

science



Dean's Round-up: August 2019

Faculty Highlights



York U is now home to a new **one-metre custom telescope** that will enhance hands-on learning experiences and undergraduate research opportunities for the York community and beyond. Installed at the [Allan I. Carswell Observatory](#) on Aug. 16, the telescope is the largest on a university campus in Canada. Read more here: <https://bit.ly/2m7huzb>



At the **Faculty of Science's annual summer BBQ**, the dean recognized several faculty members – **Jianhong Wu** (Math & Stats), **Christopher Caputo** (Chemistry), **Jennifer Chen** (Biology) and **Cora Young** (Chemistry) – for their research leadership, as well as **Don Hastie** and **Alex Mills** for their distinguished service.



Six undergraduate students won awards at this year's **Faculty of Science annual NSERC Summer Undergraduate Research Conference**. The winners of the oral presentations are:

- Gold – Kevin Borsos of the Department of Physics and Astronomy (supervisor Professor Anantharaman Kumarakrishnan)
- Silver – Ehsan Yavari (NSERC-URSA) of the Faculty of Health (supervisor Professor Tara Haas)
- Bronze – Seja Elgadi of the Department of Chemistry (supervisor Professor Christopher Caputo)

The winners of the poster presentation are:

- Gold – Nadar Allam of the Department of Physics and Astronomy (supervisors Professors Ozzy Mermut and Bill Pietro)
- Silver – Ethan Brooks of the Department of Physics and Astronomy (supervisor Professor Eric Hessels)
- Bronze – Quinton Weyrich of the Department of Physics and Astronomy (supervisor Professor Eric Hessels)



Amenda Chow, Yohana Solomon and Hongmei Zhu (Math & Stats) held a mini-workshop, "**Experimental Math: Exploring Vibrations,**" for high school students attending the **Canadian Mathematics Society Summer Math Camp** at York.

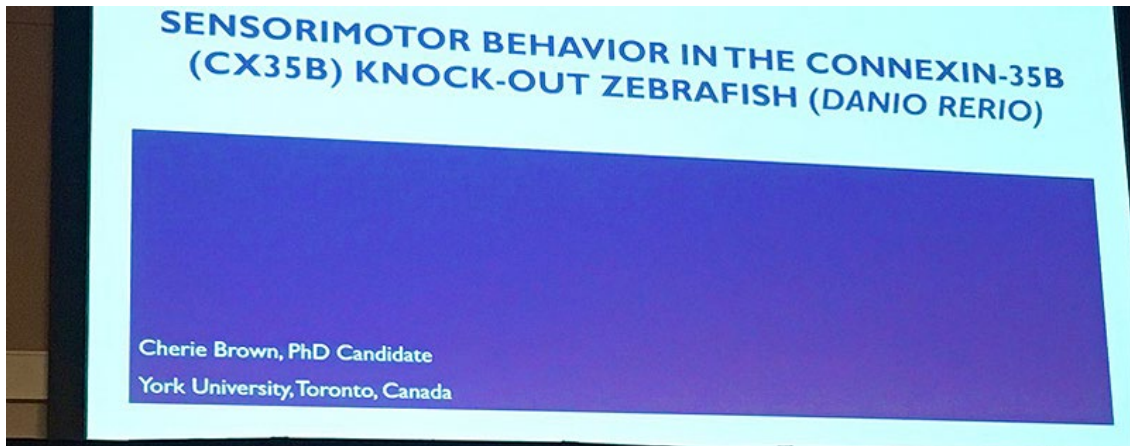
In this mini-workshop, students learned the concepts of vibrations, mathematical modelling of vibrating waves and conducted exciting experiments with different shaped Chladni plates, musical instruments, flexible beams and slinkies.



[SEEDS at YorkU](#), with founder **Sapna Sharma (Biology)**, took more than 40 refugee children from the Middle East and Africa to Ripley's Aquarium for their latest SEEDS trip. Biology graduate students, **Arnab Shuvo** and **Arshad Imrit** volunteered to teach the kids about aquatic ecology. Photo by Arnab Shuvo.



Jennifer Steeves (associate dean of research and graduate education) lent her expertise on [Charles Bonnet Syndrome](#) for the film *Torching the Dusties*, which had its international premier at **Fright Fest** in London, UK, this month.



PhD candidates **Cherie Brown** and **Paige Whyte-Fagundes** from the **Zoidl lab (Georg Zoidl, Biology)** received sponsorship from the Norton B. Gilula Foundation to attend the 2019 International Gap Junction Conference in Victoria, B.C. Brown received a **Star Award** recognizing her achievements as a rising star in the gap junction field. The title of her oral presentation was "Sensorimotor behavior in the connexin-35b (Cx35b) knock-out zebrafish (*danio rerio*).

Congratulations

Steven Connor (Biology) will receive \$125,000 in funding for his research project, which looks at mechanisms contributing to autism spectrum disorder. It is part of federal government's \$61-million [infrastructure investment](#) from the Canada Foundation for Innovation (CFI) John R. Evans Leader Fund (JELF).

Amro Zayed (Biology) and **Jennifer Grixti** (Biology alumna) have a new bee species named after them, *Liphanthus jenamro*, collected by the pair a decade ago in Chile & recently described by Laurence Packer's (Biogoy) grad student Negar Sharifi. REad more here in the journal *Zootaxa*: <https://bit.ly/2Hah5n8>

Joel Zylberberg (Physics & Astronomy) was appointed an Associate Fellow of CIFAR's prestigious program, Learning in Machines and Brains. There are only about 40 fellows, and they are collectively the world leaders in machine learning and neuroscience (and the intersection between those fields).

Chemical & Engineering News (American Chemical Society) named pollutant detective [Cora Young](#) (Chemistry) to the [Talented 12 list](#) of up-and-coming young scientists.

The [Notices of the American Mathematical Society](#) featured **Jianhong Wu** (Math & Stats) for winning the **2019 CAIMS-Fields Industrial Mathematics Prize** by the Canadian Applied and Industrial Mathematics Society, and the Fields Institute "in recognition of his many contributions to dynamical systems in mathematical epidemiology and in particular his collaborative research with public health professionals in government and industry."

Arturo Orellana (Chemistry) received a \$440,000 **NSERC CRD Grant** with F. Hoffmann-La Roche to work on perfecting new methods of making pyridines. Read more in [yFile](#).

PhD Candidate **Allysa Lumley** (Math & Stats) (supervisor Youness Lamzouri) received a two-year, NSERC Post-Doctoral Fellowship worth \$90,000, York's only one this year. She will be heading to the Centre de Recherches Mathématiques in Montreal shortly.

Other News

New Faculty Orientation took place Aug. 27 and 28 with the Dean and Alex Mills.

Welcome to all 15 new faculty members:

- **Christopher Jang**, Assistant Professor, Teaching Stream, (Biology)
- **Birgit Schwarz**, Assistant Professor, Teaching Stream (Biology)
- **Sandra Rehan**, Assistant Professor, (Biology)
- **Nikola Kovicich**, Assistant Professor (Biology)
- **Tao (Toby) Zeng**, Assistant Professor, Computational Chemistry)
- **Tihana Mirkovic**, Assistant Professor, Teaching Stream, Chemistry)
- **Trevor VandenBoer**, Assistant Professor, Environmental Analytical, Chemistry)
- **Andrew McEachern**, Assistant Professor, Teaching Stream, Math & Stats)
- **Robin Marushia**, Assistant Professor, Teaching Stream, Ecology, STS/NATS)
- **Claire David**, Assistant Professor, Experimental Particle Physics Fermilab, PHAS)
- **Deborah Harris**, Professor, Experimental Particle Physics Fermilab, PHAS)
- **Elaina Hyde**, Assistant Professor, Teaching Stream, Astronomy, PHAS)
(Arriving in November)

Starting in January 2020:

- **Jude Kong**, Assistant Professor, Industrial Research Chair (Math & Stats)
- **Nassim Bozorgnia**, Assistant Professor (Physics & Astronomy)
- **Saeed Rastgoo**, Full-Time sessional Assistant Professor (Physics & Astronomy).

Welcome to our new administrative members:

- **Gerald Audette**, Associate Dean of Faculty (Dean's Office)
- **Vera Pavri**, Department Chair (Science & Technology Studies)
- **Robin Metcalf**, Undergraduate Program Director (Science and Technology Studies)
- **Jervis Sequeira**, Faculty Research Administrator (Dean's Office)
- **Jacquelin De Faveri**, Research Officer (Dean's Office)
- **Lan Tran**, Science Academic Advisor (Academic Services)
- **Jonathan Cevallos**, Facilities Manager (Dean's Office)
- **Matthew Murray**, Operations Manager (Chemistry)
- **Juan Lemus**, Systems Administrator (ITS)

The [Banff International Research Station for Mathematical Innovation and Discovery](#) workshop on the Set Theory of the Reals took place in August, co-organized by **Juris Steprans** (Math & Stats) and **Michael Hrusak** (PhD, York University 1999). The first speaker at the workshop was recent York Postdoc **Oswaldo Guzman** and included several participants with connections to York University, including current faculty, and former faculty, students and postdocs.

Bee researchers gathered at York for the annual **BeeCon – Southern Ontario's Bee Researchers Symposium** – to talk about **bee** behaviour, genetics and genomics, and conservation. This year's conference, organized by **Laurence Packer** (Biology), and biology research assistants Sheila Dumesh and Liam Graham, drew bee researchers from Ontario and beyond, including as far away as Australia.

Research Highlights

The **Zoidl Lab** (**Georg Zoidl**, Biology) co-authored a study completed by an international group of vision researchers from Germany, UK, and the Netherlands. Working towards a comprehensive characterization of electrical synapse function, the new research points at roles of Ca^{2+} /calmodulin-dependent protein kinase II (CaMKII- β) in the retina, regulating both electrical synapses and chemical ribbon synapses and potentially also mediating cross-talk between these two types of synapses enabling processing of visual signals in the eye. This research was open access published in [Frontiers in Molecular Neuroscience](#).

Sapna Sharma (Biology) and two of her former graduate students, **Lianna Lopez** and **Bailey Hewitt**, published the paper “Reaching a break point: How is climate change influencing the timing of ice break-up in lakes across the Northern Hemisphere” in [Limnology and Oceanography](#). Sharma was also second author on “[Consequences of lake and river ice loss on cultural ecosystem services](#)” in *Limnology and Oceanography Letters*.

Media

Paul Delaney (Physics & Astronomy) was interviewed about a wide spectrum

of space matters this month, including exoplanets on AM640, AM1010 and Global TV. He was also on the AM60 Mike Stafford Morning Show discussing the Milky Way's warped appearance, on Global TV about Area 51 and UFOs, [CTV Your Morning](#) on space junk (, CHML Scott Thompson show and CTV Toronto about the [Perseid meteor shower](#) and more. CP24 and [CBC covered the installation](#) (clip at 59:11) of the new one-metre telescope and interview Delaney as did Global's Breakfast Television. Delaney also spoke to CTV NewsChannel about the Europa Clipper mission, Global TV about the possible black hole and neutron star merger, as well as CTV Your Morning about ocean worlds and settlements on exoplanets, and more.

The film company, **Mirror Image**, shot footage of **Dawn Bazely** (Biology) for a **National Film Board** series on **Women in STEM**. Bazely was also featured in [YorkRegion.com](#) talking about good and bad weeds, what to leave and what to remove.

[Bridget Stutchbury](#) (Biology) was quoted in a [National Public Radio for Central California online article](#) about birds adapting to climate change and if it's too late.

Upcoming Events

Sept. 24 to Dec. 3 – A new lineup of speakers will headline the [Research Seminar Series in Science & Technology Studies](#) (STS). The series will run on Tuesdays, from 11:30 a.m. to 1 p.m.

Sept. 26 – Faculty and staff take a look through the new telescope event from 7 to 10 p.m. Check your email and be sure to RSVP.

Sept. 26 to 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. 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>

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.
