

## Dean's Round-up: January 2021

### FACULTY HIGHLIGHTS



York University and the University of the Witwatersrand in South Africa signed a memorandum of understanding to tackle COVID-19 across Africa by creating an international consortium of experts; the group is led by Jude Kong (Mathematics & Statistics). To read the press release, [click here](#).



The Faculty of Science issued a video welcoming our students to the start of Winter semester classes. In his remarks, Dean Rui Wang emphasized that 2021 will be a year to celebrate, and reassured students that we are here to support their success. To view the video, [click here](#).

### CONGRATULATIONS

**Professor Emeritus Allan Carswell** (Physics & Astronomy) was appointed to the Order of Ontario. To read the announcement, [click here](#).

**Sandra Rehan** (Biology) was elected a Fellow of the [Linnean Society of London](#), in recognition of her world leading contributions to natural history research including taxonomy, evolutionary biology, and ecology. The Linnean Society of London is the world's oldest society for biological research. **Rehan** also received a **Mitacs Accelerate grant** in partnership with the Weston Family Foundation Microbiome Initiative to support her lab's research on wild bee microbiome research. The Weston Family Foundation has provided three years of support for their work on wild bee microbial ecology and conservation.

**Jianhong Wu** (Mathematics & Statistics) is among the world's top two percent

published researchers, according to a list published by a team of researchers at Stanford University. They compiled the world's most prolific researchers, using a database of standardized citation indicators. To read the YFile story, [click here](#).

**Kyle Belozero** (Chemistry) has been awarded a YUFA Teaching & Learning Development Grant for his project entitled "Virtual Reality-Based Structure Visualization In The Classroom: A Pilot Project." The grant will allow Belozero to develop classroom activities that involve visualizing biological macromolecules in virtual reality and to begin testing this exciting new technology in undergraduate biochemistry courses.

**Saeed Rastgoo** (Physics & Astronomy) has been [appointed as a Topic Editor](#) of the journal *Symmetry* for 2021 to 2023.

## OTHER NEWS

**The Allan I. Carswell Observatory** hosted a Mars Perseverance Landing Party on February 18, 2021. To view a recording of the event, [click here](#).

**Jane Heffernan** and **Jude Kong** (Mathematics & Statistics) have been participating in a new Fields Institute Pilot Project called "Ask a Mathematician." **Heffernan** and **Kong** virtually visit Grade 1-12 classes to talk about mathematics and mathematical biology. **Heffernan** also organized [a workshop](#) on Feb. 7-8 for the Society for Mathematical Biology Mathematical Epidemiology Subgroup. The workshop was supported by the [Centre for Disease Modelling](#).

**Dawn Bazely** (Biology) organized and moderated a panel titled "How to Make Ecology Less White" hosted by Prof. Shelley Arnott at Queen's University in September 2020. (Please contact Dawn for slides and link to the panel.) **Bazely** also collaborated with JoVE to give a [global webinar](#) in their series: **Remote Learning: Findings from a Crisis Period**, in which she explained how she rapidly pivoted when all in-person field courses were cancelled, to create one of few virtual global field courses that were pandemic public health policy compliant. One thousand people registered to attend this talk. In February, **Bazely** spoke at the [USA National Biodiversity TeachIn](#) about Amazing Arctic Plants and People Above the Treeline to hundreds of school students. **Bazely** also joined a line-up of women speakers to celebrate International Day of Women and Girls in Science, including noted Climate Scientist, Dr. Katharine Hayhoe.

**Nassim Bozorgnia** (Physics & Astronomy) gave a public talk on "[Searching for](#)

[the Mysterious Dark Matter](#)" at the Speaker's Night Meeting of the Royal Astronomical Society of Canada Toronto on January 20, 2021.

**Hugo Chen** joined the Faculty of Science as our new Director of International Collaborations and Partnerships. Hugo will be responsible for developing and managing overseas collaborations and partnerships between the Faculty of Science and international institutions, and accelerating our international student recruitment efforts. He can be reached at [hugochen@yorku.ca](mailto:hugochen@yorku.ca).

Professor Emeritus **Gordon Shepherd** (Space Science) has published a new book, [From Prairie Skies to Outer Space](#), a memoir which explores his life's research on the aurora and the airglow in Earth's upper atmosphere.

## RESEARCH HIGHLIGHTS

**Sapna Sharma, Kevin Blagrove, Alessandro Filazzola, M. Arshad Imrit** (Biology), and Harrie-Jan Hendricks Franssen published "[Forecasting the permanent loss of lake ice in the Northern Hemisphere within the 21st century](#)" in *Geophysical Research Letters*. The university issued a [press release](#) and [YFile story](#) on this research.

**Arnab Shuvo, Catherine M. O'Reilly, Kevin Blagrove, Carrie Ewins, Alessandro Filazzola, Derek Gray, Octavia Mahdiyan, Luke Moslenko, Roberto Quinlan, and Sapna Sharma** (Biology) published, "[Total phosphorus and climate are equally important predictors of water quality in lakes](#)" in *Aquatic Sciences*.

**Octavia Mahdiyan, Alessandro Filazzola, Lewis Molot, Derek Gray, and Sapna Sharma** published "Drivers of water quality changes in North American lakes over the past 40 years" in *Limnology & Oceanography*.

Ali Asgary, Monica Gabriela Cojocar, Mahdi M. Najafabadi, and **Jianhong Wu** (Mathematics & Statistics) published "[Simulating Preventative Testing of SARS-CoV-2 in Schools: Policy Implications](#)," in *BMC Public Health*. The university issued a [press release](#) and [YFile story](#) about this research.

**Laura Keane** (PhD student) and **Iain Moyles** (Mathematics & Statistics) published "[An improved approximation for hydraulic conductivity for pipes of triangular cross-section by asymptotic means](#)" in *Journal of Engineering Mathematics*.

**Jan Sapp** (Biology) published a new book, [Genes, Germs, and Medicine. The Life of Joshua Lederberg](#) (World Scientific, 2021).

Hugo A. Morales-Técotl, **Saeed Rastgoo** (Physics & Astronomy), and Juan C. Ruelas published “[Effective dynamics of the Schwarzschild black hole interior with inverse triad corrections](#),” in *Annals Physics*.

**Evan P. Kelemen** and **Sandra M. Rehan** (Biology) published “[Opposing pressures of climate and land-use change on a native bee](#)” in *Global Change Biology*.

**Edward Furman** (Mathematics & Statistics), Yisub Kye, and Jianxu Su published “[Size-biased risk measures of compound sums](#)” in *North American Actuarial Journal*.

## MEDIA

**Alessandro Filazzola** (Biology) a post-doctoral fellow in Sapna Sharma’s lab, spoke with [CTV News](#) about the new lake ice study he co-authored.

**Sapna Sharma** (Biology) was interviewed by CityNews regarding [this research](#); the study was also featured in numerous outlets, including: [The Toronto Star](#), [CBC Fresh Air](#), [PhysOrg](#), [ScienceDaily](#), [RCI](#), [AM1150](#), [Vancouver Times](#), [Yahoo](#), and [The Winnipeg Free Press](#). The Poetry of Science website also published [a poem](#) about the study.

**Jude Kong** (Mathematics & Statistics) was [featured on CTV News](#) discussing the new international collaboration to fight COVID-19 in Africa, which he is leading.

**Jianhong Wu** (Mathematics & Statistics) and **Dasantila Golemi Kotra** (Biology) published an [op ed](#) in The Conversation surrounding herd immunity and the need for non-pharmaceutical interventions following the deployment of COVID-19 vaccines. The article was reprinted in the [National Post](#).

**Jane Heffernan** commented on [vaccine supplies](#) in The Globe and Mail.

**Sergey Krylov’s** (Chemistry) research on [chemotherapy resistance](#) was featured in the university’s *Brainstorm* publication.

**Paul Delaney** (Physics & Astronomy) commented widely on astronomical events, with media hits in numerous outlets, including: AM640 Morning Show – Japan’s wooden satellites; AM640 Kelly Cutrara – Oumuamua spaceship claim; AM640 Jeff McCarthy – Most distant Quasar detected (AAS announcement); CTV Your Morning and [CTV National](#) – changing length of our day; U of T ASX presentation – Water, water everywhere; AM640 Kelly Cutrara – WASP 107b

"fluffy planet" and Blue Origin space tourism plans; [CTV website](#) – Wolf Moon; Excalibur YorkU – Changing rotation rate and length of day; AM640 Jeff McCarthy – Ax-1 space tourist mission; Sirius XM Arlene Bynom – Ax-1 space tourist mission; AM900 Scott Thompson – Ax-1 space tourist mission and Wolf Moon; and Excalibur YorkU – SpaceX Starlink challenges.

**Dasantila Golemi-Kotra** (Biology) undertook media hits on topics related to COVID-19 in dozens of outlets this month, including the following: CBC Radio One Syndicate, Metro Morning, Kitchener-Waterloo, Thunder Bay, Saskatoon, London, St. John's, Windsor, Iqaluit, Regina, Yellowknife, Edmonton, and Kelowna. She also completed a series of 10 CBC Radio interviews – Montreal, Saskatchewan, Alberta, Manitoba, Halifax and more, including: CBC Radio One 88.5FM ([Part 1](#) and [Part 2](#)), CBC Radio One 83.5FM ([Part 1](#) and [Part 2](#)); 980 FM, Saskatchewan Weekend CBC, and 570 FM.

Dean **Rui Wang** published an article in The Conversation titled, "[The surprising reason eating less meat is linked to a longer life: A smelly toxic gas.](#)" It was reprinted by the [National Post](#). He was interviewed on 106 ELMNT FM in Toronto with Radio host Rory McGreal on "Moment of Truth – MOT" and on [Ukrainian TSN, 1+1 TV channel](#), and 570 News in Kitchener with Radio host Brian Bourke. This story was also featured by [Chatham Daily News](#), [Flipboard](#), and [Yahoo!](#), as well as on many websites such as HealthUnlocked, News Break, Dining & Cooking, Tolerance.Ca., Grunt Vegan, and Healthing.ca.

