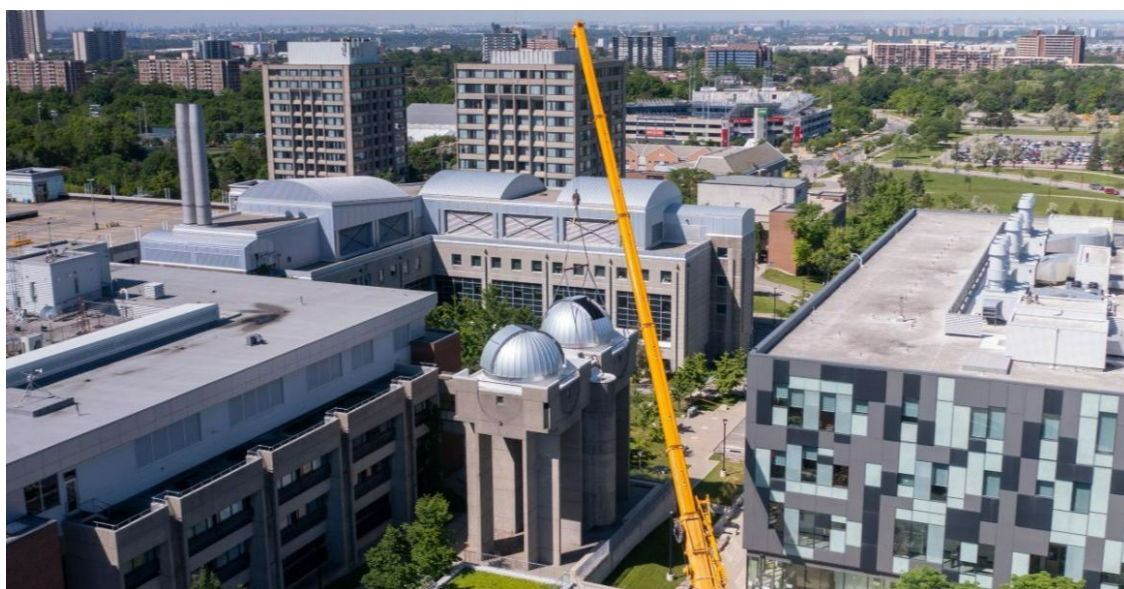


Dean's Round-up: June 2022



Two new domes were successfully installed at the **Allan I. Carswell Observatory**, replacing the original ones from the 1960s. The [new automated domes](#) will be more functional and allow for a larger opening to see more of the sky through the telescopes – leading to enhanced global research collaboration and public outreach.



At Convocation, **Sergey Krylov** (Chemistry) and **Paula Wilson** (Biology) were formally recognized in-person for receiving the title of [Distinguished Research](#)

[Professor](#) and the [President's University-Wide Teaching Award](#), respectively. Both honours were announced in 2020 but due to the pandemic could not be celebrated at an in-person Convocation until this spring.

Want to improve your course learning outcomes? Or get ideas to make your e-class clearer? Discuss classroom teaching strategies? Help is available! Educational Development Specialist **Ashley Nahornick** is here to help. She can help you write/revise your course learning outcomes, revise your course outlines, review your e-class, provide ideas, and answer your questions. Reach out at ashleynk@yorku.ca.

CONGRATULATIONS

Eleven faculty members received a total of more than \$1.9 million from the NSERC Discovery grants program. Recipients include **Chris Bergevin** (Physics & Astronomy), **Michael Chen** (Mathematics & Statistics), **Jairo Diaz-Rodriguez** (Mathematics & Statistics), **Peter Gibson** (Mathematics & Statistics), **Jude Kong** (Mathematics & Statistics), **Sergey Krylov** (Chemistry), **Dong Liang** (Mathematics & Statistics), **Kim Maltman** (Mathematics & Statistics), **Sarah Rugheimer** (Physics & Astronomy), **Jeffrey Schall** (Biology), and **Cody Storry** (Physics & Astronomy).

Professor Emeritus **Diethard Kurt Böhme** (Chemistry) was honoured in a [Special Issue](#) of *Mass Spectrometry Reviews*. The issue highlights his contributions in the fields of gas-phase ion chemistry and physics and also contains an article by Böhme entitled [Toward ICP-SIFT mass spectrometry and atomic cation ligation as a probe of relativistic effects—A personal journey](#).

Graduating BSc students **Sophie Eisen**, **Pablo Gonzalez**, and **Robert Khatib** received the [Faculty of Science Gold Medal](#), and **Jacob Fine** received the Faculty's Silver Medal. Khatib also received the [Governor General's Silver Medal](#).

Ozzy Mermut (Physics & Astronomy) is a co-PI on a \$1.65 million NSERC CREATE Grant for the project "Microsystems Technologies & Application," led by Regina Lee (Lassonde) and including co-PIs Pouya Rezai and Gerd Grau (Lassonde). The program aims to address the need for innovation in microsystems technologies and the skilled workforce to fill the rapid growth in the global market.

Adam Muzzin (Physics & Astronomy) was elected Vice President of the Canadian Astronomical Society.

Michael Organ (adjunct, Chemistry) and **William Pietro** (Chemistry) were awarded a \$1.35 million NSERC Alliance Grant entitled “The Covid-19 Post-Apocalyptic Laboratory.” This joint University of Ottawa and York University research program focuses on the development of artificial intelligence with IoT-enabled robotics for drug discovery and molecular synthesis. The Ottawa team, headed by Organ, includes Lora Ramunno and Adam Shuhendler as co-PIs.

MORE NEWS

YFile featured **Kyle Belozarov** and **Derek Jackson** (Chemistry) and their use of [virtual reality technology](#) in undergraduate chemistry teaching.

Ada Chan (Mathematics & Statistics) co-organized the 26th Ontario Combinatorics Workshop with Mike Newman (University of Ottawa) and a group of University of Waterloo graduate students. Nineteen graduate students and postdocs presented their work at the event. **Mohabat Tarkeshian**, a York mathematics alumni currently working on her doctoral studies at Western University, won the Peter Rodney Memorial Book Prize for the best student talk.

The Faculty hosted the second Collaborative Online International Learning Virtual Exchange with a group of 30 students from Northeastern University (China). Director of International Collaborations & Partnerships **Hugo Chen**, students and Global Leaders of York Science **Arghavan Sammak Moghaddam**, **Anna Agazzi Migotto**, **Chenyang Yue**, **Chaemin Kwon**, and **Misbah Parkar**, and students **Daniela Escobar** and **Tracy Li** joined the virtual discussion on various student topics.

Amenda Chow, **Allysa Lumley**, and **Pam Sargent** (Mathematics & Statistics) organized a math education session at the Canadian Mathematics Society Summer Meeting. In the session, entitled “Learning Math Through Experimentation and Exploration,” attendees interacted with the teaching styles presented by participating in activities. The speakers also illustrated how to provide authentic mathematical experiences on various scales.

Paul Delaney (Physics & Astronomy) presented “Solar Observing” at the

Hamilton Amateur Astronomers club.

Jane Heffernan (Mathematics & Statistics) was one of three Canadian health researchers and innovators invited to a [Parliamentary Health Research Caucus](#) event entitled Game Changers in Health Research and Health Innovation. She presented on the topic of modeling immunity.

Postdoc **Shira Joudan** (Chemistry) published [My pandemic postdoc](#) in *Nature Chemistry*.

PhD student **Laura Keane** (Mathematics & Statistics) presented “Reduction of a lithium-ion solid electrolyte model under potentiostatic hold” and “An improved approximation for hydraulic conductivity for pipes of triangular cross-section” at the Canadian Applied and Industrial Mathematics Society Annual Meeting. She also presented a poster on battery modelling at the 241st Meeting of the Electrochemical Society, from which she received a travel grant to attend.

Jude Kong (Mathematics & Statistics) presented “Estimation of epidemiological parameters and ascertainment rate from early transmission of COVID-19 Across Africa” at the Applied and Industrial Mathematics Society Annual Meeting, and “The Phytoplankton competition for nutrients and light in a stratified lake: a mathematical model connecting epilimnion and hypolimnion” at the Dynamical systems and applications session of the Canadian Mathematics Society Meeting. He also co-organized a mini symposium at the Canadian Industrial and Applied Mathematics Meeting on Big Data and AI for Public Health.

John McDermott (Biology) presented an invited seminar, “Nucleolar Protein Localization and Re-Organization in Myogenic Cells,” at the Faculty of Biology, Medicine and Health, University of Manchester (UK).

Kevin McGregor (Mathematics & Statistics) presented an invited talk at the Statistical Society of Canada Annual Meeting: Spotlight on New Investigators, and a talk at the IMPACTT Symposium.

Iain Moyles (Mathematics & Statistics) was the faculty NSERC presenter for a Research Commons workshop on Tri-Council Graduate Scholarships and What Supervisors Need to Know. As well, at the Canadian Applied and Industrial Mathematics Society Annual Meeting, he organized the mini-symposium Batteries: Modeling, Simulation, & Analysis, presented a talk entitled “A

timescale analysis for a mathematical model of in-host immunity response to a liquid nanoparticle vaccine,” and chaired the panel session on Navigating EDI.

Sapna Sharma (Biology) co-organized a Winter Biology Virtual Symposium with over 350 registrants. PhD student **Aman Basu** (Biology) was one of just a few doctoral students who presented.

Andrew Skelton (Mathematics & Statistics) presented "Will Faculty Buy In and Will Students Care? Embedding Transition Content into the First-Year Classroom" at the Canadian Mathematical Society Summer Meeting, and "Eye on 2024: Turning Your Local Best Practices into a Conference Presentation" at the 12th International Conference on Supplemental Instruction.

Asia Ivić Weiss (Mathematics & Statistics) presented a plenary lecture entitled “On the evolution of the theory of regular polyhedral and polytopes” at the seventh Croatian Mathematical Congress.

Through the African Institute for Mathematical Sciences (AIMS), **Woldegebriel Assefa Woldegerima** (Mathematics & Statistics) virtually supervised an MSc student (now graduated) and was an external examiner for two other MSc theses. AIMS is a pan-African network of centers of excellence enabling Africa’s talented students to become innovators driving the continent’s scientific, educational and economic self-sufficiency.

YFile featured the **OMNI-RÉUNIS [Distinguished Lecture Series](#)** on Modelling of Infectious Diseases, which included University of Warkwick Professor Matt Keeling alongside Canada’s Chief Medical Officer Theresa Tam and York University’s Provost and Vice-President Academic and Professor Lisa Philipps. The network is led by **Huaiping Zhu** (Mathematics & Statistics).

RESEARCH HIGHLIGHTS

Postdoc **Nicola L. Bragazzi**, **Jude D. Kong**, Naim Mahroum, Christina Tsigalou, Rola Khamisy-Farah, Manlio Converti, and **Jianhong Wu** (Mathematics & Statistics) published [Epidemiological trends and clinical features of the ongoing monkeypox epidemic: a preliminary pooled data analysis and literature review](#) in the *Journal of Medical Virology*. Read the [press release](#) from York University.

Ada Chan (Mathematics and Statistics), Bobae Johnson, Mengzhen Liu, Malena Schmidt, Zhanghan Yin and former York Science Fellow **Hanmeng Zhan** published [Laplacian pretty good fractional revival](#) in *Discrete Mathematics*.

Ryan K. Schott (Biology), Rayna C. Bell, Ellis R. Loew, Kate N. Thomas, David J. Gower, Jeffrey W. Streicher and Matthew K. Fujita published [Transcriptomic evidence for visual adaptation during the aquatic to terrestrial metamorphosis in leopard frogs](#) in *BMC Biology*. Read the [press release](#) from York University.

Sapna Sharma (Biology), postdoc **Alessandro Filazzola**, BSc student **Thi Nguyen**, research assistant **M. Arshad Imrit**, postdoc **Kevin Blagrove**, Damien Bouffard, Julia Daly, Harley Feldman, Natalie Felsine, Harrie-Jan Hendricks-Franssen, Nikolay Granin, Richard Hecock, Jan Henning L'Abée-Lund, Ed Hopkins, Neil Howk, Michael Iacono, Lesley B. Knoll, Johanna Korhonen, Hilmar J. Malmquist, Włodzimierz Marszelewski, Shin-Ichiro S. Matsuzaki, Yuichi Miyabara, Kiyoshi Miyasaka, **Alexander Mills** (Biology), Lolita Olson, Theodore W. Peters, David C. Richardson, Dale M. Robertson, Lars Rudstam, Danielle Wain, Holly Waterfield, Gesa A. Weyhenmeyer, Brendan Wiltse, Huaxia Yao, Andry Zhdanov and John J. Magnuson published [Long-term ice phenology records spanning up to 578 years for 78 lakes around the Northern Hemisphere](#) in *Scientific Data*.

Postdoc **Wyatt A. Shell** and **Sandra M. Rehan** (Biology) published [Comparative metagenomics reveals expanded insights into intra- and interspecific variation among wild bee microbiomes](#) in *Communications Biology*. Read the [press release](#) from York University.

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

MEDIA

Postdoc **Nicola Bragazzi** (Mathematics & Statistics) spoke to [The Globe and Mail](#) about his research on the clinical and epidemiological features of the recent monkeypox outbreak.

Paul Delaney (Physics & Astronomy) was interviewed by the *Toronto Star* and

AM1010 about the Observatory's new domes. He also spoke to *960AM*, *AM1010*, *AM640* and *610CKBT* on a number of other astronomical topics, including ETs in the galaxy, the Hubble Space Telescope and the James Webb Space Telescope, fast radio bursts, planetary alignment, the strawberry full Moon, lunar rental rovers, and Jupiter's "planet eating" history.

Elaina Hyde (Physics & Astronomy) spoke to [CTV News](#) about the new domes installed at the Allan I. Carswell Observatory and what they mean for teaching, research and outreach. She was also interviewed by [CTV News](#) about five planets aligning in the sky in June.

Trevor VandenBoer (Chemistry) spoke to [CTV News](#) about a research project he is collaborating on to better understand how fog forms on oceans.

EVENTS

August 18: [Summer Undergraduate Research Conference](#). Sandra Faire and Ivan Fecan Theatre + CIBC Lobby, Accolade East Building, 8:30am-3:30pm.

August 29-September 1: [Academic Integrity Awareness Week](#), on Zoom.

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.



Sunway University

Sunway University is one of Malaysia's leading private universities. It is a not-for-profit institution dedicated to quality education, supporting enterprise, and undertaking research focused on key global problems. It is home to 8,000 students, 72 academic programs, seven academic schools and 17 research centres.

The university is relatively young but already ranks within the top two percent of universities in the world (QS World University Rankings). Sunway University ranked 121 in the QS Asia University Rankings 2022, as well as within the top 150 universities in the world under 50 years old.



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