

science



Dean's Round-up: September 2019

Faculty Highlights



The official unveiling of the new **one-metre telescope** took place at the Allan I. Carswell Observatory with President & Vice-Chancellor Rhonda Lenton, Allan Carswell and family members, Interim Dean EJ Janse van Rensburg, Paul Delaney, Assistant VP, Development Louise Spencer, and many others. Although skies were cloudy, guests learned much about what the new telescope can do and how it will enhance teaching and learning.

A second event for faculty, staff and their families gave everyone an opportunity to view celestial objects, such as Jupiter and Saturn.



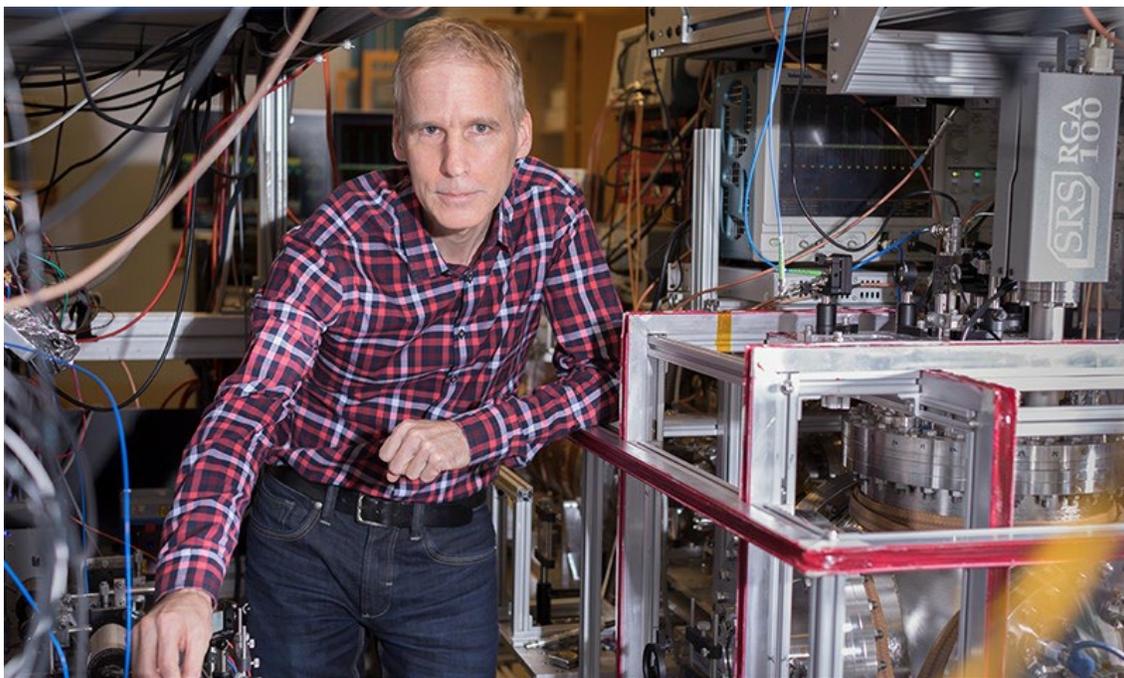
The Faculty has two new Science Communicators in Residence this academic year – **B.D. Colen** and **Patchen Barss**. B.D. will be in Room 320 Lumbers most Wednesdays, while Patchen Barss will join us in January, five days a week until March 13.

They bring a wealth of journalistic, communication and photographic experience and are eager to discuss communications with faculty and students.

Alison Motluk was also supposed to join us, but is unable to at this time.



A second event for **faculty, staff and their families** gave everyone an opportunity to view celestial objects, such as Jupiter and Saturn, through the new telescope before it opened to the public the following week. Staff and faculty can also book a viewing on public viewing nights throughout the year [here](#).



Eric Hessels (Physics & Astronomy) and his team made a precise measurement of the size of the proton. The research, which was published in the journal [Science](#), took eight years and is a crucial step towards solving a decade-old mystery. His team included graduate students **Nikita Bezginov** and **Travis Valdez**, **Marko Horbatsch**, postdoctoral research assistant **Alain Marsman**, and former postdoctoral Fellow **Amar Vutha**.



Bridget Stutchbury (Biology) co-authored a study, [published in the journal *Science*](#), with her former grad student **Margaret Eng**, now a postdoctoral Fellow at the University of Saskatchewan's Toxicology Centre, and Christy Morrissey, University of Saskatchewan. The study found that [white-crowned sparrows](#), which consumed small doses of the insecticide imidacloprid, suffered weight loss and delays to their migration – effects that could severely harm the birds' chances of surviving and reproducing. Read more [here](#).

Congratulations

Christopher Caputo (Chemistry) received a \$450,000 NSERC CRD grant with the Toronto start-up company Inkbox to study molecules to improve semi-permanent tattoo technology.

Cora Young (Chemistry) received \$138,555 for her project, Adaptable Liquid Chromatography System for Online and Offline Analysis of Trace Atmospheric Water-Soluble Compounds. **Ryan Hili** (Chemistry) received \$114,626 for his project, Expanding the Chemistry of DNA. [Funding for both projects](#) came through the Ontario Research Fund and Canada Foundation for Innovation's John R. Evans Leaders Fund.

Hélène Mialet (STS) received a residential fellowship at the [Centre for Advanced Study](#) at the Norwegian Academy of Science & Letters for the fall of 2019. Read more [here](#).

PhD students **Tanushree Tiwari** and **Kathleen Dogantzis** (both Biology) in

Amro Zayed's (Biology) lab were runners-up for [2019 Canadian PAm-Costco Scholar Fellowship](#). The program recognizes and supports outstanding graduate students pursuing research-based doctoral degrees in fields that help enhance honey bee health while improving crop production. Tiwari and Dogantzis were among three outstanding candidates who were awarded for demonstrating exemplary initiative, capacity, innovation, scholastic dedication and skillful communication of honey bee health research.

Other News

Dawn Bazely (Biology) travelled through the Northwest Passage, starting in Kugluktuk, Nunavut as [Adventure Canada](#)'s onboard botanist, helping passengers identify arctic flowers and plants.

Scott Menary (Physics & Astronomy) gave a talk, titled "Antigravity: Would an anti-apple fall up?", as part of the York University Scholars' Hub series at Markham Public Library on Sept. 12.

Hélène Mialet (STS) was invited to give a talk at Uppsala University in September. She presented, "[Managing the Self through Dogs and Machines](#)," organized by the Department of History of Science and Ideas, Uppsala University. Mialet's talk was based on an ethnographic study she is currently conducting in a California facility that trains dogs to recognize hypoglycemic episodes for people with Type 1 Diabetes.

Research Highlights

Sandra Rehan (Biology) with grad student **Katherine Odanaka** had their research on wild bee diversity, "[Impact indicators: Effects of land use management on functional trait and phylogenetic diversity of wild bees](#)," published in the journal *Agriculture, Ecosystems and Environment*.

Peter Backx (Biology) has had several research papers he was involved with published recently, including "[Biowire Model of Interstitial and Focal Cardiac Fibrosis](#)" in *ACS Central Science*, "[Phosphodiesterase type 3A \(PDE3A\), but not type 3B \(PDE3B\), contributes to the adverse cardiac remodeling induced by pressure overload](#)" and "[Inhibition of soluble TNF \$\alpha\$ prevents adverse atrial](#)

[remodeling and atrial arrhythmia susceptibility induced in mice by endurance exercise](#)” in the journal of *Molecular and Cellular Cardiology*, and [“Engineering microenvironment for human cardiac tissue assembly in heart-on-a-chip platform”](#) in journal *Matrix Biology*.

Grad student **Amanda Liczner** (Biology) and **Sheila Colla** (FES) had their paper, [“A systematic review of the nesting and overwintering habitat of bumble bees globally,”](#) published in the *Journal of Insect Conservation*.

PhD candidate **Cherie Brown** (Biology) is the lead author on a new study demonstrating [“Tubulin-Dependent Transport of Connexin-36 Potentiates the Size and Strength of Electrical Synapses,”](#) published in the journal *Cells*. The work was completed with **Georg Zoidl** (Biology), **Logan Donaldson** (Biology) and spray labs at York University, as well as the Albert Einstein College (NY, USA).

PD candidate **Paige Whyte-Fagundes** (Biology) spoke at the fourth **Zebrafish for Personalized/Precision Medicine (ZPPM)** conference (Sept. 18 to 20) in Toronto about her work on “Panx1 knockout fish as a model to investigate seizure activity.”

Media

Eric Hessels (Physics & Astronomy) and his team, including **Marko Horbatsch** and grad students **Nikita Bezginov** and **Travis Valdez**, had their research on the proton radius puzzle picked up by [The Economist](#), [Quanta Magazine](#), [New Scientist](#), [Ars Technica](#), [The Register](#) and more.

Paul Delaney (Physics & Astronomy) was on AM640’s Morning Show discussing ray burst and magnetar formation, on Global TV and CTV Your Morning show to talk about K2-18b water vapour in the atmosphere, CTV Toronto to talk about the [harvest moon](#) and K2-18b water vapour in the atmosphere, as well as CHML’s Scott Thompson show to discuss the Area 51 rave and UFO footage.

A media event for the **telescope** also garnered some attention with **Paul Delaney** being interviewed for a CBC Radio Canada International (RCI) segment, titled [In the heart of the action with Elvis Nouemsi](#) (clip at 6:22), [RCI](#)

[online](#) French, and CBC's Here and Now.

Amro Zayed (Biology) was interviewed about his new project to develop a bee health diagnostic tool by [CBC news online](#), [CBC Radio Canada International](#) and CBC syndicate, which aired from Charlottetown, to London, Kitchener-Waterloo to Ottawa, Sudbury and more.

Bridget Stutchbury (Biology) was quoted about her research on insecticides and songbirds by [CBC News online](#), the [Independent](#), the [Telegraph](#), [Smithsonian.com](#) and more

Grad student **Malory Owen** (Biology), in **Christopher Lortie's** lab, was on CBC's Quirks and Quarks talking about [adapting to challenges in the field](#) when doing research, especially when the cactus you're studying doesn't bloom on time.

Dawn Bazely (Biology) was interviewed by the [Travel Courier](#) about her time as the onboard botanist, lecturing and guiding, for Adventure Canada in the Arctic.

Upcoming Events

Until Nov. 18 – Toronto Public Library Series, "[Feasting at the Table of Elements](#)," with Christopher Caputo, Cora Young, Pierre Potvin, Hovig Kouyoumdjian and Derek Jackson.

Oct. 9 to March 11 – The [Aquatic Research Group \(ARG\) Seminar Series](#) 2019/2020 will feature talks on everything from microplastics, pharmaceuticals, road salt, mercury and more that end up in our waterways.

Oct. 17 to 19 – The Mathematics of Vision Workshop at The Fields Institute (Room 230) will look at the many ways "vision science" can serve as a fruitful proxy for research in neuroscience and artificial intelligence. The organizing committee includes Christopher Bergevin (Physics & Astronomy) and Joel Zylberberg (Physics & Astronomy). To register and for more information visit the website: <http://www.fields.utoronto.ca/activities/19-20/vision>

Oct. 18 – Fall convocation for the Faculty of Science will take place at **10:30 a.m.** with the Faculty of Environmental Studies, Lassonde School of

Engineering, and Faculty of Education.

Oct. 24 – A **Career Conversation Panel in Statistics and Data Science** will take place in the Common Room N620 Ross Bldg, from 10am to noon. Panellists will include Sam Liu, a data scientist at RBC, and Jiawei Li, a senior data scientist at Shopify. Register [here](#).

Nov. 1 to 3 – The 47th Ontario-Quebec Physical-Organic Mini-symposium (POMS), one of North America's premier physical organic chemistry symposia, will be at York. For more information, visit the website www.yorku.ca/tbaumgar/POMS/ or contact organizers Thomas Baumgartner at tbaumgar@yorku.ca or Chris Caputo at caputo@yorku.ca.
