Pacific Institute *for the* Mathematical Sciences

PIMS MONTHLY CONNECTION | **August 2020**

UNIVERSITY OF CALGARY

Hello from PIMS

Things are bustling along at PIMS! With over 70 participants, the Math^Industry workshop is off to a robust start! We also have 4 new graduate courses launching in September. To say that the members of the PIMS community have embraced virtualization is an understatement. They are connecting in new ways with diverse audiences while moving research forward with excellence and vibrancy in the mathematical sciences.

The Institute of Mathematics of the CNRS (INSMI) has a limited number of research positions to offer for 2021, available to foreign visitors from the "UMIs/IRLs", "LIAs" or "IRNs". These positions are for three months and open to all seniority levels (assistant, associate or full professors). Check out the News & Announcements section to learn more.

PIMS is happy to continue to support researchers across the network in their virtualization endeavours that promote the mathematical sciences and advancement of research.

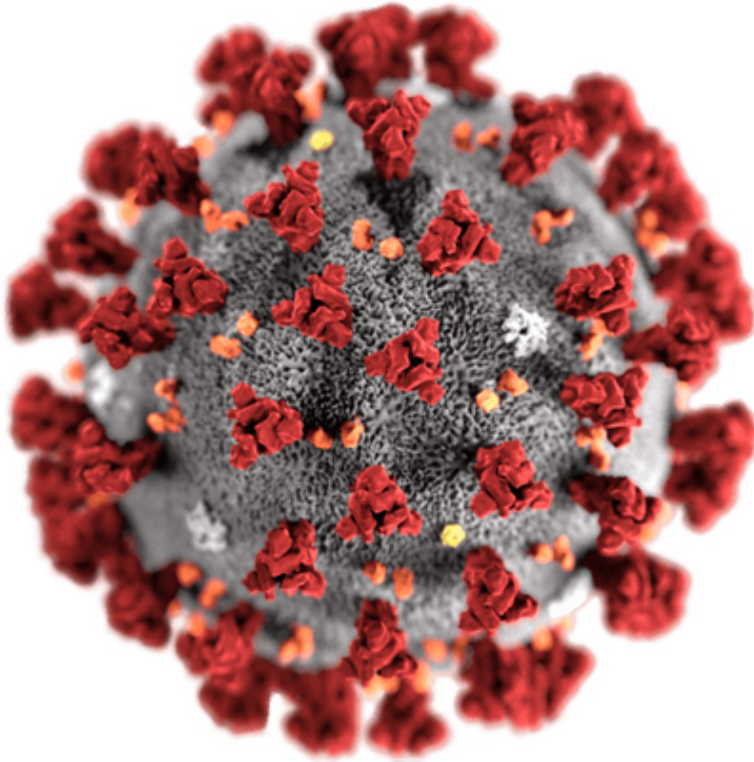**Sincerely,**
The PIMS Team

FEATURE EVENTS

PIMS Summer Distinguished Colloquium: John Mighton, Jump Math
August 6: All Things Being Equal: Why Math is the Key to a Better World.

Math provides us with mental tools of incredible power. When we learn math we learn to see patterns, to think logically and systematically, to draw analogies, to perceive risk, to understand cause and effect--among many other critical skills.

Yet we tolerate and in fact expect a vast performance gap in math among students and live in a world where many adults aren't equipped with these crucial tools. This learning gap is unnecessary, dangerous and tragic, and it has led us to a problem of intellectual poverty which is apparent everywhere--in fake news, political turmoil, floundering economies, even in erroneous medical diagnoses.
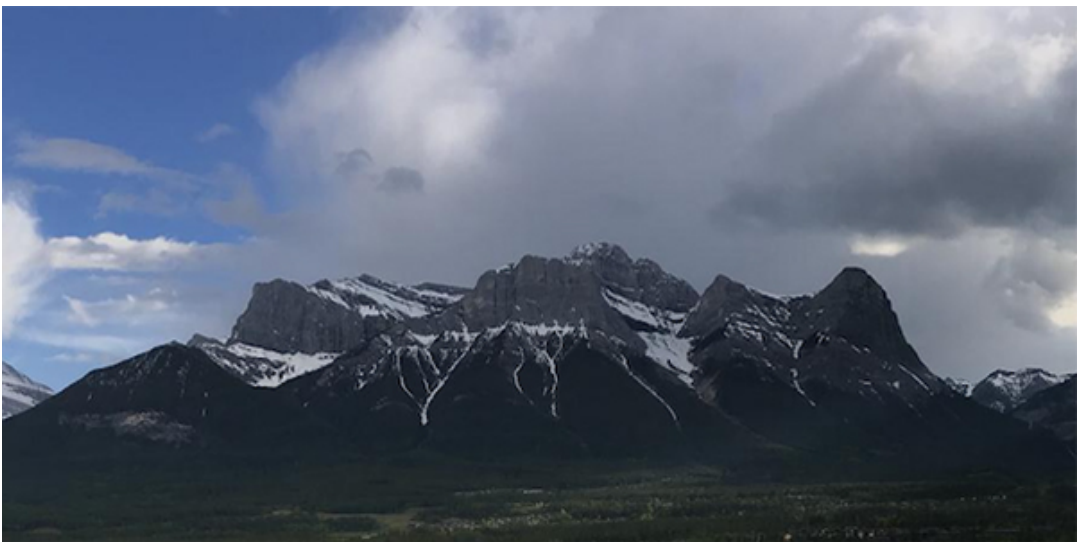
The study of math is an ideal starting point to break down social inequality and empower individuals to build a smarter, kinder, more equitable world. In this talk Mighton will share his vision for a numerate society for all, not just a chosen few.

[Café Mathematique: What is a model of COVID-19?](#)
August 12: Hosted Virtually by The Fields Institute

Café Mathematique is a free, public forum where anyone can learn how math underpins our understanding of the COVID-19 pandemic. Hear from a panel of experts at universities across Canada as they answer the question, "What is a model of COVID-19?" followed by a lively discussion where audience members are encouraged to ask questions and explore ideas about modelling the pandemic.
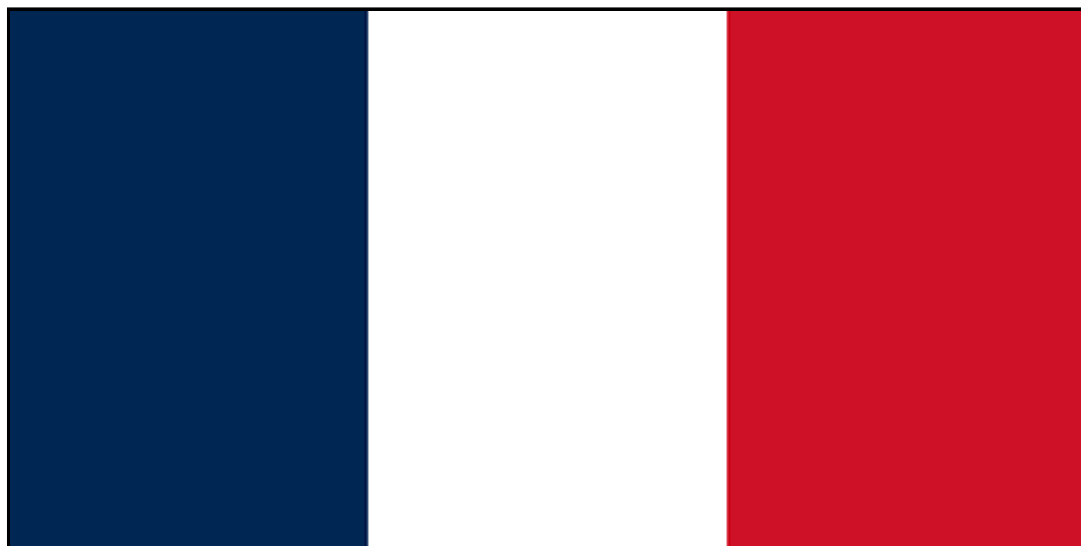

[Process-Based Hydrological Modelling](#)
A fall graduate-level course offered virtually by the University of Saskatchewan Centre for Hydrology

This course is designed to provide participants with the understanding and skills necessary to become experts in process-based hydrological modelling. The lectures will advance understanding of state-of-the-art modeling practices. The quantitative exercises will provide participants with the opportunity to build simple models, run complex models, make changes, and analyze model output. The practical exercises will require work in groups in order to develop the collaborative problem-solving skills that are required in both academia and industry.

For more lectures and PIMS resources, please visit mathtube.org

Click below for all events|August 2020

NEWS & ANNOUNCEMENTS

Visiting Professor Opportunities at the Institute of Mathematics of the CNRS

The Institute of Mathematics of the CNRS (INSMI) is offering a limited number of research positions in 2021, available to foreign visitors from the "UMIs/IRLs", "LIAs" or "IRNs". These positions are for three months (shorter visits cannot be funded under this scheme). Invitations can be extended at any seniority level (assistant, associate or full professors). The offer is open to all non-French academics, member or not of your UMI/IRL, LIA or IRN: however, a clear connection with the scientific activity of the UMI/LIA/IRN should appear in the file. For the full set of details, see PIMS - CNRS Postes Rouges 2020.

PIMS COMMUNITY RECENT PUBLICATIONS

1. So, T. (2019). Homotopy types of SU (n)-gauge groups over non-spin 4-manifolds. *Journal of Homotopy and Related Structures, 14*(3), 787-811.

2. Drimbe, D. (2019). Orbit equivalence rigidity for product actions. *Communications in Mathematical Physics,* 1-19.

3. Reichstein, Z., & Shukla, A. (2019). Essential dimension of inseparable field extensions. *Algebra & Number Theory, 13*(2), 513-530.

ABOUT PIMS

The Pacific Institute for the Mathematical Sciences (PIMS) was created in 1996 to promote **discovery**, **understanding** and **awareness** in the mathematical sciences. PIMS has expanded from the mathematics community of **Alberta** and **British Columbia** to include **Washington State**, **Saskatchewan** and **Manitoba**. We are proponents of mathematical **collaboration with industry**, **innovation in mathematics education** from K-12 to graduate level initiatives, **public outreach** and **partnerships** with similar organizations around the globe. We fund Collaborative Research Groups, Post-Doctoral Fellowships, individual events, and competitive prizes in mathematics.

FOLLOW US!