science YORK

Dean's Round-up: December 2023

FACULTY HIGHLIGHTS



Our Faculty's top achievements in 2023 were highlighted on our #BestofYU webpage and social networking channels, as part of York University's end-of-year digital campaign. Congratulations to everyone for their hard work and achievements.

After consultation and collaboration with colleagues, the Dean's Office was pleased to refresh some common spaces in the Faculty of Science with wall and column vinyl wrappings, including in the Dean's Office (Lumbers 355), Lumbers lunchroom (Rm 305), and Chemistry Building. Thank you to everyone who provided input and helped complete the installations.







CONGRATULATIONS

Gerald Audette (Chemistry) was <u>elected as vice president</u> (and president-elect) of the American Crystallographic Association (ACA). The ACA's mission is to promote and preserve crystallography, structural science, and allied disciplines, and to support students, young scientists, and established researchers in the structural sciences. During his three-year term (2024-2026), Audette, who is also the Vice-Chair of the Canadian National Committee for Crystallography, which represents Canada at the International Union of Crystallography (IUCr), will lead the ACA and the North American Crystallographic community as it works toward the 27th Congress of the IUCr being held in Calgary in August 2026.

PhD student **Jennifer Porat** (Biology) received the <u>Scaringe Young Scientist Award</u> from the RNA Society, the world's top society dedicated to RNA research. The Scaringe Young Scientist Award was established to recognize the achievement of young scientists engaged in RNA research and to encourage them to pursue a career in the field of RNA.

Graduate Student **Chris Prashad** (Mathematics & Statistics) won third place in the Canadian Statistical Sciences Institute's first-ever <u>What Do You Meme? Contest</u>.

Amro Zayed (Biology) received a <u>Postdoctoral Supervisor Award</u> from the Faculty of Graduate Studies at York.

MORE NEWS

The **Committee on Teaching & Learning** hosted its first of a series of informal drop-in sessions to chat about teaching and learning. Chair Robin Marushia (Science, Technology & Society) led a session titled "Fix my Stuff!" where participants worked together to solve teaching and learning questions.

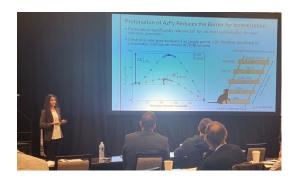
The <u>EdSci Book Club</u> met to discuss types of alternative grading from the book "Grading for Growth."

Ada Chan (Mathematics & Statistics) presented "Quantum isomorphism and Hadamard graphs" in the Current Trends in Matrices, Graphs and Computing session at the 2023 Canadian Mathematical Society Winter meeting.

Yuejiao Cindy Fu (Mathematics & Statistics) gave an invited talk entitled "Two-sample

tests based on data depth" at the 16th International Conference of the European Consortium for Informatics and Mathematics Working Group on Computational and Methodological Statistics.

Biophysics graduate student **Coral Hillel** (Physics & Astronomy) presented at the 2023 International Conference on Photoalignment and Photopatterning in Soft Materials. She was one of five student presentations invited at the conference, and she discussed her discovery on energetic properties of photo-switchable molecules with pumpprobe spectroscopy and mechanisms revealed through Density Functional Theory.



In a <u>YFile</u> article, **Elaina Hyde** (Physics & Astronomy) identified several astronomical viewing opportunities for the holiday season, including the Geminid meteor show, winter solstice, and the "Cold Moon."

Postdoc **Sooyeong Kim** (Mathematics & Statistics) co-organized the "Algebraic Graph Theory for Walking on Graphs" session at the 2023 Canadian Mathematical Society Winter meeting. In this session, he also presented "Kemeny's constant and enumerating Braess edges in trees," and PhD student **Aysa Tajeri** presented "Pretty good state transfer on cycles."

Iain Moyles (Mathematics & Statistics) presented the talk "Bifurcations in fear behaviour impact final-size in a disease epidemic" at the Winter Meeting of the Canadian Mathematical Society in Montreal.

Kelly Ramsay (Mathematics & Statistics) presented "Differentially private projection-depthbased medians" at CMStatistics.

Paul Scholz (Physics & Astronomy) was selected as a 2024 Lecture Tour Speaker with the Canadian Association of Physicists. He will be presenting "Fast radio bursts: What are they and where do they come from?"

Woldegebriel Assefa Woldegerima (Mathematics & Statistics) co-organized the <u>session</u> "Mathematical, statistical, and AI modelling of Mpox and related diseases" at the Canadian Mathematical Society Winter Meeting in Montreal. He also presented a talk on "Quantification the reproduction number and under-estimation of Mpox cases: mathematical modelling and machine learning approach."

<u>YFile</u> profiled a course developed by **Joel Zylberberg** (Physics & Astronomy) to teach machine learning techniques to graduate students.

RESEARCH HIGHLIGHTS

Mary-Helen Armour (Science, Technology & Society), Joseph I. Boyce, Zackary Shulman, and David R. Zilkey published <u>3-D geophysical modeling of a buried, simple impact crater:</u> <u>Holleford impact structure, Ontario, Canada</u> in *Meteoritics & Planetary Science*.

Research Associate J Bryan McNeil, graduate student Su-Kyong Lee, former undergrad student Anna Oliinyk, graduate student Sehaj Raina, Jyoti Garg, graduate student Marjan Moallem, former undergrad student Verne Urquhart-Cox, Jeffrey Fillingham, Peter Cheung, and Emanuel Rosonina (Biology) published <u>1,10-phenanthroline inhibits</u> sumoylation and reveals that yeast SUMO modifications are highly transient in EMBO reports.

Former postdoc Jeta Molla, former postdoc Suzan Farhang-Sardroodi, lain R. Moyles and Jane M. Heffernan (Mathematics & Statistics) published <u>Pharmaceutical and non-pharmaceutical interventions for controlling the COVID-19 pandemic</u> in *Royal Society Open Science*.

Former PhD student **Farwa Sajadi**, former Mitacs Globalink Research Internship trainee **María Fernanda Vergara-Martínez**, and **Jean-Paul V. Paluzzi** (Biology) published <u>The V-type H+-ATPase is targeted in antidiuretic hormone control of the Malpighian "renal"</u> <u>tubules</u> in *PNAS*.

For a full list of publications from the Faculty of Science, see our website.

MEDIA

Elaina Hyde (Physics & Astronomy) discussed spiral galaxies on *CBC Radio's* <u>Quirks &</u> <u>Quarks</u> program. She also spoke to <u>Newstalk1010</u> about "The Brick," a large cloud of gas in our galaxy, and to *N2K Space*'s T-minus podcast about upgrades at the Allan I. Carswell Observatory.

On <u>CBC Radio</u>'s Quirks & Quarks program, **Sarah Rugheimer** (Physics & Astronomy) discussed why the temperature in the poles doesn't keep rising when there is perpetual sunlight during the summer months.

EVENTS

Jan 22: York Science Social, 2-4pm in Lumbers Lunchroom (305).

Feb 6: Faculty of Science Honours & Awards Ceremony, 7-9pm, Second Student Centre.