

The Ontario Colleges Mathematics Association 39th Annual Conference



CONFERENCE PROGRAM

Fern Resort
Orillia, Ontario
May 22 to 24, 2019

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Wednesday, May 22

| TIME | ACTIVITY | LOCATION |
|-------------------------------------|---|----------------|
| 11 - 12:45 | Registration and Light Lunch | TBA |
| 12:50 | Welcome and Opening Remarks from the Executive | Bergwens |
| 1:00 – 2:30 Speaker Session 1 | <p style="text-align: center;">KEYNOTE SPEAKER</p> <p style="text-align: center;">Mathematical Moments That Leave Us Breathless and Wanting to Learn More</p> <p>Imagine a moment when something took your breath away. It might have been a song you heard, a play or movie you saw, a poem or book you read, a sunrise or sunset you saw, an encounter with nature, an invention; a piece of technology, or a magic show. Can you imagine what life would be like without such moments to remember that leave us breathless? Join Ron Lancaster for a discussion of what teachers can do to ensure that students have similar encounters with mathematics that leave them wanting to learn more and that invite them to marvel and be amazed at a subject that is truly the greatest show on earth.</p> <p><i>Ron Lancaster, Ontario Institute for Studies in Education</i></p> | Bergwens |
| 2:30 – 3:30 | <p>CONVERSATION CAFÉ</p> <p>Check out the presentations for the conference. Meet the presenters. Talk to poster presenters.</p> | Bergwens Lobby |
| 3:35 – 4:25 Speaker Session 2 | <p>Best Fit: TI Technology for Math, Science and STEM</p> <p>Come and see what is new from Texas Instruments. You will be shown new technology and resources available for learning in Math, Science and STEM. All participants will receive free software.</p> <p><i>Darryl Marchand, Texas Instruments</i></p> | Simcoe |
| | TBA | Huron |
| | <p>Math Phobia</p> <p>Do your first-year students suffer from Math Phobia? We know that this is one of the main challenges for students when they enter college. Pearson has worked to ensure that our print and online products address this challenge. Please join Pearson author Michelle Boué to see how she has worked with Pearson to produce math content that helps overcome Math Phobia.</p> <p><i>Michelle Boué, Pearson Education</i></p> | Room 420 |

Wednesday, May 22, continues

| | | |
|-------------------------------------|--|---|
| 4:30 – 5:20 Speaker Session 3 | <p>Because Learning Changes Everything</p> <p>Join McGraw-Hill to learn more about the evolution of our award-winning Connect and ALEKS technologies. Connect now includes the new SmartBook 2.0, delivering a more personalized, productive, and accessible learning experience for students and instructors. ALEKS offers a placement, preparation, and learning solution that combines a placement assessment that places from Basic Math to Calculus I with six months of personalized learning and remediation to help students succeed.</p> | Simcoe |
| | <p>Vretta’s Homework Management System, Intromath, Gets A New Suite Of Powerful Features And Incorporates An AI-Based Virtual Assistant</p> <p>We’ve had our ear to the ground! Carefully listening to suggestions from teachers and analyzing the interactions made by students on our system, Vretta has developed intuitive features into IntroMath to support its evolution into a powerful and intelligent homework companion for all mathematics and statistics courses. Additionally, in partnership with the AI Hub at Durham College, Vretta is introducing a personalized AI Virtual Assistant for IntroMath to revolutionize the learning experience for our students. We invite you to our session to get first-hand information on these new state-of-the-art developments.</p> <p><i>Anand Karat and James Howell, Vretta Inc.</i></p> <p>TBA</p> | Huronia |
| | TBA | |
| 5:25 – 6:25 | <p>Hospitality Suite (sponsored by McGraw-Hill Education)</p> |  Fireside 108 |
| 6:30 – 8:00 | <p>Dinner</p> | Dining Room |
| 8:00 – ??? | <p>PUB(lisher) Night (sponsored by Pearson and Texas Instruments)</p> <p>Come on over to check out the publishers and vendors. The bar will be open!</p> |   Mary Lou’s |
| 9:30 – ??? | <p>The Greatest Talent Show (sponsored by Pearson)</p> |  Bergwens |

Thursday, May 23

| TIME | ACTIVITY | LOCATION |
|-------------------------------------|---|-------------|
| 7:00 – 7:30 | Walk/Run Activity Start the day with a walk/run! Meet at the Gazebo located at the front of the main lobby. | Gazebo |
| 7:30 – 8:45 | Breakfast | Dining Room |
| 8:50 – 9:50 Speaker Session 4 | Using GeoGebra in a First Year Linear Algebra Class The open source software GeoGebra (see www.geogebra.org) provides an easy way to create interactive and dynamic web applications about geometry, algebra and calculus. It is available free of charge and is used by thousands of students and teachers around the world. We will explore how it can be used as a tool for teaching entry level mathematics courses. I will show I set up GeoGebra activities and use them in my current linear algebra class. <i>Xinli Wang, University of Toronto</i> | Simcoe |
| | How to Map Your Math Mind As a Pre-Health Science math teacher, I have noticed that our students require more guidance when it comes to studying strategies and making connections with learned mathematical concepts. This past term, I have experimented with Novak's Concept Maps (see http://cmap.ihmc.us/docs/theory-of-concept-maps), a tool that allows students to organize their learning both conceptually and visually. In this presentation, I will share my experiences and show that our current go-to strategy of mastering a problem set to prepare for a test is just not enough. We will also talk test-taking strategies and develop our own mind maps in small groups. <i>Elisa Romeo, George Brown College</i> | Huronia |
| | An Update On Our Math Assessment & Upgrading System Over the past year, the Ontario Colleges Mathematics Test (OCMT) has been evolving to serve the needs of students and educators at high schools, colleges, and universities by strengthening student confidence and preparing them for success in their math courses. We invite you to learn more about the impact of the OCMT on the Educational Quality and Ability Office (EQAO) scores of participating schools, the technological evolution of the OCMT to bring this innovative assessment-for-learning experience in the hands of every student, and the expansion of the assessment bank to diagnose students in a variety of programs for success in mathematics. <i>Mona Nouroozifar, Humber College</i> | Room 420 |

Thursday, May 23, continues

| TIME | ACTIVITY | LOCATION |
|--------------------------------------|--|-----------|
| 9:55 – 10:55 Speaker Session 5 | <p>Using Office 365 to Teach Mathematics</p> <p>What presentation is complete without a good platform? Chances are your college has a subscription to the Office 365 platform for you and your students. With its extensive set of mathematics input features, it is an excellent platform to enhance and facilitate communication within your department or even with and among your students. We will look at the features of Office 365, from Word to OneDrive and SharePoint to Teams. We will start with getting you connected and then look at some aspects that will use math tools and departmental collaboration. Bring your devices and get connected so you have a solid platform to start off the 2019-2020 school year.</p> <p><i>Cameron Redsell- Montgomerie, Mohawk College</i></p> | Simcoe |
| | <p>Holistic Educational Experience for Success in Business and Finance Mathematics</p> <p>Experience has shown that being successful beyond the classroom in business and financial mathematics requires more than just mastering the ability to pass exams and tests. While we believe there is value in testing, we do not consider this to be the most important skill students take away from our courses. In this session, we will demonstrate the impact of real-world cases, simulations, group studies, and interactive assessments that provide students with a holistic educational experience leading to success in the classroom and beyond.</p> <p><i>Lisa Mackay and Paul Obour, Southern Alberta Institute of Technology</i></p> | Hurononia |
| | <p>Taming the Lions in My Class: A Gamified Approach to Teaching Mathematics</p> <p>Trying to get students excited about math can sometimes feel like performing a trapeze act in the classroom. Balancing crucial fundamental math concepts with fun and engaging content can be intimidating. But by introducing games and interactive challenges, students become fully engaged and motivated to take their fundamental math skills to the next level! Through this session, you will get a hands-on demonstration on how to integrate games in your class. Don't forget to bring your laptop with you!</p> <p><i>Betty Pratt, Seneca College</i></p> | Room 420 |

Thursday, May 23, continues

| TIME | ACTIVITY | LOCATION |
|---------------------------------------|--|--------------|
| 11:00 – 12:00 Speaker Session 6 | <p>Bringing Statistics Home: The Launch of a New Interactive Online Resource by Vretta</p> <p>The father of science fiction, H.G. Wells, once said “statistical thinking will one day be as necessary a qualification for efficient citizenship as the ability to read and write”. As professors, we know that most of our students do not share this same passion for the importance of statistics! In response to this, we are developing a digitally-rich online resource that Canadian college business students will find intuitive and valuable, helping them to effectively engage with statistics and find greater value in its study. We invite you to our session to learn more about how you can help your students master statistics by connecting abstract concepts to their practical applications using this resource.</p> <p><i>Joshua Emmanuel, Humber College, & Sean Saunders, Sheridan College</i></p> | Simcoe |
| | <p>Using OneNote and Open Resources</p> <p>Instead of picking a textbook for introductory level math and statistics classes, why not choose open resources to help deliver your material? Using Microsoft OneNote and free open resources, you can create and curate your content all in one place, improving on and developing past iterations as you go. Using a OneNote Class Notebook also allows students to sign-in synchronously or asynchronously, helping virtual or hyflex students stay on track and work in a more collaborative environment. Feel free to bring your own device as this session will demonstrate and walk you through multiple options for using this tool and incorporating open resources in your classes!</p> <p><i>Meghan Corcoran, Cambrian College</i></p> | Huronia |
| | <p>Pathway to a SMILE</p> <p>Imagine a classroom without blackboards, without walls, without boundaries. SMILE is a Synchronous Mobile Interactive Learning Environment that allows the instructor to present and record lessons anywhere any time on any mobile device. Students interact in real time in virtual or real classrooms, using features such as whiteboards, audio-video, chat and polling, thus eliminating barriers imposed by geography, economic status and ability. In this presentation, you will be invited to join a live online SMILE session, so bring your laptops, tablets, iPhones or Android devices and experience for yourself a new way of classroom instruction. [Check out https://www.youtube.com/watch?v=ttwvny2-lic&list=PLNJ4bb0RRGLBjo2VUtVB_7xeWO0uKRR-2]</p> <p><i>Richard Mitchell, Humber College</i></p> | Room 420 |
| 12:05 – 1:45 | Lunch | Dining Room |
| 2:00 – 5:00 | <p>Inter-Active Activities : See the sign-up sheets for activities, including: <i>Golf / Walking / Biking Trail/ Badminton/ Tennis/ Table Tennis/ Archery /Canoes / Kayaks / Paddle-boats/Mini-golf/Bocce / Horseshoes / Shuffleboard/ Archery</i> Complete the Math Problem Challenge PRIZES!!!!</p> | Outdoors |
| 5:00 – 6:10 | <p>Hospitality Suite (sponsored by McGraw-Hill Education)</p> <div style="text-align: right;"></div> | Fireside 108 |
| 6:15 – 6:30 | Group Photo | Gazebo |
| 6:30 – 8:30 | DINNER/ Annual General Meeting/ Reports from OAME, AMATYC ELECTIONS | Dining Room |
| 8:45 - ??? | <p>The Greatest Cirque Show (sponsored by Vretta)</p> <div style="text-align: right;"></div> | Bergwens |

Friday, May 24

| TIME | ACTIVITY | LOCATION |
|----------------------------------|--|-------------|
| 7:00 – 7:30 | Walk/Run Activity Start the day with a walk/run! Meet at the Gazebo located at the front of the main lobby. | Gazebo |
| 7:30 – 8:45 | Breakfast | Dining Room |
| 8:50 – 9:50 Speaker Session 7 | Using Semantics to Impose Structure and Teach the Fundamentals of Mathematics This presentation advances the point of view that definitions, theorems, and algorithms in mathematics evolve as a result of the ever-increasing level of complexity of our problem-solving needs. This presentation ties such topics as the formal classification of numbers, the evolution of the syntax of algebra, and the deconstruction of algebraic statements using the analysis-synthesis technique to the increasing level of complexity of the problems that we solve. In doing so, it provides a framework for the teaching of the fundamentals of mathematics that is applicable to a diverse set of pure and applied disciplines. <i>Afshin Azari-Vala, George Brown College</i> | Room 420 |
| | A Virtual Stage To Connect Mathematics Professors In a survey published this past fall of about 2000 professors, 75% mentioned that they support the increased use of educational technologies and 30% described themselves as early adopters of new technologies. Have you ever wondered how to connect with these educators and be able to discuss and debate the pros and cons of being able to successfully use technologies to teach mathematics? Have you waited eagerly for annual conferences to listen to fellow educators share information on their teaching methods? I would like to introduce you to an open virtual platform that has been recently launched by Vretta to connect math professors across our country, a platform to discuss and share technological adoptions and innovations to produce the greatest math show in their classroom. <i>Cameron Redsell- Montgomerie, Mohawk College</i> | Simcoe |
| | Mathematics and Music: The Greatest Show on Earth! Come one, come all! Step right up and see the amazing duo of mathematics and music! Learn the mysteries of how successful song writers use a “formula” to write the perfect song! Be amazed as you explore how the tunings of modern instruments can be derived using trigonometry and logarithms! Explore the musical qualities of group theory and the irrational numbers! And marvel at a live demonstration by a real-life mathemusician! This is one show you won’t want to miss – only at the 2019 OCMA, where the “Big Top Rises for the Greatest Math Show” ever! <i>Sean Saunders, Sheridan College</i> | Huron |

Friday, May 24 continues

| TIME | ACTIVITY | LOCATION |
|---------------------------------------|--|-------------|
| 9:55 – 10:55 Speaker Session 8 | <p>Producing a Great Math Show by Working Smarter, Not Harder</p> <p>Many teachers wrestle with issues in their own classes that, if they had clear insight, would move their classes from good shows to great shows. But how can busy instructors manage that improvement while they are very busy teaching? A surprising answer is to begin resolving the issues from a grassroots approach. This session will discuss strategies that will enable instructors to begin to examine questions that will help them to work more efficiently.</p> <p><i>Tim Sibbald, Nipissing University</i></p> | Simcoe |
| | <p>No (Stand Alone) Mathematics Course for First Semester Students</p> <p>Bridging the gap between a new student’s mathematical skills and the skill level they need by the end of the first semester is never easy. We have integrated math with physics for our first semester Electronics Engineering Technology students. The course presents a foundational view of physics to support an electronics education with a just-in-time delivery of math to support the problem solving core of the course with six contact hours per week. This is our second semester. This presentation will look at what we are doing and how we deliver the topics using this integrated concept with feedback from faculty and students. We welcome your feedback, since we are exploring new territory!</p> <p><i>Dave Schuett, Durham College</i></p> | Huronia |
| | <p>Gamification in the Mathematics Classroom</p> <p>Mathematical fluency is a skill becoming more essential with every passing year, yet many students struggle with mathematics. Despite their struggles in the classroom, students tend to enjoy and succeed with many table-top and electronic games that require non-trivial elements of mathematics. By incorporating gamification elements in the classroom, instructors can increase students’ engagement, reduce mathematical anxiety, and open a vast array of effective tools to describe complex mathematical concepts. Mathematics has a special relationship with games and strategic thinking that most other fields do not share. This presentation will cover the link between mathematics and games and present examples of gamification tools and practices that can be used to teach various mathematical concepts.</p> <p><i>Alexander Gurevich, Humber College</i></p> | Room 420 |
| 11:00 – 12:30 Speaker Session 9 | <p>KEYNOTE SPEAKER</p> <p>Be More Unicorn: Using your inner sparkle for teaching math</p> <p>Unicorns possess characteristics that have emerged and seized the human imagination for many years. Unicorns are magical, fabulous, powerful, playful, and fierce. They live a life that is full of wonder, and inspire others. As math teachers, we can help learners find their inner creativity resulting in the joy of learning as they break out of their comfort zone. Stories will be shared on how designing rich and meaningful activities can have an impact on how we relate and teach mathematics to our students. Explore how to harness your internal unicorn and push your students to towards an innovative process that encompasses concept development, applied creativity, and experimentation.</p> <p><i>Amy Lin, Director of Teaching and Learning, Seneca College</i></p> | Bergwens |
| 12:35 – 2:00 | <p>Lunch and Closing</p> | Dining Room |