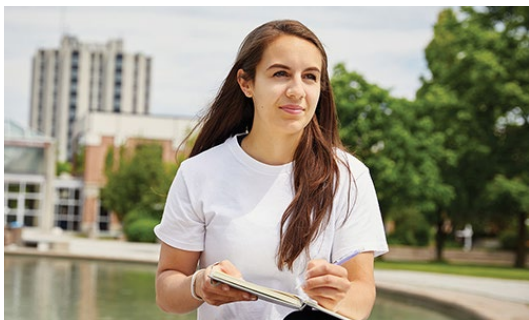


## Dean's Round-up: June 2020

### Faculty Highlights



The Faculty launched the **York Science Summer Transition Program** for high school students starting university this fall. The program is a series of five summer module courses and will run July 20 to August 24. [Read more](#)



**Science Engagement Programs** have gone virtual this summer, with weekly online STEM programs for students in grade 3 to 12. [Read more](#)



The Centre for Bee Ecology, Evolution and Conservation (BEEc)—which includes Biology Profs **Amro Zayed**, **Sandra Rehan**, and **Laurence Packer**, and **Jane Heffernan** (Mathematics & Statistics)—became an Organized Research Unit. [Read more](#)

## Congratulations

Undergraduate Program Assistant **Madeline Salzarulo** (Mathematics & Statistics) received the 2019 President's [Voice of York](#) Award.

**Ilijas Farah** (Mathematics & Statistics) was appointed a Tier 1 [York Research Chair](#) in Foundations of Operator Algebras.

**Paula Wilson** (Biology) received a President's University-wide Teaching Award.

Master's student **Maria Amuchastegui** (supervised by **Ernie Hamm**, Science & Technology Studies) won the Richard Hadden Award for the best student paper of the 2020 meeting of the Canadian Society for the History and Philosophy of Science. Her paper was titled "The 'Discovery' of Binary Numeration: Leibniz, Caramuel and the New World."

PhD student **Laura Keane** (supervised by **Iain Moyles**, Mathematics & Statistics) received a [Vanier Canada Graduate Scholarship](#) to develop mathematical models to improve the design and safety of lithium-ion batteries. She is the only award recipient from the NSERC category at York University.

The following recent graduates received [Thesis & Dissertation Prizes](#) from the Faculty of Graduate Studies:

- Master's student **Leah Wright** (supervised by **Laura McKinnon**, Biology, Glendon) for her thesis "Using Light-Level Geolocation to Investigate the Carry-over Effects of Long-Distance Migration on the Reproductive Success of Dunlin (*Calidris alpina hudsonia*)";
- PhD student **Rafael Rodrigues Ferrari** (supervised by **Laurence Packer**, Biology) for his thesis "Systematics and Biogeography of Colletinae with Revisionary Studies of the Species of *Colletes* Latreille (Hymenoptera: Colletidae: Colletinae) from Chile and Eastern South America";
- PhD student **Kosuke Kato** (supervised by **Eric Hessels**, Physics & Astronomy) for his thesis "Precision Microwave Frequency-Offset Separated-Oscillatory-Fields Measurement of the  $2^3P_2$  1-to- $2^3P_2$  Fine-Structure in Atomic Helium".

## Other News

**Andrew Donini** and **Jean-Paul Paluzzi** (Biology) organized a virtual version of the annual [Insect Biotech Conference](#), which had well over 100 hundred participants and 20 research trainee oral presentations.

**Ilijas Farah** and **Paul Skoufranis** (Mathematics & Statistics) together with George Elliott (University of Toronto) organized the [48<sup>th</sup> Canadian Operator Symposium](#) via the Fields Institute that attracted more than 440 participants.

**Nikola Kovinich** (Biology) is a co-principal investigator on a grant from the United States Department of Agriculture – National Institute of Food and Agriculture for \$200K USD for the project “Characterization of the terpene-cannabinoid metabolic network and its genetic regulation in industrial hemp.”

**Chris Lortie** (Biology) presented a talk to the U.S. Environmental Protection Agency entitled “Systematic review and meta-analysis: open synthesis science supports effective decision-making” on June 9. He also taught a webinar for the Environmental Protection Agency on how to do scientific syntheses on June 11.

**Marshall McCall** (Physics & Astronomy) was interviewed for the York U Observatory Wednesday [TeleTube Broadcast](#).

**Sapna Sharma** (Biology) is a collaborator on a grant from the National Science Foundation for \$45K USD for the project “Integrating remote sensing, in situ, and physically-based modeling approaches to understand global lake ice dynamics.”

Student **Iuliana Stoica** presented her Honours Thesis project (supervised by **Thomas Baumgartner**, Chemistry) titled “Improving the Lewis Acidity of 2 (2-thiazolyl)-3-thienylphosphanes” at the 48<sup>th</sup> Southern Ontario Undergraduate Student Chemistry Conference.

**Hongmei Zhu** (Mathematics & Statistics), who is Chair of the International Mathematical Modelling Challenge (IMMC) – Canada Committee, organized an IMMC competition at the Department of Mathematics and Statistics. Two high school teams won awards and are going on to represent Canada in the international competition.

## Research Highlights

Research associate **Kashif Aziz Khan** and **Peter Cheung** (Biology) published [Presence of mismatches between diagnostic PCR assays and coronavirus SARS-CoV-2 genome](#) in *Royal*

Society Open Science. [Read the media release](#)

**Steven Connor** (Biology) published [Norepinephrine Stabilizes Translation-Dependent, Homosynaptic Long-Term Potentiation Through Mechanisms Requiring the cAMP Sensor Epac, mTOR and MAPK](#) in the *European Journal of Neuroscience*.

**Nikola Kovicich** (Biology) and his former and current students, including PhD student **Md Asraful Jahan** and undergraduates **Brianna Harris** and **Matthew Lowery** published [Glyceollin Transcription Factor GmMYB29A2 Regulates Soybean Resistance to Phytophthora sojae](#) in *Plant Physiology*.

**Saeed Rastgoo** (Physics & Astronomy) co-authored [Gravitation in terms of observables 2: the algebra of fundamental observables](#) in *Classical and Quantum Gravity*.

**Sapna Sharma** (Biology) and her students published [Changes in water quality related to permafrost thaw may significantly impact zooplankton communities in small arctic lakes](#) in *Ecological Applications*.

**Jianhong Wu** (Mathematics & Statistics) and his team published [Modelling scenarios of the epidemic of COVID-19 in Canada](#) in the *Canada Communicable Disease Report*.

**Huaiping Zhu** (Mathematics & Statistics) and a team of Canadian and international researchers published [A data-driven network model for the emerging COVID-19 epidemics in Wuhan, Toronto and Italy](#) in *Mathematical Biosciences*.

**Georg Zoidl** (Biology) and his team published [Visuomotor Deficiency in panx1a Knockout Zebrafish Is Linked to Dopaminergic Signaling](#) in *Scientific Reports*.

**Joel Zylberberg** (Physics & Astronomy) published [Global motion processing by populations of direction-selective retinal ganglion cells](#) in the *Journal of Neuroscience*.

PhD student **Sajjad Ahmed** and supervisor **Nikola Kovicich** (Biology) published [Regulation of Phytoalexin Biosynthesis for Agriculture and Human Health](#) in *Phytochemistry Reviews*.

PhD student **Stephanie Haas** and supervisor **Chris Lortie** (Biology) published [A systematic review of the direct and indirect effects of herbivory on plant reproduction mediated by pollination](#) in *PeerJ*.

York Science Fellow **Jacob Lucero**, supervisor **Chris Lortie** (Biology) and collaborators from

Israel and the USA published [Positive associations with native shrubs are intense and important for an exotic invader but not the native annual community across an aridity gradient](#) in *Diversity and Distributions*.

PhD student **Alyssa Murdoch** (supervised by **Sapna Sharma**, Biology) published [Impacts of co-occurring environmental changes on Alaskan fish populations](#) in *Freshwater Biology*.

## Media

**Gerald Audette** (Chemistry) was interviewed by [The Star](#) about COVID-19 risks related to regular activities like having a backyard BBQ with friends.

Research associate **Kashif Aziz Khan** spoke to media about his recent research on COVID-19 diagnostic tests, including [CBC](#) and [The Naked Scientists](#).

**Paul Delaney** (Physics & Astronomy) spoke to media about the SpaceX mission, close pass asteroid 2002 NN4, life in Europa and Earth's weakening magnetic field. Outlets included *Sirius XM*, *CHML900*, *AM640*, *AM1010*, [CTV News](#) and *Global News*.

**Dasantila Golemi-Kotra** (Biology) conducted numerous media interviews on topics related to COVID-19 pandemic, including how to stay safe as the province re-opens and wear masks properly. Media outlets included the [Toronto Star](#), *Global News* ([here](#) and [here](#)), [toronto.com](#), [Yorkregion.com](#) and more.

An article in [Maclean's](#) about contact tracing for COVID-19 included comments from **Jane Heffernan** (Mathematics & Statistics) about her recent research on the level of tracing needed to avoid rebounds.

**Elaina Hyde** (Physics & Astronomy) was a guest on CBC Radio's [Quirks & Quarks](#) to discuss Earth's shifting magnetic field and its potential impact on life, the Northern Lights and more.

[Scientific American](#) profiled research by **Cora Young** (Chemistry) that found that CFC replacements are accumulating in the Arctic.

