



The Ontario Colleges
Mathematics Association
36th Annual Conference



**SHERLOCK HOLMES:
SOLVE THAT PROBLEM!
CONFERENCE PROGRAM**

Fern Resort
Orillia, Ontario
May 25 to 27, 2016

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**TEXAS
INSTRUMENTS**

Wednesday, May 25

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 Address: For the Love of Math Description: As mathematics educators, it is vital that we make and take some time to do some mathematics ourselves. In this presentation, we will solve some interesting problems that require surprisingly little actual mathematical knowledge, and we will discuss why this is important and how it will connect us back to our love of mathematics. <i>Presenter: Ian VanderBurgh, a professor of mathematics at the University of Waterloo and the Director of the Centre for Education in Mathematics and Computing there. In 2008, Ian received a Distinguished Teaching Award from the University. Ian has led workshops throughout Ontario, as well as in Yellowknife, Halifax, Winnipeg, England, and India.</i>	Bergwens
3:05 – 4:05 (Speakers Session 2)	Topic: Quality or Quantity? Description: As we are all aware, high failure or dropout rates is not looked upon favourably in our colleges. Math is one of the subjects that can have these high rates. Hence, some of us are confronted with the issue of “watering down” our curriculum in order that more students may pass and not drop out. Is this a wise decision for the long run? In this participatory workshop, we will discuss this issue and what we as math teachers can do about it, or for that matter, whether we should do anything about it. <i>Presenter: Bruno Fullone, George Brown College</i>	Simcoe
	Topic: Update on the Implementation of the CSAP Assessments and Remediation Resources Description: In 2015, Humber College, after discussions with other colleges in Ontario, agreed to lead the implementation of the CSAP Math Assessment and Remediation resources. Humber selected Vretta as the technology partner in facilitating the implementation of the resources at the college which commenced this year. We invite you to this interactive session to gain insight on the benchmarking of the resources, integration into the ERP system, report testing, user acceptability testing, and staff training. We will also discuss next steps for implementation, analyzing data, and updating resources. <i>Presenter: Paula Gouveia, Humber College and Anand Karat, Vretta</i>	Bergwens
	Topic: Cost-effective Technology Tools for Creating Engaging Video Tutorials for your Students Description: In this presentation, I will walk through the process of making video tutorials for your LMS as a supplement to course material for enhanced learning, including little tricks learned along the way. Participants are encouraged to bring their iPads with them. <i>Presenter: Sarah White, co-author for Wiley's Technical Mathematics with Calculus</i>	Huron

Wednesday, May 25, continued...

4:10 – 5:10 (Speakers Session 3)	<p>Topic: Informing Problem Solving with Multiple Perspectives</p> <p>Description: This presentation will look at problem solving from a variety of perspectives. Within college programs there are a variety of layers of problem solving needs. These arise from the high school context where a variety of issues interact with preparation of students for college as well as university. The preparation of teachers for the public school system also informs issues where colleges can have an active voice. The presentation is oriented to identifying challenges that arise because of the various perspectives and discussion will be encouraged to address ways that the issues may be addressed.</p> <p><i>Presenter: Tim Sibbald, Nipissing University, and Carmen Wehrstedt, Canadore College</i></p>	Bergwens
	<p>Topic: Identifying and Preventing Math Errors in Pre-Service Nursing and Paramedic Students</p> <p>Description: Weak mathematics histories and negative math experiences can leave students underprepared for college level maths and contribute to high levels of math anxiety. Mathematics anxiety interferes with numerical cognition and that leads to an increased incidence of math errors – an unacceptable situation in the medical field. Awareness and analysis of the types of errors associated with high levels of math anxiety allows for remedial action during the pre-service years and promotes practice associated with increased patient safety in the field. This presentation explores highly successful strategies employed in a Canadian college mathematics course for pre-service nursing and paramedic students to identify and prevent math errors in the classroom and, ultimately, in professional practice.</p> <p><i>Presenter: Michele Baron, Georgian College</i></p>	Simcoe
	<p>Topic: Mathematics Evaluation, Proctoring, and Cheating in Online Courses</p> <p>Description: There is a push in education today to move all programs to the online, digital environment in order to allow students access to courses year round. Math courses are no exception to this pressure. In our school at Fanshawe we have put all our math courses online. The difficulty that we have encountered is how to "assess" the students in these courses. There are many options, like virtual proctoring, or having students attend at the school, but these come with high costs and inconvenience to the digital student. So, we are further pressured to reduce the attendance requirements and costs of evaluations for these online students. When these factors are coupled with the belief that math evaluations must be proctored and are therefore different than liberal arts and other assessments, the question becomes "how should one assess mathematics online?" Eliminate proctored tests? What about cheating? The seminar is to discuss cheating, online testing, and proctored vs. un-proctored tests in mathematics online courses.</p> <p><i>Presenter: Mimi Dancy, Fanshawe College</i></p>	Huron
5:10 – 6:10	Hospitality Suite (sponsored by McGraw-Hill Education)	Fireside 108
6:10 – 8:00	Dinner and Annual General Meeting	Dining Room
8:00 – ???	<p>Pub(lisher) Night</p> <p>Come on over to check out the publishers and vendors. The bar will be open!</p>	Mary Lou's
9:00 – ???	<p>Casino Night (sponsored by Pearson Education Canada)</p> <p>Play some games! Win big! Lose spectacularly!</p>	Bergwens

Thursday, 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 – 9:20 (Speakers Session 4)	Topic: Re-Imagine Math with ALEKS Description: McGraw-Hill Education presents ALEKS – an adaptive, artificially-intelligent learning system that provides students with an individualized learning experience tailored to their unique strengths and weaknesses. With decades of scientific research behind its creation, ALEKS strives to bring the most advanced and efficient learning system to students worldwide. Join us to learn more about how ALEKS can help significantly improve your student’s performance. <i>Presenters: Nick Morfopos and Cathie Lefebvre, McGraw-Hill Education</i>	Huronia
	Topic: How Adaptive Learning Can Improve Your Students’ Learning Outcomes in Math Courses Description: Come see ORION Adaptive Learning demonstration for Math courses. Based on cognitive science, ORION is a personalized, adaptive learning experience that helps students build proficiency on topics while using their study time most effectively. 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. <i>Presenter: Kristen Vanderkooy, Wiley</i>	Simcoe
9:25 – 9:55 (Speakers Session 5)	Topic: MindTap – Making It Count Description: When students use MindTap for 3+ hours per week, they are twice as likely to score 90% or above on assignments. Join us to learn more about how this resource can help your students succeed! <i>Presenters: David Groth and John Woolacott, Nelson Education</i>	Bergwens
	Topic: Innovation with MyMathLab Description: Help your students better prepare and get them thinking more visually and conceptually with MyMathLab. Pearson will be demonstrating how they have developed creative online learning solutions in partnership with Ontario colleges, highlighting innovation and focused on student learning outcomes. <i>Presenters: Jordan MacDonald, Euan White, and Jennifer Sutton, Pearson Canada</i>	Huronia
	Topic: Using Online Videos to Support Different Learning Styles in Mathematics Description: This session will explore the use of supplemental video instruction to support the teaching of developmental mathematics. We will examine how short video based tutorials demonstrating various problem solving methods can enhance student engagement and success when they are integrated with traditional print. <i>Presenter: Jim Rozsa, Northrose Associates</i>	Simcoe

Thursday, May 26, continued...

TIME	ACTIVITY	LOCATION
10:00 – 11:30 (Speaker Session 6)	<p>Keynote Address: The Evolving Thinking Problem-Solving Classroom</p> <p>Description: The math hasn't changed but there is no doubt that the high school math classroom and what happens in it has changed. In an era of changing curricula, technological advances and a deluge of research into teaching and learning, the high school math classroom has been impacted in a variety of ways. What is the experience of the student? What is the role of the teacher in this new landscape? What has been the impact on assessment and evaluation? And why bother changing anything at all? This talk will attempt to answer these questions and more by exploring my experience as a classroom teacher, a department leader and an instructional coach over the past decade.</p> <p><i>Presenter: Paul Alves is the department head of math at Fletcher's Meadow Secondary School in Brampton. Paul is a past president of the Ontario Association for Mathematics Education (OAME). He is a frequent presenter at provincial and international conferences and contributor to provincial math print and digital resources.</i></p>	Bergwens
11:35 – 12:35 (Speakers Session 7)	<p>Topic: Multivariate problems: Using Deductive Reasoning (and Big Data) to Solve the Case of the Struggling Student</p> <p>Description: This session will look at how we can apply multivariate problem solving to tease out all kinds of hidden details about how our student think, feel, and behave. This is about using preparatory tools, diagnostic evaluations, and data analytics to learn more about our students than they may even know about themselves. We will see how and where we can partner the art of logical deduction with big data to solve the big questions: what is getting in the way of a student's success, is it a behavioural or a competency issue, and how do we keep this student engaged? The age old questions, with a big data slant!.</p> <p><i>Presenter: Elizabeth Fabbioni Martin, Mohawk College</i></p>	Simcoe
	<p>Topic: Math Placement Testing for College-Bound Students</p> <p>Description: In Fall 2014, Fanshawe College's General Arts & Science students participated in the CSAP Assessment Development Field Trial. The results were shocking – students in upper-level high school math courses were not successful on a test focused on basic numeracy skills with an average drop/withdrawal rate of 46%. The conflation of these two issues encouraged us to implement post-admission math placement testing for Fall 2015. The test was used to stream students into four different math courses and was designed with a remediation component that students could complete on their own before starting the program. We also tracked their progress through the General Arts and Science program. In this session, we will discuss the design, implementation, results and feedback of the assessment after two semesters of use, as well as our future goals.</p> <p><i>Presenter: Erin Cox, Fanshawe College</i></p>	Huronia
	<p>Topic: Numeracy -- Urgently Needed and Sadly Lacking</p> <p>Description: We live in a technological world, where understanding and using numbers with confidence is fundamental. While literacy levels are improving, numeracy levels are declining. Evidence shows that this places Ontarians at a disadvantage socially and economically. It puts our economy at deep risk on the global stage and undermines the social equality that is a hallmark of our society. The Numeracy Gap is preventing our students from succeeding in their careers. It is creating a "math phobic" culture, which is holding back businesses from employing people to innovate and create wealth. We need an Ontario roundtable on numeracy to urgently address this decline. This presentation is about that....</p> <p><i>Presenter: Emily Brown, Sheridan College</i></p>	Bergwens
12:40 – 2:00	Lunch	Dining Room

Thursday, May 26, continued...

2:00 – 5:00	Inter-Active Activities <i>See the sign-up sheets for activities, including:</i> <i>Golf / Walking / Biking Trail/ Badminton/ Tennis/Ping Pong</i> <i>Canoes / Kayaks / Paddle-boats/Mini-golf/Bocce / Horseshoes / Shuffleboard/Math Problem Solving</i> AND The Escape Room – This is a 30 minute activity open only to those who sign up. Several sessions will be offered. 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? <i>Presenter: Pearline Lung, Humber College, and Alan Warren and Candace Young, Lambton College</i>	Outdoors
		Room 420
5:00 – 6:00	Hospitality Suite (sponsored by McGraw-Hill Education)	Fireside 108
6:15 – 6:30	Group Photo	Gazebo
6:30 – 9:30	Retirement Dinner (formal wear suggested) (sponsored by Vretta)	Dining Room

Friday, May 27

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 (Speakers Session 8)	Topic: The Case of the Missing Student Description: Most statistics courses fail about 50% of their students. The student goes missing from class, the student's mind goes missing from the discussion, and the student does not succeed in finding his or her way. We can blame Professor Moriarty, Sherlock Holmes' nemesis, but Moriarty does not act alone. Other professors are rumoured to have experience with missing students. I will provide a demonstration of some 10 to 15 innovations that has driven the Seneca statistic success rate in helping students find their way back to statistics class, to success, and to graduation. <i>Presenter: Terry James, Seneca College</i>	420
	Topic: Successful Planning, Development and Execution of the Math Drop-in Centre: Reflections and Future Strategies Description: Centennial College Learning Centre successfully planned and launched the Math Drop-in Centre in January 2015. This presentation will focus on the tutoring model used in the centre. It will explore our successes and what we have learned so far, along with the various supplemental initiatives undertaken in order to reach and aid more students. <i>Presenter: Srishta Chopra, Centennial College</i>	Simcoe
	Topic: Building a Profile of Our Students Description: With support of Centennial College's Scholarship of Teaching and Learning Research Grant, we surveyed 300 first-semester business students to help develop a deeper understanding of our student population. Measuring factors ranging from commute time to comfort level communicating in English, the study sought to connect the broader scope of our students' personal and financial situations with behaviours we commonly observe in class to answer the question: Do our most financially vulnerable students perform academically as well as their more financially advantaged peers? And if not, how wide is the gap? Come to this presentation to hear about our conclusions. <i>Presenter: Matt McInnis, Centennial College</i>	Huron

Friday, May 27 Continued...

TIME	ACTIVITY	LOCATION
9:55 – 10:55 (Speakers Session 9)	<p>Topic: Using Your Learning Management System (LMS) to Encourage Students to do Assignments So They Get the Practice They Need</p> <p>Description: Have you ever wondered how you might be able to encourage students to work on more practice questions to prepare themselves for tests and examinations? Marks are a form of currency and students will focus their efforts on activities for which they are rewarded with grades. A set of practice questions will often be ignored since there are no grades associated with their completion. Instructors can give assignments, but that increases the amount of marking effort resulting in less time for actual instruction and tutoring. In this session participants will see how using large pools of questions combined with automatic grading allows instructors to give students multiple attempts at an assignment without seeing duplicate questions. The instant feedback and multiple attempts makes the assignment as much about the learning as it does about the assessment. This session will demonstrate the concept using the BlackBoard LMS used at Georgian College, but the concepts discussed will apply to almost any system.</p> <p><i>Presenter: Don Gibson, Georgian College</i></p>	Simcoe
	<p>Topic: Making Every Class a Problem Solving Experience for Students</p> <p>Description: For some teachers, evaluation is something done every so often in the semester. Teaching is what is done between evaluations. Problem solving is in the homework and we know how many students do that. But what if evaluation somehow gets interwoven with teaching in every single class? And problem solving is happening in every class? This presentation is about how I set this up in my mathematics classes and how you can start this up as well.</p> <p><i>Presenter: Don Vander Klok, Lambton College</i></p>	Huron
	<p>Topic: Missing Links - A Search for Questions/Problems That Assess Gaps in Foundational Math Skills</p> <p>Description: Foundational math courses provide a unique set of challenges for the teacher and student. What is it that we really want those students to be able to do? Which math questions and problems demonstrate that our students truly have the skills needed to move on to the next math or statistics course? When a student calculates $9^3 = 729$ in a diagnostic test at the start of a foundations math course, then $9^3 = 27$ on the final exam, did they ever know what 9^3 really means? What challenging questions can we present to students to provoke mathematical thinking? A short presentation will aim to elicit discussion and a sharing of mathematical challenges that can assess (and perhaps evoke?) deeper foundational skills in mathematics at the college level. You are encouraged to bring questions/problems to share!</p> <p><i>Presenter: Taras Gula, George Brown College</i></p>	Bergens
11:00 – 12:00	<p>Topic: Birds of a Feather</p> <p>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! Let Harry Matsugu or Carol Ann Waite know, and they will insert your name in the “Birds of a Feather” schedule.</p> <p><i>Facilitated by Harry Matsugu</i></p>	Bergens
12:10 – 2:00	Lunch/Prizes/Check-out	Dining Room