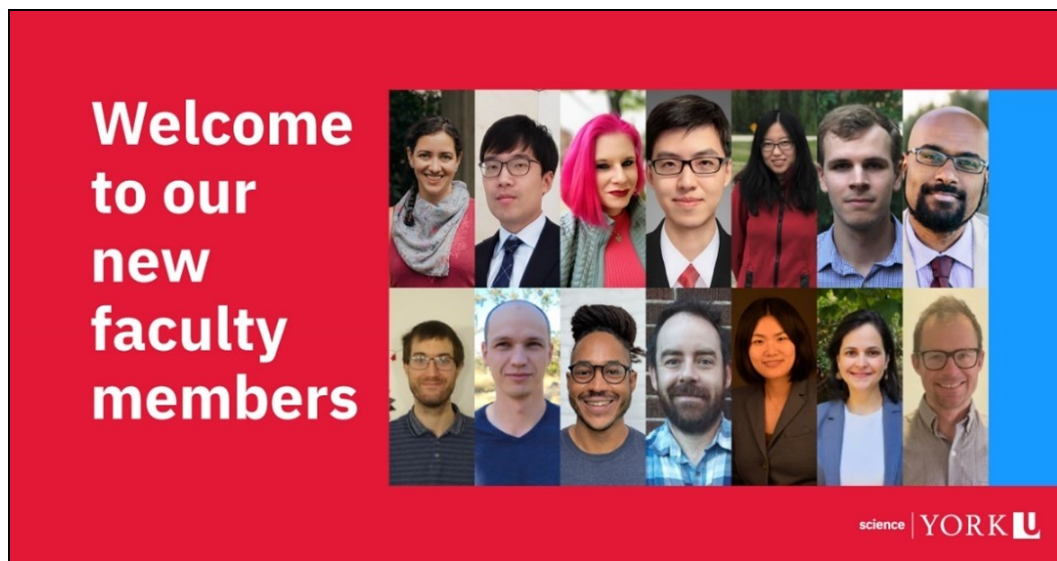


Dean's Round-up: September 2023

FACULTY HIGHLIGHTS



The Faculty of Science welcomed 14 new faculty members who were profiled in [YFile's New Faces](#) feature. Our new members include **Nikita Blinov** (Physics & Astronomy), **Charles-Édouard Boukaré** (Physics & Astronomy), **Miles Couchman** (Mathematics & Statistics), **Yuqing Feng** (Biology), **Gordon Fitch** (Biology), **Lana Hébert** (Chemistry), **Bill Kim** (Chemistry), **Dongchen Li** (Mathematics & Statistics), **Eryn McFarlane** (Biology), **Mohamed Omar** (Mathematics & Statistics), **Luz Adriana Puentes Jácome** (Biology), **Paul Scholz** (Physics & Astronomy), **Jeremy Webb** (NATS), and **Kaiqiong Zhao** (Mathematics & Statistics).

The **FSc Science Education Book Club** is back! Join faculty, postdocs, and graduate students once a month for lively discussions about inclusive teaching practices related to grading. The club will be reading *Clark, D., & Talbert, R. (2023). Grading for Growth: A Guide to Alternative Grading Practices that Promote Authentic Learning and Student Engagement in Higher Education. Taylor & Francis* – which is available for free through the [YorkU libraries](#). [Sign up for the book club.](#)

CONGRATULATIONS

Peter Backx (Biology) was elected as a [Fellow](#) to the Canadian Academy of Health Sciences.

Kohitij Kar (Biology) received a \$100,000 [grant from Brain Canada](#)'s Future Leaders in Canadian Brain Research program for the project "Translating knowledge from primate neuroscience and artificial intelligence to develop non-invasive behavioral modulation strategies during emotion recognition in autistic adults."

Undergraduate student **Yibin Zheng** received the inaugural Faculty of Science Global Engagement Funding Award (GEFA). Spearheaded by the Office of International Collaborations and Partnerships, GEFA aims to nurture the global perspectives of our students by facilitating international academic experiences.

Undergraduate students **Ananya Sharma, Saba Tabrizchi, Aardra Suresh, Sathyanarayanan Venkatesan, Naomi Conliffe-Muir** and **Saania Syed Azam Pasha Albiz** received Faculty of Science Summer Transition Program (SSTP) Awards. The SSTP Awards assist and honour international students, aiding their transition into undergraduate programs in our faculty.

MORE NEWS

The **Allan I. Carswell Astronomical Observatory**, directed by **Elaina Hyde** (Physics & Astronomy), hosted a grand reopening event on September 6 to celebrate the completion of a series of renovation projects and to kick off the restart of its in-person public tours on Wednesday evenings.

Ada Chan (Mathematics & Statistics) presented "Finding graphs with instantaneous uniform mixing" in the Special Session on Recent Trends in Spectral Graph Theory at the 2023 Fall Eastern American Mathematical Society Meeting.

Elizabeth Clare (Biology) presented "Measuring Biodiversity by Harnessing the Wind" as the first of the season's "Evenings at Whitney" [public lecture](#) at Whitney Laboratory For Marine Bioscience.

The **Global South Artificial Intelligence for Pandemic and Epidemic Preparedness and Response Network (AI4PEP)**, directed by **Jude Kong** (Mathematics & Statistics) announced its funding of 16 new projects for a total of more than \$5.8 million. The announcement came after a call for proposals by AI4PEP that saw 221 submissions from 47 countries with 142 of them from Africa, 40 from Asia, and 26 from Latin America. [READ THE PRESS RELEASE FROM YORK UNIVERSITY](#) and the feature by [CTV News](#).

Science International Recruitment Coordinator **Mingming Li** and undergraduate student

Gina Quan presented an informational session at Ace Acumen Academy. This event, part of the outreach Elite Pathway Program to Your Science, showcased our Science programs and services to prospective students.

[YFile](#) profiled new research led by PhD student **Nelson Nunes** and supervised by Distinguished Research Professor Emeritus and Senior Scholar **Nobert Bartel** (Physics & Astronomy) that verified Albert Einstein's theory of general relativity and the Einstein equivalence principle by measuring gravitational redshift.

[YFile](#) profiled an experiential summer boot camp on quantum computing that **Randy Lewis** and student **Sarah Powell** (Physics & Astronomy) were invited to lead at the Thomas Jefferson National Accelerator Facility in the U.S.

Lisa Robertson (Biology) held the [workshop](#) "Start of Semester Communication Tips for TAs" in which she provided suggestions and reasoning for effective communication strategies with students and course directors.

Sapna Sharma (Biology) organized and moderated the [event](#) "Addressing Global Water Insecurity: Harnessing the Power of Big Data, Novel Technologies and International Collaboration" at the UN SDG Summit.

RESEARCH HIGHLIGHTS

Postdoc **Nico M. Bonanno**, graduate student **Fiona Jeeva**, postdoc **Avik Bhattacharjee**, graduate student **Charley N. Garrard**, graduate student **Jesse LeBlanc**, NMR Specialist **Howard N. Hunter**, and **Christopher B. Caputo** (Chemistry) published [Substituent effects of amines on genipin dye formation – Insights into dye origin](#) in *Dyes and Pigments*.

PhD student **Dusty Cadwallader**, MITACS intern **Dmytro Shevchuk**, former MSc student **Tristan R. Tiburcio**, and **Christine M. Le** (Chemistry) published [Fluoride-Catalyzed Cross-Coupling of Carbamoyl Fluorides and Alkynylsilanes](#) in *Organic Letters*.

Postdoc **Katherine D. Chau**, Mariam Shamekh, Jesse Huisken and **Sandra M. Rehan** (Biology) published [The effects of maternal care on the developmental transcriptome and metatranscriptome of a wild bee](#) in *Communications Biology*. [READ THE PRESS RELEASE FROM YORK UNIVERSITY](#).

Former York Science Fellow **William Chen-Mertens**, postdoc **César Corral-Rojas**, and **Paul J. Szeptycki** (Mathematics & Statistics) published [Strong Fréchet properties of spaces constructed from squares and AD families](#) in *Applied General Topology*.

Ivette Perfecto, Luis Fernando Chaves, **Gordon M. Fitch** (Biology), Zachary Hajian-Forooshani, Benjamin Iuliano, Kevin Li, Nicholas Medina, Jonathan Morris, Beatriz Otero Jiménez, Iris Saraeny Rivera-Salinas, Chenyang Su, John Vandermeer, Alexa White, and Kimberly Williams-Guillén published [Looking beyond land-use and land-cover change: Zoonoses emerge in the agricultural matrix](#) in *One Earth*.

Postdoc **Qing Han**, former postdoc **Nicola Bragazzi**, Ali Asgary, James Orbinski,

Jianhong Wu and **Jude Dzevela Kong** (Mathematics & Statistics) published [Estimation of epidemiological parameters and ascertainment rate from early transmission of COVID-19 across Africa](#) in the *Royal Society Open Science Journal*. [READ THE PRESS RELEASE FROM YORK UNIVERSITY](#).

Professor Emeritus **Scott Menary** (Physics & Astronomy) and a team of international scientists published [Observation of the effect of gravity on the motion of antimatter](#) in *Nature*. [READ THE PRESS RELEASE FROM YORK UNIVERSITY](#).

Christopher W. Schruder, Christopher J. Barrett, **William J. Pietro** (Chemistry), and **Ozzy Mermut** (Physics & Astronomy) published [Geiger Mode Single Photon Counting: A Laboratory Experiment Exploring Delayed Fluorescence in Plants](#) in the *Journal of Chemical Education*.

Balint Radics (Physics & Astronomy) and a team of international researchers published [Search for Light Dark Matter with NA64 at CERN](#) in *Physical Review Letters*.

Arezoo Khalili, former PhD student **Nickie Safarian**, Ellen van Wijngaarden, PhD student **Georg S. Zoidl**, **Georg R. Zoidl** (Biology), and Pouya Rezai published [Loss of Panx1 function in zebrafish alters motor behavior in a lab-on-chip model of Parkinson's disease](#) in the *Journal of Neuroscience Research*.

Nicholas Gaspelin, Dominique Lamy, Howard E Egeth, Heinrich R Liesefeld, Dirk Kerzel, Ananya Mandal, Matthias M Müller, **Jeffrey D Schall** (Biology), Anna Schubö, Heleen A Slagter, Brad T Stilwell, and Dirk van Moorselaar published [The Distractor Positivity Component and the Inhibition of Distracting Stimuli](#) in the *Journal of Cognitive Neuroscience*.

Jacob A. Westerberg, **Jeffrey D. Schall** (Biology), Geoffrey F. Woodman and Alexander Maier published [Feedforward attentional selection in sensory cortex](#) in *Nature Communications*.

Gianni M. Castiglione, Yan L.I. Chiu, Eduardo de A. Gutierrez, Alexander Van Nynatten, Frances E. Hauser, Matthew Preston, Nihar Bhattacharyya, **Ryan K. Schott** (Biology) and Belinda S.W. Chang published [Convergent evolution of dim light vision in owls and deep-diving whales](#) in *Current Biology*.

Stephan Tetenborg, Viktoria Liss, Leonhard Breitsprecher, former PhD student **Ksenia Timonina**, former PhD student **Anna Kotova**, Alejandra Jesús Acevedo Harnecker, Chunxu Yuan, Eyad Shihabeddin, Fatemeh Ariakia, Guoting Qin, Cai Chengzhi, Karin Dedek, **Georg Zoidl** (Biology), Michael Hensel, and John O'Brien published [Intralumenal docking of Connexin 36 channels in the ER isolates mis-trafficked protein](#) in the *Journal of Biological Chemistry*.

José Carlos R. Alcantud, Domenico Cantone, Alfio Giarlotta, and **Stephen Watson** (Mathematics & Statistics) published [Rationalization of indecisive choice behavior by pluralist ballots](#) in the *Journal of Mathematical Economics*.

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

MEDIA

University Professor **Dawn Bazely** (Biology) spoke to [The New York Times](#) about a recent report prepared for the United Nations by the Intergovernmental Science and Policy Platform on Biodiversity and Ecosystem Services detailing the detrimental global impact of invasive species.

New research by postdoc **Katherine Chau** and **Sandra Rehan** (Biology) on the effects of maternal care on carpenter bee development was covered by media, including [Salon](#), [Yahoo News](#) and [MSN](#).

Professor Emeritus **Paul Delaney** (Physics & Astronomy) spoke to *Sirius XM, AM640, CP24, AM900 CHML, CTV News, NewsTalk 1010, and CJBQ Belleville* on numerous astronomical topics, including the NASA UAP report, the OSIRIS-Rex mission, comet Nishimura, exoplanet K2-18b and the Mars Oxygen In-Situ Resource Utilization Experiment.

Jane Heffernan (Mathematics & Statistics) was interviewed by [Global News](#) about the upcoming rhinovirus season and whether the common cold has the ability to act as a barrier against other viruses.

Elaina Hyde (Physics & Astronomy) spoke to *CityNews* about NASA's OSIRIS spacecraft bringing back matter from the surface of an asteroid dating from the early history of the solar system, and *CBC Radio* about the impact that solar flares have on planets closer to the sun than the Earth.

Research by an international collaboration including **Scott Menary** (Physics & Astronomy) resolved the enigma of whether antimatter follows the rules of gravity. Their work received extensive media coverage around the world, including by [The New York Times](#) and [BBC](#). Menary was interviewed and quoted in a story by [CTV News](#).

Jesse Rogerson (Science, Technology & Society) spoke to *CBC News* and *CBC Radio* about the NASA UFO/UAP report.

Sarah Rugheimer (Physics & Astronomy) spoke to *Newstalk 1010* about the NASA UFO/UAP report.

In [The Globe and Mail](#), **Sapna Sharma** (Biology) weighed in on scientists investigating the ecological history of Great Slave Lake and finding that climate change has rewired the lake at the microscopic level.

EVENTS

Oct 30: York Science Social, 2-4pm in Lumbers Lunchroom (Rm 305).

Oct 31: Haunted Hydrogen Halloween at the Allan I. Carswell Astronomical Observatory, 6-9pm. [Reserve your ticket.](#)

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.



O.P. Jindal Global University (JGU)

Established in 2009 by the Haryana Government and recognized by University Grants Commission, O.P. Jindal Global University is a non-profit initiative founded by Mr. Naveen Jindal in memory of Mr. O.P. Jindal. JGU, maintaining a 1:9 faculty-student ratio, emphasizes research and upholds values of innovative pedagogy and global engagement across its 12 established schools. As a residential university, it accommodates over 9,000 students.

Awarded "Autonomy" after securing an "A" Grade from the National Assessment and Accreditation Council, JGU was listed in the QS World University Rankings 2021 and QS Young University Rankings 2021. It ranks as India's top private university and is a top contender in social sciences, arts, and humanities, according to the QS World University Rankings 2023.