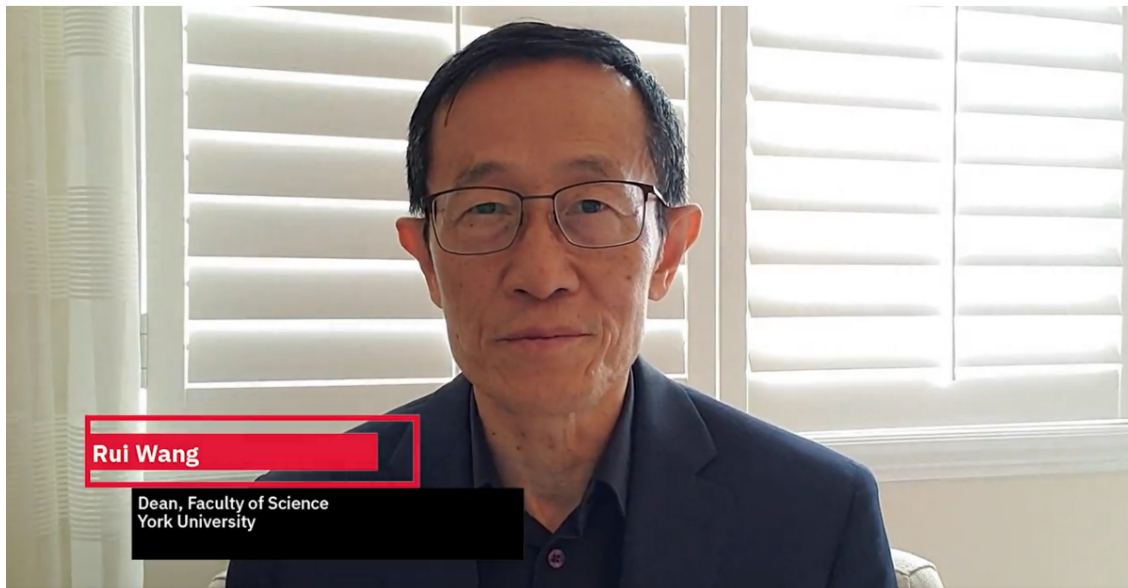


## Dean's Round-up: January 2022



Dean **Rui Wang** shared a [video message](#) on social media welcoming all students for the Winter 2022 term.

The Faculty of Science launched the [Global Leaders of York Science](#) (GLYS). Spearheaded by Director of International Collaborations and Partnerships **Hugo Chen**, GLYS aims to provide undergraduate students with professional development opportunities to enhance their employability skills and help them develop a global mindset.

**Pedagogy and Curriculum Help is Available!** Do you have questions about dynamic pedagogy, curriculum ideas, adding flexibility to labs, or adding flexibility to courses? **Ashley Nahornick** (Educational Development Specialist) is here to answer your questions. She can also review your e-class, provide ideas, and answer your questions. Reach out at [ashleynk@yorku.ca](mailto:ashleynk@yorku.ca)

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**CONGRATULATIONS**

**Dawn Bazely** (Biology) received the [Minister's Award of Excellence](#) in the Future Proofing category, which recognizes faculty and staff who are leading the way in adapting programming that supports new ways of learning.

**Muhammad Yousaf** (Chemistry) received an Honorary Award for Outstanding Lifetime Achievements from Nano Ontario and presented a Virtual Award Lecture titled "Rewiring cell surfaces with click chemistry for applications in tissue engineering."

**Elizabeth Clare, Sandra Rehan and Laurence Packer** (Biology) received \$600K in funding from the New Frontiers Research Fund, as part of the larger project [BIOSCAN](#), which received \$24 million; BIOSCAN is led by University of Guelph.

PhD student **Kathleen Dogantzis** (Biology) was one of the winners of the [Winter Stations](#) design competition, for her art installation titled "The Hive."

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## MORE NEWS

The **Financial Engineering program**, run jointly by the **Department of Mathematics & Statistics** and Schulich School of Business, was approved to be a partner of the Financial Risk Managers designation offered by the Global Risk Association Professionals.

The **Department of Physics & Astronomy** is participating in the [Canadian Association of Physicists Undergraduate Lectures](#) tour this term. They are hosting a lecture by Dr. Seyda Ipek (Carleton University), entitled "Why Are We Here? Matter-Antimatter Asymmetry Of The Universe" on February 10. Additionally, Professor **Ozzy Mermut** will present "Biophotonics: Shedding Light on Biosensory Disorders and Age-Related Degenerative Diseases" on April 1.

The Faculty of Science collaborated with York International to host a Virtual Orientation for new international students at FSc. The event included presentations by **Paula Wilson** (Biology, Bethune), Dean **Rui Wang**, Director of International Collaborations and Partnerships **Hugo Chen**, Special Projects Assistant **Daniela Escobar**, and York Science Global Ambassador (YSGL) Lead Arghavan Sammak Moghaddam.

**Sapna Sharma's** (Biology) research on lakes was profiled on the York

University United Nations Sustainable Development Goals [website](#).

**Jude Kong** (Mathematics & Statistics) delivered a keynote address, “How to harness the power of mathematical models to inform disease outbreak policies” at the Black Excellence in Science, Technology, Engineering, Mathematics, Medicine (BE-STEMM) Conference. He also served as the host for a networking and mentorship event at the conference.

**Iain Moyles, Ada Chan, Amenda Chow, and Jihyeon Jessie Yang** (Mathematics & Statistics) were panelists for a Durham District School Board’s virtual panel on the transition from high school to university mathematics.

**Paul Delaney** (Physics & Astronomy) presented “The Value of Occultations” to the Hamilton Amateur Astronomers club.

With their colleague Aarthi Ashok (University of Toronto), **Lisa Roberston** and **Tamara Kelly** (Biology) organized and hosted the annual Open Consortium of Undergraduate Biology Educators’ December UnConference. The event featured a session on Balancing Flexibility and Rigour to Support Student Success, and other sessions on equity.

**Lisa Robertson, Nicole Nivillac, and Tamara Kelly** (with input from **Robert Tsushima**), all of Biology, held an information session on scientific writing and lab reports at the Writing Department’s annual professional development day. The goal was to assist the Writing Centre in understanding components of biological lab reports in order to provide better writing support for biology students. Ideas and common writing issues were contributed by **Chris Jang** (Biology), **Hovig Kouyoumdjian** (Chemistry), **Tihana Mirkovic** (Chemistry), and **Birgit Schwarz** (Biology).

**Mike Zabrocki** (Mathematics & Statistics) co-organized the conference Combinatorial Algebra meets Algebraic Combinatorics 2022 at the Fields Institute. As well, the journal [Combinatorial Theory](#), of which he is an editorial board member, published its first issue; it is a mathematician-run, diamond open access journal published by eScholarship.

**Laurence Packer** (Biology) organized [BeeST](#), a new series of talks on bee biogeography and systematics.

Science International Recruiting Coordinator **Mingming Li** was selected as

Committee Lead-Communications of the International Network of Tomorrow's Leaders for the Canadian Bureau for International Education 2022.

**Jianhong Wu**, **Seyed Moghadas** and **Jane Heffernan** (Mathematics & Statistics) presented at the [MfPH Workshop](#) on Endemic COVID-19: Mathematical Insights, hosted by the Fields Institute. Wu was also a moderator for the event.

Postdoc **Nicola Luigi Bragazzi** (Mathematics & Statistics) presented "The impact of the COVID-19 pandemic on sexual and gender minorities: a syndemic perspective" as part of the MfPH Next Generation Seminar Series at the Fields Institute.

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## RESEARCH HIGHLIGHTS

**William J. Pietro** and Professor Emeritus **A. B. P. Lever** (Chemistry) published [Ligand Electrochemical Parameter Approach to Molecular Design.  \$\sigma\$ -Donation,  \$\pi\$ -Back Donation, and Other Metrics in Ruthenium\(II\) Dinitrogen Complexes](#) in *Inorganic Chemistry*.

**Elizabeth L. Clare** (Biology), Chloe K. Economou, Frances J. Bennett, Caitlin E. Dyer, Katherine Adams, Benjamin McRobie, Rosie Drinkwater, and Joanne E. Littlefair published [Measuring biodiversity from DNA in the air](#) in *Current Biology*. See the [press release](#) from York University.

PhD student **Zachary McCarthy**, Postdoc **Nicola Luigi Bragazzi**, Postdoc **Jummy David**, Postdoc **Martin David Grunnill**, LIAM/ADERSIM COVID-19 Reopening and Recovery Modeling Group, and **Jianhong Wu** (Mathematics & Statistics) published [Assessment of potential COVID-19 trajectories in Ontario and quantification of the evolution of the infectious population over time](#) as a Special Report in a Public Health Agency of Canada Modelling Group Report.

Jacob A Westerberg, Michelle S Schall, Alexander Maier, Geoffrey F Woodman, and **Jeffrey D Schall** (Biology) published [Laminar microcircuitry of visual cortex producing attention-associated electric fields](#) in *eLife*.

Former student **James D Cornwell** and **John C McDermott** (Biology) published [MEF2 in cardiac hypertrophy in response to hypertension](#) in *Trends in Cardiovascular Medicine*.

Lab Tech **Soma Tripathi**, Research Associate **Tetsuaki Miyake**, MSc student **Jonathan Kelebeev**, and **John C McDermott** (Biology) published [TAZ exhibits phase separation properties and interacts with Smad7 and  \$\beta\$ -catenin to repress skeletal myogenesis](#) in the *Journal of Cell Science*.

Menelaos Konstantinidis, Lisa W. Le, and **Xin Gao** published [An Empirical Comparative Assessment of Inter-Rater Agreement of Binary Outcomes and Multiple Raters](#) in *Symmetry*.

Former Postdoc **Paolo Perrone** and **Walter Tholen** (Mathematics & Statistics) published [Kan extensions and partial colimits](#) in *Applied Categorical Structures*.

PhD graduate **Sladjana Slavkovic**, PhD student **Aron A. Shoara**, PhD graduate **Zachary R. Churcher**, Elise Daems, Karolien de Wael, Frank Sobott and **Philip E. Johnson** (Chemistry) published [DNA binding by the antimalarial compound artemisinin](#) in *Scientific Reports*.

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## MEDIA

Research by **Elizabeth Clare** (Biology) on collecting DNA from air to monitor biodiversity received extensive media attention locally and globally, including by CBC Radio's [Quirks and Quarks](#), [CBC News](#), [CTV News](#), [BBC](#), [NPR](#), [CNN](#), [Wired](#), [The Economist](#), [Smithsonian Magazine](#), and more. There were more than 120 online and in print articles published about the research.

The article "Lakes are losing their ice cover faster than ever, here's what that means for us," co-authored by **Sapna Sharma** (Biology) for *The Conversation* (Dec 20, 2021), was republished by [The Weather Network](#) and [The Narwhal](#). Sharma also spoke to [NPR](#) on the topic.

**Elaina Hyde** (Physics & Astronomy) spoke to [CTV News](#) about a change in Earth's rotation that might lead to a "leap second."

**Cora Young** and **Trevor VandenBoer** (Chemistry) were featured in an article in [University Affairs](#) about getting back to fieldwork during the pandemic.

**Dasantila Golemi-Kotra** (Biology) spoke with *CBC Radio* about travelling and public health measures (radio syndicate), and [rapid antigen tests](#). Also,

*Newsweek* (Japan) re-printed the article “Omicron FAQ: How is it different from other variants? Is it a 'super-variant'? Can it evade vaccines? How transmissible is it?” which she originally published in *The Conversation* (Dec 13, 2021).

**Jesse Rogerson** (Natural Science) spoke about the James Webb Space Telescope with *CBC Radio* and *SiriusXM*.

**Jane Heffernan** (Mathematics & Statistics) spoke to *CBC Radio* (syndicate) on a number of topics related to COVID-19, including mathematical modelling, reopening, vaccination, hospitalization rates and more. She was also interviewed by [CTV News](#) about how Omicron has complicated matters for modelling COVID-19.

**Paul Delaney** (Physics & Astronomy) spoke to *Global TV*, *CTV News*, *Breakfast Television*, *AM640*, *AM630*, *900 CHML*, *AM1010* on a number of astronomy topics including the James Webb Space Telescope, SpaceX rocket impact on the Moon, and Asteroid 1994 PC1 flyby.

**Jianhong Wu** (Mathematics & Statistics) spoke to *Newmarket Today* about the risks surrounding the [reopening of schools](#) and using [wastewater testing](#) to track COVID-19.

**Amro Zayed** (Biology) was interviewed about bees and his BeeCSI project on the [CRAM Podcast](#).

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## EVENTS

**Feb 11:** *Women in Science*, presented by the Faculty of Science and featuring keynote speaker Vivian Saridakis (Biology). 6:30 pm on [Zoom](#).

**Feb 17:** *Designing Student Centered Classrooms*, presented by Dr. Shoshanna Jacobs (University of Guelph). 1-2pm on [Zoom](#).

**Mar 4:** *Talk Matters: Investigating the Nature of Non-Content Classroom Language – Instructor Talk – that May Mediate Student Inclusion, Engagement, and Learning*, presented by Dr. Kimberly Tanner (National Science Foundation, San Francisco State University). 12-1:15 pm on [Zoom](#).



**Mar 24:** *Aligning Mentoring Expectations in Science Research*, presented by Dr. Erin Dolan (University of Georgia). 12pm-1pm on [Zoom](#).

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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.



### Shenzhen University

[Shenzhen University](#) (China) hosts over 34,000 students, 3,770 faculty and staff members since it was founded in 1983. SZU offers bachelor, master and Ph.D. degrees in a wide range of programs. The university consists of 27 schools and two affiliated hospitals, offering 90 undergraduate majors. The 2022 Times Higher Education World University Rankings ranked SZU 351-400 in the world, and 17th in China.

The University's School of Mathematics and Statistics has five departments: Mathematics, Applied Mathematics, Information and Computational Science, Statistics, and University Mathematics Teaching. The school has three existing undergraduate programs: mathematics and applied mathematics (including mathematics education, financial mathematics), information and computing science (including mathematics and computer science classes), statistics.

York University and Shenzhen University signed a [Memorandum of Understanding](#) with the goal of establishing a joint degree program in Applied Mathematics and furthering pathways for student exchanges, research, and cooperation between the two institutions.

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