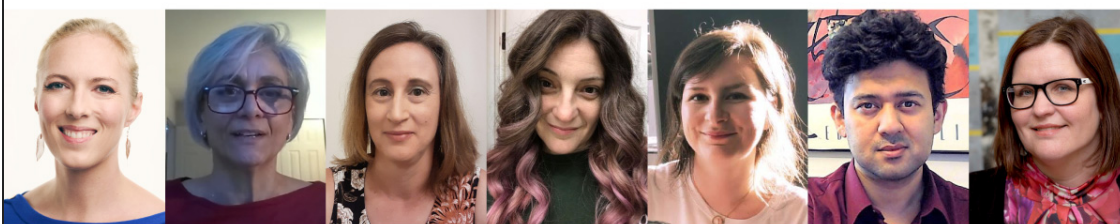


## Dean's Round-up: September 2022

### Welcome to our new **faculty** members



**#WelcomeYU**

Welcome to our new full-time faculty members, who were featured in YFile's [New Faces](#) edition: **Sarah Rugheimer** (Physics & Astronomy), **Daniela Monaldi** (Science, Technology & Society), **Gloria Orchard** (Physics & Astronomy), **Allysa Lumley** (Mathematics & Statistics), **Kelly Ramsay** (Mathematics & Statistics), **Kohitij Kar** (Biology) and **Jennifer van Wijngaarden** (Chemistry).

The Faculty of Science has created a [LinkedIn page](#) to stay connected with alumni, students, faculty and staff. We invite you to visit the page and follow!

A generous [gift by alumnus Earle Nestmann](#) will create more opportunities for our students to participate in paid summer research positions. His gift of \$200,000, matched by the Faculty of Science for a total of \$400,000, will create the Earle Nestmann Undergraduate Research Award (ENURA) program, starting summer 2023.

**Science Engagement Programs** (SEP) wrapped up their summer programming with more than 770 students in attendance (online and in-person). Twenty-nine bursaries were awarded to students in the GTA to attend

the programs. SEP also hosted 26 mentoring events, and two community events at the Jane and Finch Corner Commons to bring science into the community and promote awareness of the SEP bursary program and upcoming Jane-Finch programming in the fall.

The [Department of Science, Technology and Society](#) has relaunched with a new name, as well as new offerings for its minor programs.

The Department of Mathematics & Statistics has launched its new [Data Science](#) program, to begin in fall 2023.

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## CONGRATULATIONS

Undergraduate student **Ashlyn Nguyen** and graduate student **Gurnoor Kaur Brar** received a [Robert J. Tiffin Student Leadership Award](#) from York University.

The Faculty of Science celebrates two new [York Research Chairs](#): **Jianhong Wu** (Mathematics & Statistics), appointed Tier 1 York Research Chair in Industrial and Applied Mathematics; and **Jane Heffernan** (Mathematics & Statistics), appointed Tier 2 York Research Chair in Mathematics of Immunity and Infectious Disease.

**Jane Heffernan** (Mathematics & Statistics) was elected Vice-President of the Society for Mathematical Biology (SMB) at the SMB Annual Meeting in Heidelberg, Germany. She is also President-elect and will begin her term as President in July 2023.

**Ryan Hili** (Chemistry) received a grant from the [Cancer Research Society](#) for the project "Development of selective inhibitors of human m6A demethylases." **Chun Peng** (Biology) also received a grant from the Cancer Research Society, funded in partnership with Ovarian Cancer Canada, to study the "Role of circSKA3 in ovarian cancer development."

**Kohitij Kar** (Biology) received a [Simons Foundation Autism Research Initiative \(SFARI\) grant](#) for the project "Developing a closed-loop framework using artificial neural networks and nonhuman primate experiments to test theories of atypical facial emotion processing in autism."

**Jude Kong** (Mathematics & Statistics) received a \$7.25 million [grant](#) from the

International Development Research Centre for the project “Global South Artificial Intelligence for Pandemic and Epidemic Preparedness and Response Network.”

**Christine Le** (Chemistry) received the [2022 Petro-Canada Emerging Innovator Award](#) to support her work to develop fluorination toolkits for medicinal drug discovery and development.

**Sandra Rehan** and **Sapna Sharma** (Biology) were elected to the [Royal Society of Canada](#) College of New Scholars, Artists and Scientists.

**Bridget Stutchbury** (Biology) was named one of five finalists in the [Canadian Museum of Nature’s Nature Inspiration Awards](#) in the “Adult” category for her work on saving Canada’s most vulnerable animals that are at risk of extinction.

**Jianhong Wu** (Mathematics & Statistics) was elected as a Fellow of the [Royal Society of Canada](#), and as a Fellow of the [Canadian Academy of Health Sciences](#).

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## MORE NEWS

[YFile](#) highlighted **Thomas Baumgartner**’s (Chemistry) visiting professorship at the Research Center for Materials Science at Nagoya University in Japan.

**Kyle Belozarov** (Chemistry) spoke with [YFile](#) about his views on the role of emerging educational technologies, such as virtual and augmented reality, in the future of university education.

Undergraduate students **Taylor Cargill** (Biology), **Kevin Y. H. Hui** (Lassonde) and **Mahakprit Kaur** (Biology) gave a talk at RISC Junior Scholar Colloquium entitled “Using Tweets to identify Medical resource shortage and informing healthcare supply chain-decisions.”

Director of International Collaborations & Partnerships **Hugo Chen** joined the pan-university project team for the Go Global Sustainable Development Goals (SDGs) in Action Student Challenge. The initiative will empower York University students and their peers around the world to take action towards the achievement of SDGs with a global lens.

**Xin Gao** (Mathematics & Statistics) was invited to join the editorial board and become the associate editor of the [Biometrical Journal](#).

**Jude Kong** (Mathematics & Statistics) presented “Leveraging Artificial Intelligence and Big Data for clinical public health in South Africa” when the Deputy Minister of Higher Education, Science and Innovation (South Africa) and the Hon. Buti Manamela visited York University. During the seventh session of the UN General Assembly, he also co-organized the panel session “Artificial Intelligence Research in Health: Tackling Global Challenges as One.”

Science International Recruiting Coordinator **Mingming Li** led the International Network of Tomorrow Leaders of the Canadian Bureau for International Education to present “Lunch and Learn with Rev. Ananda Thero” as the Communication Sub-committee leads.

**John McDermott** (Biology) presented “The MEF2A Transcription Factor Interactome in Cardiomyocytes” at the International Society of Heart Research Meeting in Winnipeg.

**Iain Moyles** (Mathematics & Statistics) was part of a York delegation that had an industrial liaison meeting with Siemens to discuss sustainability initiatives for York University; the meeting was hosted by the Office of the Vice-President Research & Innovation. He also presented “From population spread to cellular immunity: A mathematical modeller's journey through COVID-19” at the Next Generation Seminar Series for the Mathematics for Public Health network at the Fields Institute.

Dean **Rui Wang** met the first cohort of student volunteers from the [Global Leaders of York Science](#) (GLYS) program on September 19.

**Woldegebriel Assefa Woldegerima, Jude Kong and Jianhong Wu** (Mathematics & Statistics) co-organized an international virtual symposium on [Machine Learning and Data Modelling in the Biomedical Sciences](#) (MLDMBioMed-22), presented by the Laboratory for Industrial and Applied Mathematics (LIAM) in collaboration with Africa- Canada AI and Data Innovation Consortium (ACADIC). The symposium included seven invited lectures and more than 14 contributing talks from more than 11 countries. There were more than 100 registered participants.

**Cora Young** (Chemistry) was the team lead at the National Oceanic and

Atmospheric Administration (NOAA) for a joint NOAA/NASA meeting on the role that the Air Quality Research Station at York University is going to have in making measurements and hosting an international team of researchers for the upcoming [AGES](#) (AEROMMA+CUPiDS, GOTHAAM, EPCAPE, and STAQS) project. Young and **Trevor VandenBoer** (Chemistry) presented at the meeting. The campaign at York is called Toronto Halogens, Emissions, Contaminants, and Inorganics eXperiment (THE CIX) and will involve researchers and scientists from the University of Toronto, Environment and Climate Change Canada, and University of York.

**Mike Zabrocki** (Mathematics & Statistics) presented “Characters of Diagram Algebras and Symmetric Functions” at the Character Theory and Categorification workshop in Oberwolfach, Germany.

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## RESEARCH HIGHLIGHTS

**Ada Chan** (Mathematics & Statistics), Chris Godsil, Christino Tamon and Weichan Xie published [Of shadows and gaps in spatial search](#) in *Quantum Information and Computation*.

**Ada Chan** (Mathematics & Statistics), Gabriel Coutinho, Whitney Drazen, Or Eisenberg, Chris Godsil, Mark Kempton, Gabor Lippner, Christino Tamon and Hanmeng Zhan (former York Science Fellow) published [Fundamentals of fractional revival in graphs](#) in *Linear Algebra and its Applications*.

**Amenda Chow** (Mathematics & Statistics) published [From the Lecture notes of ...](#) in *Crux Mathematicorum*.

**Conor M. W. Douglas** (Science, Technology and Society), Fernando Aith, Wouter Boon, *et al.* published [Social pharmaceutical innovation and alternative forms of research, development and deployment for drugs for rare diseases](#) in *Orphanet Journal of Rare Diseases*.

Postdoc **Shira Joudan** (Chemistry) published [Postdoc progression](#) in *Nature Chemistry*.

PhD student **Katherine Lunn**, Tobias Frøslev, Madeleine Rhodes, Leah Taylor, Hernani F M Oliveira, Catherine E A Gresty, and Elizabeth L Clare (Biology) published [Non-Target Effects of Agri-Environment Schemes on Solitary Bees](#)

[and Fungi in the United Kingdom](#) in *Bulletin of Entomological Research*.

Maya Abou-Ghanem, PhD student **Danial Nodeh-Farahani**, Devon T. McGrath, **Trevor C. VandenBoer** (Chemistry), and Sarah A. Styler published [Emerging investigator series: ozone uptake by urban road dust and first evidence for chlorine activation during ozone uptake by agro-based anti-icer: implications for wintertime air quality in high-latitude urban environments](#) in *Environmental Science: Processes & Impacts*.

Lamiya Mowla, Kartheik G. Iyer, Guillaume Desprez, Vicente Estrada-Carpenter, Nicholas S. Martis, Gaël Noirot, PhD student **Ghassan T. Sarrouh**, Victoria Strait, Yoshihisa Asada, Roberto G. Abraham, Gabriel Brammer, Marcin Sawicki, Chris J. Willott, Marusa Bradac, René Doyon, **Adam Muzzin** (Physics & Astronomy), Camilla Pacifici, Swara Ravindranath, and Johannes Zabl published [The Sparkler: Evolved High-redshift Globular Cluster Candidates Captured by JWST](#) in *The Astrophysical Journal Letters*. **READ THE [PRESS RELEASE](#) FROM YORK.**

**Robert Reynolds** and **Allan Stauffer** (Mathematics & Statistics) published [Non-Zero Order of an Extended Temme Integral](#) in *Symmetry*.

Beatriz Herrera, Jacob A Westerberg, Michelle S Schall, Alexander Maier, Geoffrey F Woodman, **Jeffrey D Schall** (Biology), and Jorge J Riera published [Resolving the mesoscopic missing link: Biophysical modeling of EEG from cortical columns in primates](#) in *Neuroimage*.

Gregory E Cox, Thomas J Palmeri, Gordon D Logan, Philip L Smith, **Jeffrey D Schall** (Biology) published [Salience by competitive and recurrent interactions: Bridging neural spiking and computation in visual attention](#) in *Psychological Review*.

Kate N Thomas, Caitlyn Rich, Rachel C Quock, Jeffrey W Streicher, David J Gower, **Ryan K Schott** (Biology), Matthew K Fujita, Ron H Douglas, and Rayna C Bell published [Diversity and evolution of amphibian pupil shapes](#) in *Biological Journal of the Linnean Society*.

**Sapna Sharma** (Biology), R.I. Woolway, PhD student **Aman Basu**, postdoc **Kevin Blagrove**, Gerald Bove, Nikolay Granin, Jan Henning L'Abée-Lund, Hilmar J. Malmquist, Wlodzimierz Marszelewski, Tiina Nöges, Merja Pulkkanen, and Kenton Stewart published "Lake Ice" in [State of the Climate in 2021](#),

*Bulletin of the American Meteorological Society.*

Former postdoc **Ye Tao**, **Trevor C. VandenBoer**, MSc student **RenXi Ye**, and **Cora J. Young** (Chemistry) published [Exploring controls on perfluorocarboxylic acid \(PFCA\) gas-particle partitioning using a model with observational constraints](#) in *Environmental Science: Processes & Impacts*.

Postdoc **Pei Yuan**, PhD student **Yi Tan**, **Liu Yang**, postdoc **Elena Aruffo**, Nicholas H. Ogden, Jacques Bélair, **Jane Heffernan**, Julien Arino, James Watmough, Hélène Carabin, and **Huaiping Zhu** (Mathematics & Statistics) published [Assessing transmission risks and control strategy for monkeypox as an emerging zoonosis in a metropolitan area](#) in the *Journal of Medical Virology*.

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

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## **MEDIA**

**Elizabeth Clare** (Biology), MSc student **Nina Garrett**, and undergraduate student **Mehdi Movahed** were featured in Radio-Canada's [Decouverte](#). The segment highlighted their approach of collecting DNA from air to study biodiversity.

**Elaina Hyde** (Physics & Astronomy) spoke with *AM900* about NASA's DART mission and about detecting water and life on other planets and stars.

**Jesse Rogerson** (Science, Technology & Society) spoke with *CTV News*, *CBC Radio*, *Newstalk1010*, and *CFAX 1070* about a variety of astronomy topics, including NASA's DART mission, the UAE getting ready to launch a rover to the moon, finding water on meteorites, and about why the Earth's core remains hot.

**Sarah Rugheimer** (Physics & Astronomy) spoke with *Newstalk1010*, *AM640* and appeared on *CityTV* to discuss Nasa's DART mission.

**Trevor VandenBoer** (Chemistry) spoke with CBC Radio's [Quirks & Quarks](#) about his expedition to study fog along the Atlantic coast.

**Jennifer van Wijngaarden** (Chemistry) spoke with [Chemistry World](#) magazine



about a recent paper reporting the most accurate experimental geometry of benzene to date.

In a [CBC Radio](#) documentary produced by former York Science Communicator in Residence Molly Segal, **Cora Young** (Chemistry) shares a personal story from childhood about being inspired to take action and eventually become an atmospheric chemist.

**Huaiping Zhu** (Mathematics & Statistics) spoke to [Nature News](#) about his team's monkeypox modelling study that considered the potential role of animal hosts in the transmission of the virus.

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## EVENTS

Oct 11: [Alternative Assessments for Science Instructors](#)

Oct 14: [Convocation](#)

Oct 17: [Graduate Students Fireside Chats on Teaching](#)

Oct 18: [FSc. Science Education Book Club](#)

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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.







### **Nanjing University, China**

Founded in 1902, Nanjing University is one of the oldest and most prestigious institutions of higher learning in China. At present, the University has three campuses —Xianlin Campus, Gulou Campus and Pukou Campus—with 28 schools. As of 2016, the number of the students was 32,999 in total, including 13,583 undergraduates, 10,865 master students, 5,335 doctoral students, and 3,216 full-time international students.

