

First-Year Math & Stats in Canada One-day Online Conference

Why are we teaching mathematics today?

--- ITINERARY ---

Date: Thursday, May 9th, 2024

Time: 11:00 EDT -- 17:00 EDT

Zoom: <https://utoronto.zoom.us/j/83481699285>

Meeting ID: 834 8169 9285

Passcode: fymxic

Keynote Speakers

Johanna Rämö (University of Eastern Finland, Finland)

Title: Breaking the hierarchies in mathematics education

Abstract:

The hierarchies in university mathematics education are often strong. The distance between a first year student and a professor is long. Students are afraid of asking questions, and professors do not know what goes on in the mind of students. The hierarchies are particularly strict in assessment. Despite the fact that student-centred teaching methods are becoming more and more popular, assessment is still governed by the teachers. In this keynote, I discuss the hierarchies in university mathematics education and how they can be broken. As an example, I use the Extreme Apprenticeship teaching method.

Biography:

Johanna Rämö is a university lecturer in the University of Eastern Finland. She develops and studies novel teaching methods in university mathematics, with a focus on student-centred teaching and assessment.

Annie Savard (McGill University, Canada)

Title: A fast-food tour of teaching Mathematics today: Poutine, noodles, and Big Mac

Abstract:

This keynote aims to address the conference theme, “Why are we teaching Mathematics today?” using a socio-economical angle. I will first talk about the perception of teaching mathematics spread out by the Organization for Economic Cooperation and Development (OECD) via their triennial Program for International Student Assessment (PISA), and the poutine created by the PISA results. The discussion of the results will conduct to a ready-to-serve noodles analysis of the teaching mathematics around the world. I will close this presentation on why teaching mathematics today using a Big Mac discussion on the nature of teaching mathematics in 2024.

Biography:

Annie Savard is an associate professor at McGill University. Building on her strong experience as a former elementary school teacher, she is an international consultant in mathematics education. Her research focus on teaching and learning mathematics to develop citizenship.

Emil Simeonov (FH Technikum Wien, Austria)

Title: “Why do I need this?” Is Mathematics becoming increasingly an alibi-subject?

Abstract:

In many curricula mathematics is still there. For historical reasons? For prestige? Because many still don't dare to eliminate it? But the history of engineering tells that there have been periods where mathematics has been abandoned from engineering curricula.

Do employers really need mathematical skills and knowledge from their employees? If yes, then which are these skills? If no, why don't they state this explicitly?

How many people are really needed, who know what is hidden in all the black boxes which surround us? The mathematics in those black boxes goes most often far beyond the mathematics covered in average curricula.

Is mathematics really so important? That's the wrong question! Its trivial answer is: Yes!
Is mathematical competence really so important? This is the question!

The term “scientific” is nowadays more and more reduced to the use of proper statistical methods. Most of those methods can be found in various statistical software like “R”. How much mathematical knowledge is needed in order to “properly” use such software? Could the proper use of this software be delegated to other software (with the slogan “AI”)?

In my talk I will pose these and related questions in a pragmatic approach to mathematics as a compulsory subject in many university curricula.

Biography:

Emil Simeonov is a professor and senior lecturer at the Department of Applied Mathematics and Physics at the University of Applied Sciences Technikum Wien in Vienna, Austria. His main research interests are in the Philosophy of Mathematics (semiotics, rhetoric, phenomenology, tacit knowledge) and in the Foundations of Physics (philosophy of time). Besides this he has been active for more than 25 years in Early Mathematics Education, founding the project minimath (www.minimath.at) which offers courses for 4-6 year olds as well as PD-courses for teachers. Recently he founded the start-up company MathTime (www.math-time.eu) where high quality learning tools and materials - mainly for primary school - are being developed and offered, including his own inventions 10-omat, 100-Net and the dissection puzzle Pentram. He is also performing as a classical singer (bass-voice). As a pianist he has been a finalist at the prestigious competition for amateur pianists in Paris.

Conference Itinerary (times in EDT):

11:00 -- 11:10	Opening Remarks The online conference will commence with opening remarks and announcements.
11:10 -- 12:15	Session 1: Breaking the hierarchies in mathematics education <i>Johanna Rämö (University of Eastern Finland, Finland)</i>
12:15 -- 12:20	5-minute Transition Break

12:20 -- 13:25	Session 2: A fast-food tour of teaching Mathematics today: Poutine, noodles, and Big Mac <i>Annie Savard (McGill University, Canada)</i>
13:25 -- 14:00	35-minute Break -- FYMSiC Profiles !!!

14:00 -- 14:40	<p>Session 3: Four Parallel Sessions</p> <p>FYMSiC traditional short presentations but in parallel sessions.</p> <p>First Session: 14:00 -- 14:10</p> <p>Room 1 <i>Why are we teaching mathematics yesterday, today and tomorrow?</i> Gordon Hamilton (Math Pickle)</p> <p>Room 2 <i>Why are we teaching mathematics today? What kind of mathematics are we teaching? and What pedagogies are conducive to today's needs?</i> Olga Fellus (Brock University)</p> <p>Second Session: 14:10 --14:20</p> <p>Room 1 <i>Why Are We Teaching Mathematics Today: A Play Perspective for School Mathematics</i> Xiong Wang (University of Alberta)</p> <p>Room 2 <i>Angles of the Heart: Emotional Regulation Skills, Resilience, and Cognitive Flexibility Through Learning Mathematics</i> Lindsey Shorser (University of Toronto)</p> <p>Third Session: 14:20 -- 14:30</p> <p>Room 1 <i>A New Elephant Enters the (Chat)Room: Why Teach Math Now?</i> Gizem Karaali (Pomona College)</p> <p>Room 2 <i>The Only One In The Room: Teaching as an Act of Welcoming-In</i> Meghan Rose Allen (Mount Allison University)</p> <p>Fourth Session: 14:30 -- 14:40</p> <p>Room 1 <i>Mathematical Tensions - an Ontario College Perspective</i> Taras Gula (George Brown College)</p>
14:30 -- 14:45	5-minute Transition Break

14:45 -- 15:50	<p>Session 4:</p> <p>“Why do I need this?” Is Mathematics becoming increasingly an alibi-subject? <i>Emil Simeonov (FH Technikum Wien, Austria)</i></p>
15:50 -- 16:20	<p>30-minute Break -- FYMSiC Profiles !!!</p>
16:20 -- 16:50	<p>Open Discussion</p> <p>We will reflect upon the events of the online conference and to discuss ideas, topics or concerns not mentioned, surrounding teaching and learning mathematics and statistics.</p>
16:50 -- 17:00	<p>Closing Remarks</p> <p>The online conference will close with some remarks and updates.</p>

We hope you enjoy the FYMSiC one-day online conference!

Thank you for joining us and participating. :-)

FYMSiC One-day Online Conference Organizers

Andie Burazin (University of Toronto Mississauga)

Lauren DeDieu (University of Calgary)

Veselin Jungic (Simon Fraser University)

Miroslav Lovric (McMaster University)

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