

Dean's Round-up: May 2021

FACULTY HIGHLIGHTS



Jane Heffernan (Mathematics & Statistics) received a [\\$200,000 one-year grant](#) from the *National Research Council of Canada (NRC)* to study the rate of COVID immunity provided by vaccinations and contracting the virus. The [project](#) is part of the NRC's [Pandemic Response Challenge program](#).



The Ontario government announced a [\\$27 million investment](#) into five Ontario Genomics-led projects, including previously announced funding of \$10 million for BeeCSI, a new bee health assessment and diagnosis platform led by **Amro Zayed** (Biology).

CONGRATULATIONS

Post-doctoral researcher **Nicola Bragazzi** (Mathematics & Statistics), is a recipient of the 2020 [MAI Autoimmunity Award](#). He's currently researching infectious disease and vaccination modelling and biomedicine big data mining.

Members of **Jean-Paul Paluzzi's** (Biology) lab received [awards and honourable mentions](#) following the recent North American Society for

Comparative Endocrinology biennial meeting held virtually from May 25-27, 2021.

- **Farwa Sajadi** (PhD Candidate) received the “Best Oral Presentation Award, Student”
- **Salwa Afifi** (MSc Candidate) was runner up for the “Best Oral Presentation Award, Student”
- **Dr. Leena Thorat** (PDF) was runner up for the “Best Oral Presentation Award, Post-doctoral Fellow”

Gian Alix, undergraduate research assistant of **Xin Gao (Mathematics & Statistics)**, received the Vector Scholarship in Artificial Intelligence from the Vector Institute.

OTHER NEWS

The Allan I. Carswell Observatory held a special “Astronomy Jeopardy” event as part of Canada’s Science Odyssey Festival on May 12. The event was open to the public and is playable online on the Observatory’s [YouTube channel](#).

Science Engagement Programs is celebrating its 15th anniversary this summer. Over the last 15 years, the program has reached more than 26,500 students in STEM programs all over the world, including Peru, Germany, Ethiopia, China, Mexico, and France. This summer, the Science Engagement team are running **19 unique themes** for students in grade 3 to 12 including *Flight Academy*, *Neuroscience: Meet the Mind*, *Adventures in Space*, *Sustainable Future*, and *The Science of Movies*. For more information about the summer online programs, [click here](#).

The 54th [Spring Topology and Dynamical Systems Conference](#) was held at Murray State University May 12-15, 2021. **Paul Szeptycki** (Mathematics & Statistics) gave a talk along with a large number of former and current students and postdocs, including Ivan Ongay Valverde (Postdoctoral Fellow), former PhD students Vera Fischer (Kurt Gödel Research Centre, Vienna), David Fernandez-Breton, and Sergio Garcia-Balan, and former Postdoctoral Fellows Rodrigo Hernandez-Gutierrez, William Chen-Mertens, and Santi Spadaro.

Christine Le (Chemistry) is involved with two education projects that recently received funding from the [eCampus Ontario Virtual Learning Strategy Competition](#). As a subject matter expert, Le will work with these two teams to design, organize, and implement these projects within the chemistry department at YorkU:

1. Design thinking in STEM education (\$111,534) led by PI, Helen Tran, at University of Toronto (Chemistry) with York U and University of Windsor as partner organizations.
2. Plug-and-play modules for green and sustainable organic chemistry education (\$40,000) led by PI, Amanda Bongers, at Queen's University (Chemistry) with York U and University of Toronto as partner organizations.

Hanmeng Zhan (York Science Fellow) and **Ada Chan** (Mathematics & Statistics) were part of the organizing team for the online workshop “Open Problems in Algebraic Graph Theory,” which took place the week of May 3-7.

RESEARCH HIGHLIGHTS

Chris Luszczek (PhD student), Andrew Medeiros, Brent Wolfe, and **Roberto Quinlan** (Biology) published, “Effects of recent climate and environmental changes on the ecology of a boreal forest lake in Manitoba, Canada,” in *Journal of Paleolimnology*.

Hanmeng Zhan (York Science Fellow), and **Ada Chan** (Mathematics & Statistics), together with the students they supervised in the Fields Undergraduate Summer Research Program 2020 (Bobae Johnson, Mengzhen Liu, Malena Schmidt and Zhanghan Yin), published "Laplacian fractional revival in graphs" in the *Electronic Journal of Combinatorics*.

Qiong Li, Xiaoying Sun, Nanwei Wang, and **Xin Gao** (Mathematics & Statistics), published “Penalized composite likelihood for colored graphical Gaussian models” in *Statistical Analysis and Data Mining*.

Sicheng Wu (PhD student), **Xin Gao** (Mathematics & Statistics), and Raymond Carroll published “Model selection for Generalized Estimating Equations with Divergent Model Size” in *Statistica Sinica*.

Robert McLaren (Chemistry) was a co-author on the paper, “[New methodology shows short atmospheric lifetimes of oxidized sulfur and nitrogen due to dry deposition](#),” published in *Atmospheric Chemistry and Physics*.

William Chen-Mertens, **Juris Steprāns** (Mathematics & Statistics) and Menachem Kojman published “Strong colorings over partitions” in *The Bulletin of Symbolic Logic*.

Saharon Shelah and **Juris Steprāns** (Mathematics & Statistics) published “Universal graphs and functions on ω_1 ” in *Annals of Pure and Applied Logic*.

Pasquale Bosso, Octavio Obregón, **Saeed Rastgoo** (Physics & Astronomy), and Wilfredo Yupanqui published "[Deformed algebra and the effective dynamics of the interior of black holes](#)" in *Class. Quantum Grav.*

Shanshan Qin (former Postdoctoral Fellow), Bin Sun (former PhD Student), **Yuehua Wu** and **Yuejiao Fu** (Mathematics & Statistics) published "[Generalized least-squares in dimension expansion method for nonstationary processes](#)" in *Environmetrics*.

MEDIA

Dr. Eileen de Villa, Medical Officer of Health for the City of Toronto, referenced projections from the **Canadian Centre for Disease Modelling**, led by **Huaiping Zhu** (Mathematics & Statistics) when discussing COVID-19 restrictions in a [Toronto Star article](#).

Jane Heffernan (Mathematics & Statistics) was interviewed on [CTV News](#) about her NRC grant to study immunity levels provided by COVID vaccines and contracting the virus. She was also interviewed in the Globe and Mail on [how we can prevent a fourth wave](#) and [intervals between vaccine doses](#), and by [Science Alert](#) and [Business Insider](#) on other topics related to COVID. Heffernan also completed interviews on CBC Radio programs across Canada, including stations in Montreal, Quebec City, Thunder Bay, Kitchener-Waterloo, Charlottetown, Newfoundland, Yellowknife, Winnipeg, Calgary, Victoria, Prince George/Prince Rupert, Fredericton, and Regina.

For a week in mid-May, **Alex Mills** (Biology) worked in the field in Parry Sound with a crew from the BBC's Natural History unit, advising them on woodpecker-hummingbird interactions for a segment of their upcoming series, *The Green Planet*.

Postdoctoral Fellow **Leigh Crilley** (Chemistry) was on [CTV news](#) discussing his recent research on three-layer masks that are easy to make using everyday materials. Crilley led this research with **Jennifer Chen** (Chemistry). The university issued a [media release](#) on their study.

Paul Delaney (Physics & Astronomy) had his busiest month for media outreach to date, commenting on astronomical events in the following outlets: AM1010 Dave Trafford: Tides and the super moon; Markham Youth Expo Presentation (Grades 3-8): Solar System; Sirius XM Arlene Bynom: Crew 1 returns; AM640 Kelly Cutrara: Crew 1 returns and Parker Probe; AM640 John Oakley: DART and asteroid collisions; Global TV: Chinese rocket booster re-entry; AM640 Jeff

McCarthy: Chinese rocket booster re-entry; CTV NewsChannel: Chinese rocket booster re-entry; AM1010 Mark Towhey: SpaceX, Chinese rockets; CJAD 800 Montreal: Chinese rocket booster re-entry; Global TV: Chinese rocket booster re-entry; AM900 Scott Thompson: Chinese rocket booster re-entry; CTV NewsChannel: Chinese rocket booster re-entry; Global TV: Chinese rocket booster re-entry; AM900 Scott Thompson: Chinese rocket booster re-entry; CHED Edmonton: Chinese rocket booster re-entry; Presentation to Probus Bradford Club: Mars update; Talk Radio 1010 Jim Richards: Volcanism on Mars; Global TV: OSIRIS-REx heads home; Talk Radio 1010 Jim Richards: Best and Worst SF movies; Talk Radio 1010 Jim Richards: Voyager's interstellar "hum"; CBC Radio Here and Now: Lunar eclipse, supermoon; CTV National: Lunar eclipse, supermoon; AM900 Scott Thompson: Lunar eclipse, supermoon; AM640 Jeff McCarthy: Lunar eclipse, supermoon; Talk Radio 1010 Jim Richards: Milky Way galaxy evolution; AM640 Morning Show: Canadian Moon rover; CTV Your Morning: UFO reports

Dasantila Golemi-Kotra (Biology) commented on issues related to COVID immunity and transmission in [AFPFactCheck](#), [The Toronto Star](#), [IOL](#), and [North Bay Today](#).

Sean Tulin (Physics & Astronomy) delved into a question surrounding Dark Matter for CBC's [Quirks & Quarks](#).

Deborah Harris (Physics & Astronomy) was interviewed in [ScienceNews](#) about scientists finding neutrinos at the Large Hadron Collider.

