

science



Dean's Round-up: May 2019

Faculty Highlights



Kirsty Duncan, Minister of Science and Sport, and MP for Etobicoke North, visited the labs of **Gary Sweeney** lab (Biology) and **David Hood** (Health).

She announced \$114 million to create 500 more master's level scholarships and 500 more three-year doctoral scholarships by 2021-2022.



The Faculty of Science hosted another successful [Science Rendezvous](#) at the Markham Farmers' Market on May 11. Participants learned how to make a DNA necklace, could get a constellation tattoo, and more. Thank you to the staff, students and researchers who made it a big hit!



Protecting Pollinators

PROTECTING THE POLLINATORS

YORK UNIVERSITY

Laurence Packer, Amro Zayed (Biology), and Sheila Colla (FES), part of York U's [BEEc research initiative](#), focused on bee ecology, evolution and conservation, were featured in a new video, [Protecting the Pollinators](#), for International Bee Day.



Rare songbirds were spotted in the Boyer Woodlot on York's Keele Campus by Faculty of Science students recently. The songbirds sometimes use the woodlot as a migration stopover. Read the story by MSc student **Lisa Horn** of Bridget Stutchbury's lab (Biology) in [yFile](#).



From May 6 to 10, the Fields Institute hosted an **Industrial Problem Solving Workshop (IPSW)** to connect academic mathematicians with industry to solve problems relevant to various economic and social areas of impact. This IPSW investigated Mathematical Methods to Estimate Burden of Influenza-Attributable Complications, sponsored by Sanofi Pasteur and made available through their sponsored industrial research chair for York faculty member **Jianhong Wu** (Math & Stats). The group for this problem included **Jane Heffernan** and **Iain Moyles**, postdocs **Safia Athar** and **Kyeongah Nah**, and graduate students **Mahnaz Alavinejad**, **Zack McCarthy**, and **Laura Keane** (incoming student). They presented their [results](#) to Sanofi Pasteur and are currently following up for further study and investigation.

Congratulations

York University's **Actuarial Science Program** (Math & Stats), led by program director **Ed Furman**, recently ranked second in North America and fifth in the world for risk, insurance and actuarial science research for a non-business school, ahead of universities in the U.S. Italy, Germany, China, the U.K., France and others. Read about it in [yFile](#).

Steven Wang (Math & Stats), co-principal investigator along with principal investigator Associate Vice-President Research Rebecca Pillai Riddell, received a \$1.5 million CHIR, NSERC and SSHRC grant, along with \$387,00 in-kind from community partners, for the project, [Rebooting Infant Pain Assessment: Using Machine Learning to Exponentially Improve Neonatal Intensive Care Unit Practice](#). Wang will be in charge of the artificial intelligence part of the project.

Sergey Krylov (Chemistry) along with **Ryan Hili** (Chemistry) received more than \$900,000 from NSERC to fund a [new research project](#) to design new ways to automate key processes of pre-clinical, early-stage drug development, facilitating faster routes to clinical testing, making treatments for illness available sooner.

Tom Salisbury (Math & Stats) has been selected as the Interim Deputy Director of the Fields Institute effective July 1, 2019: <https://bit.ly/2Z5Bm44>

Hélène Mialet (STS) was awarded a Residential Fellowship at the Center for Advanced Study at the Norwegian Academy of Science and Letters for the fall of 2019. The theme is “The Body in Translation (Historicizing and Reinventing Medical Humanities and Knowledge Translation)”.

Christopher Bergevin (Physics and Astronomy) was recently appointed Associate Editor of the journal [JASA Express Letters](#).

PhD student **Nadia Tsvetkov** (Biology), supervised by **Amro Zayed**, was one of three winners of the University of British Columbia’s **Science Early Career Invited Lecture Award**, which she will give on **June 12**. The award helps to identify rising stars in their fields, especially top female scholars (PhD students and post-docs).

Fourth-year PhD student **Paige Whyte-Fagundes** (Georg Zoidl group, Biology) has been selected as the 2019 recipient of the **Susan Mann Dissertation Scholarship**. This award acknowledges the significant progress she has made on the role of Panx1 in epilepsy. Whyte-Fagundes, who is also affiliated with the Krembil Research Institute and UHN, was invited to orally present her research topic, “Panx1 Knockout zebrafish as a mode to investigate seizure activity,” at the **Krembil Research Day**, May 15.

Other News

The Faculty has opened nominations for the [Excellence in Teaching Awards](#). The deadline to submit a nomination is **Nov. 29**.

Registration for the Faculty’s **summer science explorations camps** is now open. Details about this summer’s programs can be found here: <http://science-explorations.info.yorku.ca/summercamp/>

The Winter 2019 issue of the [Canada Watch: Practical and Authoritative Analysis of Key National and International Issues](#) magazine, published by York's Robarts Centre for Canadian Studies, was launched in May at the Indo-Canadian Chamber of Commerce (co-sponsored by the York Centre for Asian Research), featuring **Dawn Bazely** (Biology) and other York U profs as speakers. This issue of Canada Watch features an article written by Bazely about the Frugal Innovation approach to STEM research and reports on the October 2017 conference, Facing the Future Together: Exploring New Pathways for Canada-India Collaborations, which she co-organized. In June 2019, she will be a keynote speaker at the Ecology and Evolution of Urban Areas Conference at Roehampton University, London, UK.

The conference, [50 Years of Set Theory in Toronto](#), was held May 13 to 17 at the Fields Institute with co-organizers **Juris Steprans**, **Ilijas Farah** and **Paul Szeptycki** (Math & Stats). Among the invited speakers were many former York students and postdocs, including **Bruno Braga**, **Vera Fischer** (formerly Usheva), **Oswaldo Guzman**, **Michael Hrusak** and **Wieslaw Kubis**. As well, former York faculty member and department chair **Alan Dow** was an invited speaker.

From May 21 to 23, the [Workshop on Vaccine Vaccine Dynamics Modelling and Immunization Program Optimization](#) was hosted by the [Fields-Centre for Quantitative Analysis and Modelling](#) and industry partner Sanofi Pasteur, which included a public talk by **Ayman Chit**, VP of Sanofi Pasteur, North America. The event was organized by **Jianhong Wu** (Math & Stats) and Chit.

Tamara Kelly (Biology) co-organized this year's **Ontario Consortium of Undergraduate Biology Educators (Un)Conference**, held in Port Carling, May 21 to 24. At the event, she gave a session on Assessments – Beyond the Midterm & Final, while **Nicole Nivillac** (Biology) gave a session on Student Accommodation and Academic Integrity.

Laurence Packer (Biology) spoke at the Entomology & Nematology Spring Seminar Series on “Extreme Bees in Extreme Environments: Bee Biogeography in the Atacama Desert” on May 29 at the University of California, Davis.

Jean-Paul Paluzzi's (Biology) students did a great job representing York U at the recent North American Society for Comparative Endocrinology conference at the University of Florida. All received extensive praise for their research and

presentations, in particular, **Aryan Lajevardi (MSc)** received the **best poster presentation award** and **Farwa Sajadi** (MSc, but starting her PhD in September) received **runner up/honourable mention** for the best oral presentation.

The student chapter of the [Association for Women in Mathematics at York U](#) celebrated the [contribution of women in mathematics at the Fields Institute](#) on May 13 in honour of the first woman to win a Fields medal, as well as other women who have made a serious impact in the field. Contributions from many graduate students in the Department of Math & Stats, including **Allysa Lumley**, **Elena Aruffo**, **Sergio Garcia**, **Snezhana Kirusheva**, **Yohana Solomonson**, **Neda Aminnejad** and **Amenda Chow** (Math & Stats), made it a successful event. **Paul Szeptycki**, **Patrick Ingram** and **Peter Gibson** provided support and encouragement.

Research Highlights

John McDermot's (Biology) new research uncovered a unique set of genes that play a role in muscle cellular gene expression and differentiation which could lead to new therapeutic targets to prevent the spread of muscle cancer was published in journal [Cell Death and Disease](#). Read the [media release](#):

Emanuel Rosonina (Biology) had two papers published. The first, [A Conserved Role for Transcription Factor Sumoylation in Binding-site Selection](#), published in *Current Genetics*, is a mini-review he was invited to write based on another research paper – [Sumoylation of DNA-bound Transcription Factor Sko1 Prevents its Association with Nontarget Promoters](#), published in *PLOS Genetics*.

Media

Laurence Packer (Biology) talked to Linda Ward of **CBC news** on April 21 about a new study that shows American bumblebees on the brink of extinction. “This is the tip of the iceberg....,” he said. Sheila Colla (FES) and grad student Victoria MacPhail looked at bees and diversity in their study. Watch here: <https://www.cbc.ca/player/play/1502038083512>.

Packer also spoke to [Atlas Obscura](#) on the number of described bee species (20,355) and how much work is still to be done.

CBC's The National interviewed PhD student **Charissa Campbell** (second

from right) (Physics & Astronomy) about "The Big Bang Theory" TV show and whether it introduced a new generation to science and what the show meant to her. Watch the clip here: [//bit.ly/2w4bVDg](https://bit.ly/2w4bVDg)

Paul Delaney (Physics and Astronomy) was on the AM640 Morning Show talking about Moonquakes on May 6 and on Global TV's Return to the Moon show on May 17.

Upcoming Events

June 5 – A symposium in honour of **Barry Lever's** (Chemistry) 50 years of editing *Coordination Chemistry Reviews*, an international journal that he founded in 1966, is taking place at the [102nd Canadian Chemistry Conference & Exhibition](#) in Quebec City.

June 5 to 19 – The [IRC Distinguished Lecture Series](#) with **Professor Odo Diekmann** of Utrecht University will start June 5 and run every Monday and Wednesday until June 19, through the Department of Math & Stats Laboratory for Industrial and Applied Mathematics and the Fields-CQAM. Diekmann will be here until June 26.

June 13 to 16: The **General Assembly for the Royal Astronomical Society of Canada** will be held at York University. Check here for the schedule and more information: <https://www.rasc.ca/ga2019>

June 20 – The Faculty of Science Convocation ceremony, including the conferring of an Honorary Degree on **Professor Jennifer Doudna**, will start at 10:30am.
