Pacific Institute for the Mathematical Sciences

PIMS MONTHLY CONNECTION | **May 2021**

Hello from PIMS

May is here and we are getting ready for warmer weather and a host of summer schools, conferences and workshops that will take place “virtually” across the PIMS network. We highlight some events taking place this month, and hope you have time to add a few of them to your calendar this month.

Our site at the **University of Regina** will host **Adrian Ioana**, on **May 4**, for the PIMS Distinguished Lecture: “Classification and rigidity for group von Neumann algebras". From **10–14 May** the Workshop on New Trends in Localized Patterns in PDEs will be hosted by **UBC**. This workshop will highlight the influential contributions of Professor Michael Ward to the mathematics and applications of localized solutions to PDEs.

Be sure to set time aside for the **Women in Mathematics Day**, held on **May 12**. This date was chosen to commemorate the birth day of Professor Maryam Mirzakhani, who in 2014, was the first, and only, woman to win the Fields Medal. Here at PIMS we mark the Women in Mathematics Day with a movie and panel session: Picture a Scientist. The event runs from **May 12–15**.

The West Coast Optimization Meeting and the Western Canada Linear Algebra Meeting, both take place online this month. Do not miss our last talk in the **PIMS Emergent Research: PDF Seminar Series** on **May 19** with **Chandra Rajulapati**. She gives us a glimpse into her research with her talk on “Data accuracy for risk management in changing climate”. The PDF Seminar Series takes a break in the Summer and will resume later in September.

More details on this month's featured events, news and publications are provided below.

Sincerely,
The PIMS Team

FEATURE EVENTS

PIMS - URegina Distinguished Lecture

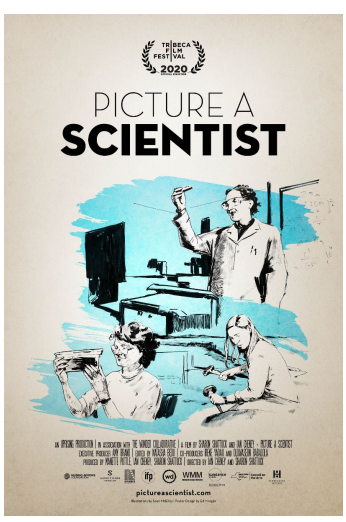
May 4, 10AM Pacific/ 11AM CST Hosted online by PIMS- URegina
Adrian Ioana, UC, San Diego

Classification and Rigidity for Group Von Neumann Algebras

Any countable group G gives rise to a von Neumann algebra L(G). The classification of these group von Neumann algebras is a central theme in operator algebras. I will survey recent rigidity results which provide instances when various algebraic properties of groups, such as the presence or absence of a direct product decomposition, are remembered by their von Neumann algebras. I will also explain the strongest such rigidity results, where L(G) completely remembers G, and discuss some of the open problems in the area. Click to register.

Women in Mathematics Day

May 12–15. Online. Movie & Panel Discussion - Picture a Scientist



On May 12 (in honour of women in mathematics), PIMS will offer a virtual screening of the acclaimed film **Picture a Scientist**. Registered participants will be provided the link to the film to view at their own time. They will also be able to attend a panel discussion, on May 14 (1:00PM Pacific), that highlights notable issues on inclusivity and barriers to inclusion that affect women and underrepresented minorities in the mathematical sciences. The deadline for registration **is May 10, 2021.**

Changing The Culture 2021

May 14, 9:00AM Pacific. Hosted online by PIMS.

The annual Changing the Culture Conference brings together mathematicians, mathematics educators and school teachers from all levels to work together towards narrowing the gap between mathematicians and teachers of mathematics, and between those who do and enjoy mathematics and those who think they don't. This year's meeting will include a plenary lecture from Math educator, James Tanton. Registration is free and limited to 200 participants.

Emergent Research: The PIMS Postdoctoral Fellow Seminar

May 19, 9:30AM Pacific. Hosted online by PIMS
Chandra Rajulapati, University of Saskatchewan

Data Accuracy for Risk Management in Changing Climate.

The decade of the 2010s was the hottest yet in more than 150 years of global mean temperature measurements. The key climate change signatures include intensifying extreme events such as widespread droughts, flooding and heatwaves, severe impacts on human health, food security, ecology, and species biodiversity. Climate has been changing from ice-age and is expected to change in future, yet the rate of change is alarming. Data plays a crucial role in developing risk management, mitigation and adaptation strategies under changing climate conditions.

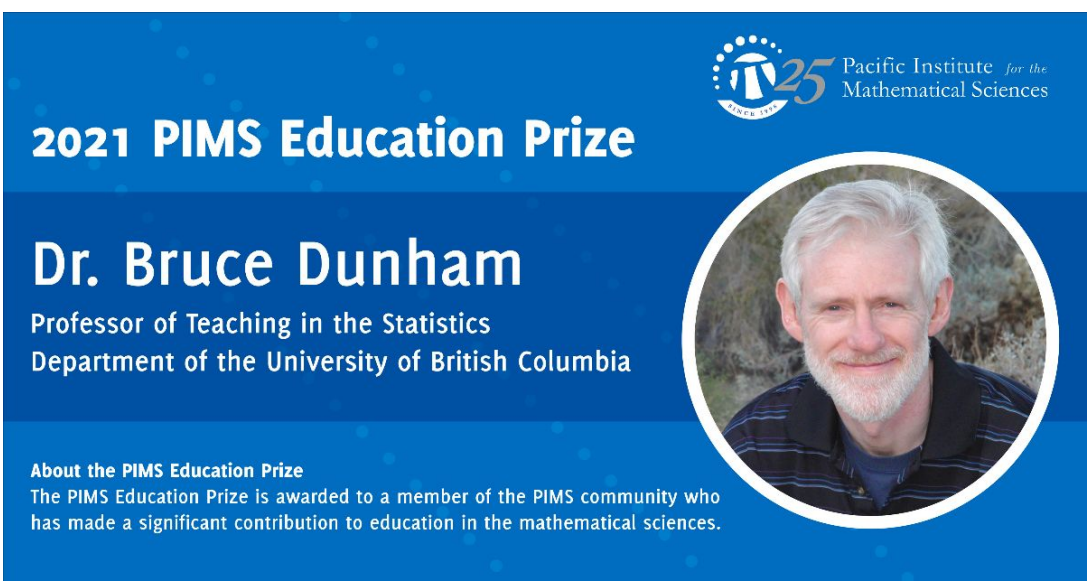
This talk focuses on uncertainties in hydrological data and the subsequent effect on extreme events like floods, droughts and heatwaves. Projected changes along with apparent biases in the global climate models, tools available for understanding future climate, are discussed. Register for this talk and sign up for the ongoing lecture series.

Click below for all events: May 2021

Scientific

NEWS & ANNOUNCEMENTS

PIMS Announces the 2021 Education Prize Winner

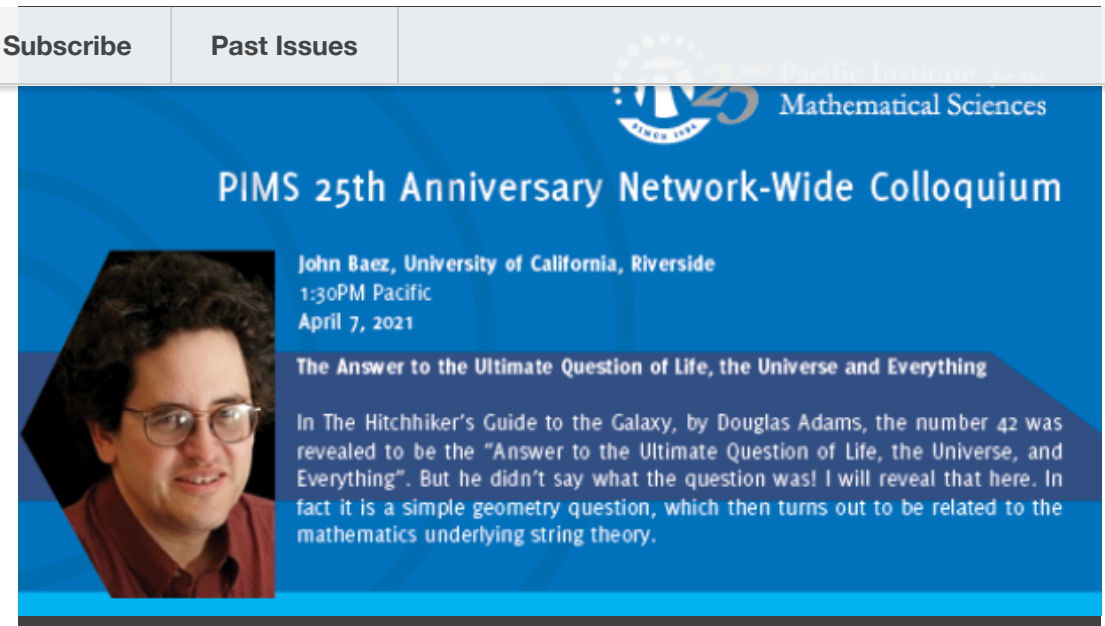


PIMS is pleased to announce that the winner of the 2021 Education Prize is Dr. Bruce Dunham, Professor of Teaching in the Statistics Department of the University of British Columbia.

Dr. Dunham is an internationally respected expert in statistics education, and has contributed to education in the mathematical sciences by developing and providing resources for evidence-based teaching. He has also provided training and expert advice on statistics teaching and curriculum. He has served in a range of leadership roles at UBC and at the provincial and national level.

The evaluation committee was particularly impressed by the direct public impact of his curriculum work in the BC school system, and the development of free software for the community. Dr. Dunham is a tremendous advocate for mathematics and statistics, his leadership contributes to public awareness, fostering communication among various groups concerned with mathematical training. Learn more

MEDIA



Watch it again! John Baez, The Answer to the Ultimate Question of Life, the Universe and Everything

Have a read! Interview with PIMS Postdoctoral Fellow: Sajad Fathi Hafshejani

To view past lectures and other PIMS resources, please visit mathtube.org

PIMS COMMUNITY RECENT PUBLICATIONS

1. J. Ray, (2020). Explicit presentation of an Iwasawa algebra: The case of pro-p Iwahori subgroup of SLn(Zp). Forum Mathematicum, 32 (2), 319-338.
2. S. Asgarli and B. Freidin , (2021), On the proportion of transverse-free plane curves. Finite Fields and Their Applications, 72, 101833
3. Z.S. Aygin and K.S. Williams, (2021) Derivable quadratic forms and representation numbers, J. Math. Anal. Appl. 495 (2), 124745.

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, Postdoctoral Fellowships, individual events, and competitive prizes in mathematics.

FOLLOW US!

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