

## Dean's Round-up: February 2021

### FACULTY HIGHLIGHTS



On February 3, the Faculty of Science launched its inaugural [Dean's Special Advisory Board](#), strengthening its collaboration with industry and community. FSc held a virtual public event to introduce board members to our community, including Board Chair [Reza Moridi](#), former Ontario Minister of Research, Innovation and Science and Minister of Training, Colleges and Universities.



On February 11, UN International Day of Women and Girls in Science, the Faculty of Science launched the [Dean's Scholarship for Women in Science](#).

The scholarship supports domestic female students entering a graduate program in the Faculty of Science who demonstrate leadership skills, academic excellence, and research potential in the field of science.

### CONGRATULATIONS

**Nicola Bragazzi** (Mathematics & Statistics), a post-doctoral fellow in **Jianhong Wu's** lab, is among the world's [top two percent published researchers](#), according to a list by researchers at Stanford University. They compiled the world's most prolific researchers using a database of standardized citation indicators. **Professor Wu** was also included on the list and highlighted in last month's Round Up.

**Kevin McGregor** (Mathematics & Statistics) became a review editor for the Statistical Genetics and Methodology section of the *Frontiers in Genetics*

## OTHER NEWS

**The Canadian Centre for Disease Modelling** hosted its 2021 Incubation Day on February 25 featuring graduate students and postdoctoral researchers speaking about their work in mathematical modelling and analysis of diseases. Nick Ogden from the Public Health Agency of Canada gave a keynote address on the national mathematical modelling efforts related to COVID-19. The virtual conference was attended by people all over the world and was organized by **Elena Aruffo** (Mathematics & Statistics postdoc), Ali Beykzadeh, Adriana-Stefania Ciupeanu, **Jude Dzevela Kong**, **Iain Moyles** (Mathematics & Statistics), and PhD students **Vadim Tyuryaev** and **Pei Yuan**.

**Nassim Bozorgnia** (Physics & Astronomy) gave a public talk for high school students on "Probing the dark matter distribution in the Milky Way" at the national symposium "Let's Talk Astrophysics" on February 20, 2021.

**Andrew Skelton** (Mathematics & Statistics) gave a talk titled, "Integrating FYE Programming into a Large Introductory First-Year Course" at the 40th Annual Conference on the First-Year Experience. The international conference is designed to provide educators from every segment of higher education with a platform to share innovative ideas, programs, tools, and research critical to the learning, development, and success of first-year college students.

**York University's Science Engagement Programs** continue to provide online STEM (Science, Technology, Engineering, and Mathematics) programs to students in grades 3-12, engaging more than 200 eager learners in York STEM Clubs and more than 1300 students with the York CanCode workshops. Sign up for their [Parent Newsletter here](#) to receive exclusive updates on free York CanCode workshops and Summer 2021 programs. You can visit their social media ([Instagram](#), [Twitter](#), and [Facebook](#)) for more resources and engaging at-home STEM activities.

**The Committee on Teaching & Learning** (CoTL) organized two recent events: On January 28, they hosted a talk by Dr. Sarah Eaton, Associate Professor, Werklund School of Education and Educational Leader in Residence, Academic Integrity, titled "Academic Integrity: Ethical approaches to teaching, learning and supporting student success during COVID-19 and beyond." On February 17, CoTL hosted Dr. Ben Wiggins, Instructional Manager for the Department of Biology at the University of Washington, who gave a talk titled "Our test is their test: Using the pandemic crisis as an opportunity." To

access seminar recordings, please contact **Robin Marushia**, Chair of CoTL, at [marushia@yorku.ca](mailto:marushia@yorku.ca) .

## RESEARCH HIGHLIGHTS

Jorge Bruno and **Paul Szeptycki** (Mathematics & Statistics) published “There are exactly omega-1 topological types of locally finite trees with countably many rays” in *Fundamenta Mathematicae*.

**Iain Moyles**, **Jude Kong**, and **Jane Heffernan** (Mathematics & Statistics) published “[Cost and social distancing dynamics in a mathematical model of COVID-19 with application to Ontario, Canada](#)” in *Royal Society Open Science*. The University issued a [media release](#) about this research.

Nayanthara Asok, Joshua Gaffen, Ekadashi Pradhan, Tao Zeng and **Thomas Baumgartner** (Chemistry) published "[Structure-reactivity studies on hypervalent square-pyramidal dithieno\[3,2-b:2',3'-d\]phospholes](#)" in *Dalton Transactions*.

**Yuehua Wu**, **Shanshan Qin** (PhD student) and **Hao Ding** (postdoctoral fellow) (Mathematics & Statistics) published “[Asymptotic properties on high-dimensional multivariate regression M-estimation](#)” in *Journal of Multivariate Analysis*.

**Yaguang Li** (postdoctoral fellow), Wei Xu, and **Xin Gao** (Department of Mathematics & Statistics) published “Graphical-model based high dimensional generalized linear models” in *Electronic Journal of Statistics*.

**Mahdis Azadbakhsh** (PhD student), **Xin Gao**, and **Hanna Jankowski** (Mathematics & Statistics) published “Composite likelihood ratio testing under non-standard conditions using tangent cones,” in *Stat Journal*.

Brock A. Harpur and **Sandra M. Rehan** (Biology) published “[Connecting social polymorphism to single nucleotide polymorphism: Population genomics of the small carpenter bee, \*Ceratina australensis\*](#)” in *Biological Journal of the Linnean Society*.

**Wyatt A. Shell**, Michael A. Steffen, Hannah K. Pare, Arun S. Seetharam, Andrew J. Severin, Amy L. Toth, and **Sandra M. Rehan** (Biology) published “[Sociality sculpts similar patterns of molecular evolution in two independently evolved lineages of eusocial bees](#)” in *Communications Biology*. The University issued a [media release](#) about this research.

## MEDIA

**Elaina Hyde** (Physics & Astronomy) commented on the Mars Perseverance landing, with interviews including [Breakfast TV](#), CBC The World This Hour, and 680 News Radio.

A study co-authored by **Sandra Rehan** (Biology) on the maternal instincts and social life of bees was featured in media outlets including [CTV News Channel](#), [Phys.Org](#), and [Hindustan Times](#), among many others.

**Iain Moyles** (Mathematics & Statistics) was interviewed on [CTV](#) and [580 CFRA](#) in Ottawa about his research surrounding cost and social distancing dynamics in a mathematical model of COVID-19.

**Sapna Sharma** and postdoctoral fellow **Alessandro Filazzola** (Biology) continued to conduct media interviews on their recent lake ice study, including: [CBC Fresh Air](#), New Hampshire Public Radio, [Cottage Life](#), [Bridge Michigan](#), and [Wisconsin Public Radio](#).

**Paul Delaney** (Physics & Astronomy) commented widely on astronomical events surrounding the Mars Perseverance landing, including: Global News; AM640; AM1010; AM640 Morning Show; Sirius XM; CP24; AM900; CBC Radio; Global TV, and Presentation GTLLI: “Hello...Is anyone out there?”

**Jude Kong** (Mathematics & Statistics) was interviewed on [CTV News](#) discussing a new international collaboration he is leading to fight COVID-19 in Africa using mathematical modelling and artificial intelligence to detect early warning signals.

**Dasantila Golemi-Kotra** (Biology) was interviewed by [CTV News](#) regarding COVID-19 variants and how they initiate an infection.

**Jianhong Wu** (Mathematics & Statistics) was interviewed by [Global News](#) on the topic of double masking.

**Centre for Disease Modelling** COVID-19 projections were featured in a [Toronto Star](#) story about why Toronto needs to remain in lockdown.

