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**A Lay of the Land: Mathematics Education in Saskatchewan**  
(Org: **Egan Chernoff** and/et **Derek Postnikoff** (University of Saskatchewan))

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**EGAN J CHERNOFF**, University of Saskatchewan  
*The Gateway Approach to Popularizing Mathematics*

The purpose of this presentation is to contribute to the betterment of the popularization of mathematics. To achieve this goal, I suggest a route that, I contend, is different and could be considered oft-ignored. Popularization of mathematics, as I will detail, should be drawing upon the popularization of the teaching and learning of mathematics, school mathematics and mathematics education. Let's be honest, not many people are familiar with cutting edge mathematics, yet a lot (a lot) of people have dabbled with school mathematics. As such, let us start where everybody has been and see how far we can truly get in bringing mathematics education and mathematics to the masses. As also detailed in this talk, there are many barriers to popularizing the teaching and learning of school mathematics, that but does not mean, of course, that at least some of us (even just a few of us) should not be trying.

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**SANDRA ELLIOTT**, University of Saskatchewan  
*Bass Case: A Case Study of Music in the Mathematics Classroom*

This presentation will explore the longstanding connection between music and mathematics, proposing a variety of methods to integrate music into math education to encourage cross-domain learning. We will examine examples of mathematician-musicians, such as Albert Einstein and Manjul Bhargava, and lightly touch on the historical perspectives of the integration of music in mathematical teaching and learning. Through a hands-on exploration of Etude No. 6 by Philip Glass, we will discuss the educational potential of using music to illustrate mathematical principles, leading to deeper understanding and appreciation for both subjects.

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**DAN KRAUSE**, University of Saskatchewan  
*PISA Scores: Grounding Perspectives*

The Organization for Economic Co-operation and Development (OECD) administers the Programme International Standard Assessment (PISA) every three years in reading, science, and mathematics. Results of this test are analyzed to calculate a PISA score (along with reports and other data), where the purported achievement of students in mathematics is publicized as a single number. These PISA scores have declined in Canada (and for many of the member states in the OECD) from 2000 - 2022. Do the results on the PISA tests mean that student performance in mathematics is declining in Canada over time? Does this mean that the quality of the mathematics education system is deteriorating? These questions are not as simple to answer as they first seem. PISA is a unique assessment that assesses cumulative student knowledge (not just what students learn in school), and the OECD has made multiple changes to their assessment over time. This talk will include a critical discussion of these changes, an examination of how PISA scores are determined, how these results impact policy making, and how mathematicians can contribute to the critical discussion surrounding the use of PISA scores in Canadian mathematics education.

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**PAUL LEHMKUHL**, University of Saskatchewan  
*Financial numeracy: A path towards standardizing financial education*

Research has shown that many individuals are lacking skills related to basic financial concepts, hindering their ability to make sound financial decisions related to investing, debt management, wealth accumulation, and retirement planning. Governments recognize the importance of financial literacy among citizens leading to a push for mandatory financial education across Canadian provinces. Given the federal government's National Financial Literacy Strategy (2021-2026), there remains significant

inconsistency in how financial literacy is integrated into school curricula across Canada. Traditional definitions of financial literacy are inadequate for guiding curriculum development effectively and I draw attention to the need for a broader definition of financial literacy to account for socioeconomic, affective, behavioural, and motivational factors of students. Financial numeracy, an emerging concept in the literature, offers a more standardized and comprehensive framework for policymakers, curriculum writers, administrators, and teachers when developing and implementing financial education curricula.

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**GALE RUSSELL**, University of Regina

*Intersections and roadblocks: Disentangling and rebuilding pre-service teachers' combinatoric understandings*

In my experience, and the experience of others that I work and dialogue with, combinatorics is either a loved or hated high school mathematics topic for both teachers and students. In my EMTH courses (which focus on mathematics content, pedagogy, and assessment), I use an ever-expanding set of tasks to explore my students' (math majors and minors in a secondary education program) understanding of and thinking about combinatorics. Over the years, I have come to recognize relationships (that I call intersection points within combinatorics) that are key to my students understanding of combinatorics, as well as points of confused entanglements that have created roadblocks to that understanding. This session will briefly look at the tasks I most recently used with my students, what intersection points and roadblocks emerged, and how we worked to create a complex but navigable roadway for combinatoric understanding.