Pacific Institute *for the* Mathematical Sciences

PIMS- ULethbridge Distinguished Speaker Series

Friday—March 27, 2020
12:00 to 12:50 pm
UHall C640

Representing Everything

Monica Nevins

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Mathematics is often about understanding objects through their symmetries. But what do you do when the group of symmetries is nightmarishly complicated? Answer: You turn the problem into one where you can apply math's ultimate weapon: linear algebra. This process is called representation theory, and it has applications everywhere from number theory, to physics, to the development of space-time codes. We'll use these examples to share some of the successes, and some of the open problems, of representation theory today; by the end, you, too, will be representing everything.

Speaker Biography: Monica Nevins obtained her PhD from MIT in 1998. After two years as a Killam Postdoctoral Fellow at the University of Alberta, she joined the University of Ottawa, where she has served as chair and now as Vice-Dean, Governance and International Relations. Her research interests are in the representation theory of p-adic groups, and in the applications of represen-tation theory and algebra to cryptography and codes. She was awarded the University of Ottawa Award for Excellence in Teaching in 2011 and was named a Fellow of the Canadian Mathematical Society in 2019.

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