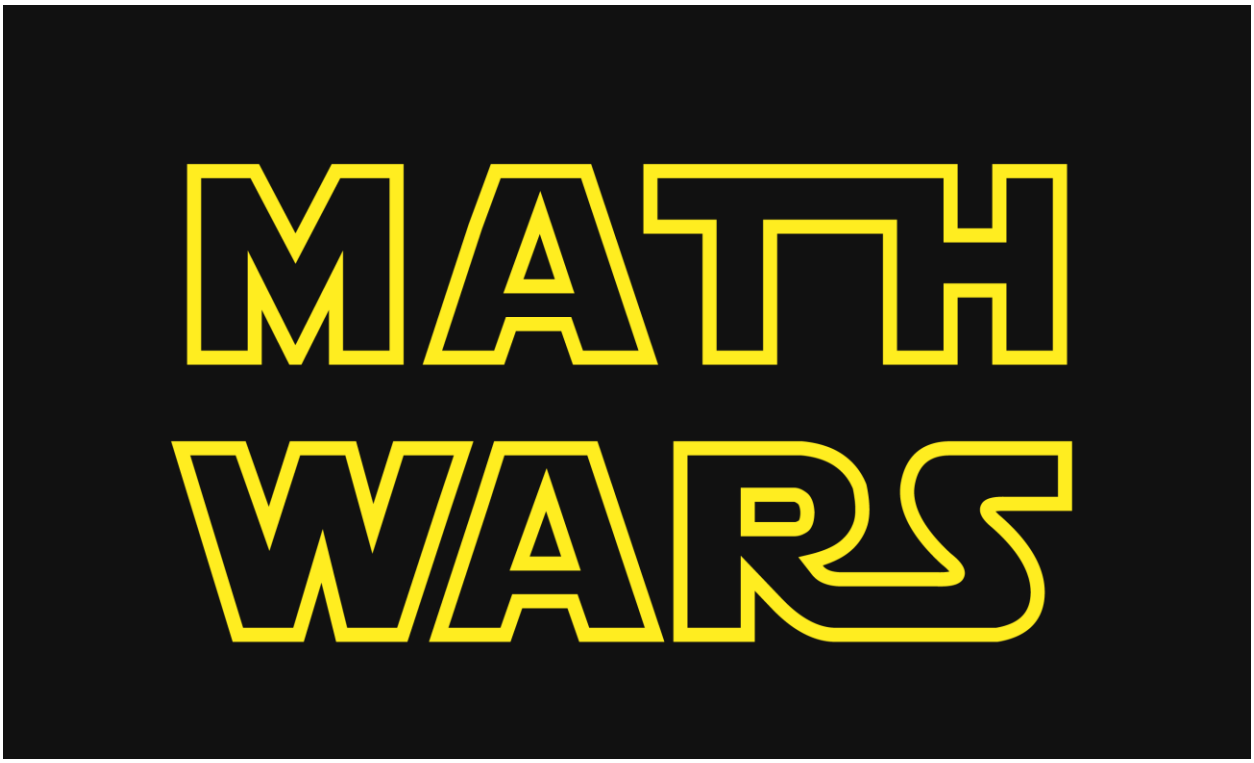
OCMA
ONTARIO COLLEGES MATHEMATICS ASSOCIATION

The Ontario Colleges Mathematics Association 37th Annual Conference



CONFERENCE PROGRAM

Fern Resort
Orillia, Ontario
May 24 to 26, 2017

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Wednesday, May 24

TIME	ACTIVITY	LOCATION
12:15 - 1:15	**Registration and Light Lunch**	Fireside 108
1:20	**Welcome and Opening Remarks from the Executive**	Bergwens
1:30 – 3:00 Speaker Session 1	**KEYNOTE DEBATE: Calculator vs. No Calculator** Calculator use in our mathematics classes has always had a "war" aspect to it. Calculators are a fact of life, and increasingly so with all the devices that are readily at hand. They can solve equations and factor quadratics along with calculate square roots or multiplication questions. Shouldn't they be a given in all college math classes? On the other hand, colleges work with employability skills like numeracy. Students come to college and have no idea how to do long division or multiply two numbers together without a calculating device. Isn't this important in numeracy development? All this and more will be covered in a debating clash in this keynote! Join in with your own comments!	Bergwens
3:05 – 4:05 Speaker Session 2	**The Coming 'Math War'** For many years literacy has received a great deal of attention and with numeracy being considered a sub-topic. Increasingly it is being recognized that attention to numeracy is distinct from literacy and underscores many of the issues math teachers and professors see. In this presentation, the implications for numeracy being recognized and addressed directly will be discussed in a manner that shows parallels with college issues as well as implications for college programs. *Presenter: Tim Sibbald, Nipissing University*	Simcoe
	1, 2, 3 … 0 and Counting This presentation shows the various ways that different cultures used to count and keep track of things and how our present day number system evolved out of these. *Presenter: Bruno Fullone, George Brown College*	Huronia
	Invasion of the Clones: When Adaptive Technology Meets the Emporium Model How can we make the best use of technology, as well as the best use of instructional skills in the classroom? This winter, Mohawk College tried a novel experiment with their tech math class by allowing students to work through materials at their own pace. This session will present the use of self-pacing models to facilitate learning math on computers in class. We will include discussion about course participation, techniques for implementing, and outcomes to help us understand how we can use both technology and instructors to their greatest strengths and avoid the perils of the dark side. *Presenter: Elizabeth Martin, Mohawk College*	Room 420

Wednesday, May 24, continues

TIME	ACTIVITY	LOCATION
4:10 – 5:10 Speaker Session 3	**There Is No 'Math War' Without Context** Star wars was remarkable when it first came out because it took warfare to a context so different than anything previously considered that audiences were intrigued by the vision. We claim the same effect arises between high school and college mathematics. Drawing on examples of contexts from colleges and working backwards we argue that interpreting different contexts cannot be entirely addressed in high schools. The implications for both high school and college programs point to a need for dialogue. *Presenters: Tim Sibbald and Carmen Wehrstadt, Nipissing University*	Simcoe
	Update on the Progress of the OCMT-Math Assessment for Student Success in Ontario In 2016, the OCMT was launched at Humber College to stream students into appropriate courses and diagnose and remediate them in preparation for their math courses. Over the past 12 months, Humber has completed the benchmarking of the resource and is currently using the OCMT, post-admission, for streaming students and also for academic upgrading. The OCMT is also being used to raise the level of numeracy for students in Grade 9 Applied Mathematics classes in the Toronto Catholic District School Board. Come to our session for an update! *Presenters: Paula Gouveia, Humber College, and Anand Karat, Vretta*	Huronia
	The Eye of Mathematics The push to "make math easier" has transformed some college math classes into a collection of memorized formulas and algorithms that lead to a shallow understanding mathematics. Students jump from topic to topic, and course to course, retaining few math skills and arrive in the workplace with very limited mathematical abilities. The Eye of Mathematics challenges this by requiring that students and instructors demonstrate a foundational understanding of the origins, derivation, and utility of some key building blocks in mathematics. The Eye of Mathematics also challenges the institutionalization of college math courses by requiring that students demonstrate more than a finite set of skills; they must demonstrate the ability to derive and manipulate mathematical abstractions from patterns observed in the physical world using the language of mathematics. Come and participate in this session and explore the Eye of Mathematics! *Presenter: Josh Schneider, Sheridan College*	Room 420
5:15 – 6:15	**Hospitality Suite (sponsored by McGraw-Hill Education)**	Mary Lou's
6:20 – 8:00	**Dinner/ Annual General Meeting/ Reports from OAME, AMATYC**	Mary Lou's
8:00 – ???	**PUB(lisher) Night (sponsored by Vretta)** Come on over to check out the publishers and vendors. The bar will be open!	Mary Lou's
8:00 – ???	**Mos Eisley Cantina (sponsored by Vretta)** Watch out for the aliens! Win big! Lose spectacularly!	Mary Lou's

Thursday, May 25

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 – 9:20 Speaker Session 4 These are repeated again for 9:25 – 9:55 Speaker Session 5	**Because Learning Changes Everything** If you could help your business math students succeed with mastery and retention of concepts and improving class participation with engaging classes – wouldn't you want to? Join McGraw-Hill Education and learn more about our award winning and proven Connect® with SmartBook adaptive learning system ensures that every minute spent studying business math is the most productive minute, so that your class time is spent focusing on what students don't know and learning new concepts, versus spending time on what they have already mastered. *Presenter: McGraw-Hill Education*	Simcoe
	Develop Conceptual Understanding by Elevating Thinking Using WebAssign This session will show you how you can help students develop conceptual understanding with WebAssign. See how our new just-in-time animated figures and interactive Explore It simulations inspire students and build critical thinking skills. *Presenter: Lindsay Bradac, Nelson*	Huronia
	From 11 Million Students to 1 Instructor: Case Use for MyLab Math for Marks Kelly Halliday has integrated MyLab Math into the courses she teaches. Join her as she walks through her unique approach that incentivizes students to interact with the digital platform and promotes their academic success. *Presenter: Kelly Halliday, Georgian College*	Room 420
	Adaptive learning in Higher Education Mathematics Courses The majority of students entering college don't meet the four key college readiness benchmarks. What if you could pinpoint your students' proficiency early in the semester to give them the best chance of succeeding in your course? You can with WileyPLUS with ORION. This adaptive, personalized learning experience delivers easy-to-use analytics so you can see exactly where your students excel and where they need help. *Presenter: Wiley*	Bergwens

Thursday, May 25, continues

10 – 11 Speaker Session 6	**The Great Health Math Debate** In the past few years, Ontario colleges have undergone a standardization of the math curriculum for Pre-Health Sciences. We invite faculty who teach math courses in the Pre-Health Sciences to this round-table discussion to share experiences on the implementation of the standardized learning outcomes from ONCAT into their courses and the associated changes that came with it. There will also be an opportunity to discuss best practices and strategies for teaching and learning in the context of the new curriculum. Participants are encouraged to bring a sample weekly topical outline to this discussion for reference and comparison. *Presenters: Sean Saunders, Sheridan College, and Irene Lee, Humber College*	Simcoe
	Learning Analytics I have a predictive model for final grades in my classes. I have a difficulty ratio for every question, topic, class, and student. I can predict what grade a student will get BEFORE they take the test, what questions they will get wrong, and really you could just skip the test altogether but I will never do that so students can prove me wrong within the margin of error. The analytics do provide some insights, such as easier questions being harder to grasp which is counter-intuitive, but true for reasons we can go into when you come to my talk/debate. *Presenter: Terry James, Seneca College*	Huronia
	Student Beliefs about Mathematics, Their Effect on Academic Performance, and Changing These Beliefs As we all know, there is a battle (within the total MATH WAR) among professors defending calculator use, formula use or some other technique. But which one has the highest potential to form healthy beliefs about mathematics? This talk will explore beliefs students hold about mathematics and how these beliefs influence their confidence and attitude in mathematics classes. For example, the belief that mathematics is unnecessary will typically result in the lack of effort displayed by the student which in turn will result in poor performance. This talk will review some of the research literature around this topic. Some data from Seneca College will be presented. We will discuss how students answer important questions like: Is mathematics necessary? Does mathematics develop creativity? Must mathematics be learnt by memorization? We will also talk about the questions, which teachers of mathematics should ask themselves: Which beliefs are detrimental for student success? How can we modify student beliefs before they cause poor performance? To what extent is it possible to modify students' beliefs? Is there a teaching method that can best transform student beliefs? *Presenter: Maksim Sokolov, Seneca College*	Room 420

Thursday, May 25, continues

11:05 – 12:05 Speaker Session 7	**Math Learning Outside Your Classroom** Most college math instructors see their students for about 3 to 4 hours per week and so a lot of math learning happens outside the classroom. With this expectation of independent study, many students come across challenges. In this session, we will explore our experiences as Learning Strategists – Math Specialists. We will look at reasons why students struggle and learning strategies that have proven to be effective. We will also spend some time exploring the importance of visual-spatial reasoning in learning math and how we can work with students to help them develop this important competency. The end of the session will be devoted to open dialogue (or war?) around instructors' experiences and challenges in the classroom and how academic learning support services can meet some of these challenges. *Presenters: Sasha Chernomurova and Srishta Chopra, Centennial College*	Simcoe
	A Mathematics for Health Sciences Resource Customized for Ontario In response to the newly created Ontario College System Exemplar course outlines for "Mathematics for Health Sciences - Standard and Advanced", Vretta has collaborated with several Ontario college educators to produce a newly developed hybrid resource that connects mathematics and statistics with real-life health science applications. Come to this presentation to find out more! *Presenters: Sean Saunders, Sheridan College, Irene Lee, Humber College, and Anand Karat, Vretta*	Huronia
	Success!! Success happens, and hopefully you have noticed it in the past five years or even the past nine months! It might be a "common" success or something unusual. Join me to share your common and unusual successes! *Presenter: Don Vander Klok, Lambton College*	Room 420
12:10 – 2	**Lunch**	Dining Room
2:00 – 5:00	**Inter-Active Activities :** *See the **sign-up** sheets for activities, including:* *Golf / Walking / Biking Trail/ Badminton/ Tennis/Ping Pong/Archery* *Canoes / Kayaks / Paddle-boats/Mini-golf/Bocce / Horseshoes / Shuffleboard/ Archery* *AND* **The Escape Room – This is a 30 minute activity open only to those who sign up. Several sessions will be offered.**	Outdoors
	Description: With the new popularity of "escape" games, this gives you the opportunity to experience the fad for yourself. Along with a few colleagues, you will be challenged with various puzzles, riddles, and mathematical problems, in hopes of escaping the locked room. Be careful though, there's a time limit on the adventure! Can you escape the room in time? *Presenter: Pearline Lung, Humber College*	Room 420
5:00 – 6:10	**Hospitality Suite (sponsored by McGraw-Hill Education)**	Fireside 108
6:15 – 6:30	**Group Photo**	Gazebo
6:30 – 9:30	**BATTLE OF THE BOOKS Dinner Theatre (sponsored by Pearson Education)**	Dining Room
9:30 - ???	**Game Wars (sponsored by Wiley)** Get your game on! Come on out to participate or cheer on the people up front!	Bergwens

Friday, May 26

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 – 10:20 Speaker Session 8	**KEYNOTE DEBATE: Remediation vs. Integration** We are all familiar with the students that enter college programs and lack the required mathematics background. Perhaps they have not completed the high school pre-requisite math courses because they are entering as a "mature student" or perhaps they have the completed requirement but were not strong in high school and continue to struggle. The lack of understanding is evident early in the first semester math courses or on the math assessments that are administered in order to place students in the right level of math. Our colleges want those students to continue, so….. Should the students continue in the first semester 'college level' math courses and hope that they succeed? Or should the students with the lack of background knowledge be required to take some remedial math so they can be successful moving forward? Which is the better approach and why? Join the debate with your own comments!	Bergwens
10:25 – 11:25 Speaker Session 9	**Creativity and Mathematics** Have you ever wondered why your students can't seem to find the same enjoyment in mathematics as you do? If math is a language, does it have a "literature" as well as grammar and syntax rules? The discipline of mathematics is inherently rich in artistic allure, philosophical profundity, innovative ideas, sordid stories, peculiar paradoxes and radical results. Come and explore the beauty and intrigue of some of these lesser-known aspects of math, and discover ways to infuse this into, as well as extract this out of, the lessons you're already teaching in your classrooms! *Presenter: Sean Saunders, Sheridan College*	Simcoe
	When Zero is Nothing In teaching foundations mathematics to health sciences students, topics such as calculating rates and proportions dominate. Given that our students have already completed high school mathematics, is it safe to say that they already have the ability to do calculations? When they can't answer what seem like straightforward questions we posit that they aren't numerate, but what does that mean? Is it important for foundations mathematics students to know that zero is not the same as nothing? How do we evoke numerate thinking that resonates beyond the math class? This presentation will try to answer some of these questions by presenting some preliminary findings from a research project entitled "Improving Health Numeracy in Health Science Students and Professionals Through an Online Instrument." *Presenter: Taras Gula, George Brown College*	Huronia
	Battling Perceptions: Respectfully Integrating Indigenous Content Into the Math Curriculum Confederation College is striving to become a leader in integrating indigenous learning into all facets of the curriculum, and that includes mathematics. This can be a challenge and maybe uncomfortable for professors. How do we introduce topics that are culturally sensitive, relate to the curriculum, avoid tokenism, and allow the students and professor to openly discuss these topics? Some different ideas will be presented which add needed relevance to our classroom without veering away from the core subject matter. *Presenters: Trevor Warren and Sandra Stiles, Confederation College*	Room 420

Friday, May 26, continues

11:30 – 12:30	**Topic: Birds of a Feather** **Description:** You have a novel approach to a math topic, an app that works wonders, some research you have been doing, or a great way to organize online learning in your course and you want to share this in 10 minutes or less. This is the place!	Bergwens
12:35 – 2:00	**Lunch/Prizes/Check-out**	Dining Room