** (Biology) spoke to [The Globe and Mail](#) about the No Mow May movement to protect bees and their important role of bees as pollinators.

**Lisa Robertson** (Biology) along with colleagues at the University of Guelph published [The importance of inclusive access to instructors](#) in *University Affairs*. The article was based on their paper [Frequency, topic, and preferences: Tracking student engagement with several modalities of student-instructor contact in a first-year course](#), published in *FEBS Open Bio*.

**Sapna Sharma** (Biology) was interviewed by CBC Radio's [Superior Morning](#) about the impact of climate change on lake ice cover.

**Amro Zayed** (Biology) spoke to [CBC News](#) and [CTV News](#) about the decline of bees and some of the projects his team is working on at the Bee Ecology, Evolution and Conservation Centre at York.

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## EVENTS

**June 17:** Spring Convocation at 10:30 am. Live webcast:

<https://www.yorku.ca/convocation/>

**August 18:** [Summer Undergraduate Research Conference](#). Life Sciences Building, 8:30am-3:30pm.

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## 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.



### Hebei Normal University

Hebei Normal University (HNU) originates from Shuntian School (founded in 1902 in Beijing) and Beiyang Women's Normal School (founded in 1906 in Tianjin). HNU has 25 colleges and one independent college (Huihua College) providing 93 four-year undergraduate programs, 29 master's degree programs and 24 doctoral degree programs. These disciplines cover the fields of philosophy, economics, law, education, literature, history, sciences, engineering, management, and art. It ranks among the world's top one percent by ESI in the disciplines of chemistry, and plant and animal science.

HNU has nearly 2,700 faculty and staff and nearly 1,800 teaching faculty, as well as more than 25,000 undergraduate students, 5,200 PhD students and 11,000 continue study students.