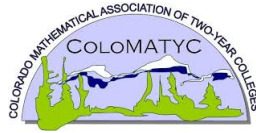# ColoMATYC Spring 2020

Thank you so much for coming and thanks to our sponsors Overleaf, Lumen Learning, and FRCC BCC Student Life for the support! Welcome to the annual meeting of ColoMATYC. Here is the day's schedule.

- **8AM-9AM Registration, Coffee, Light Refreshments.** Registration table will be set up in the Community Room (see campus map).

- **9AM-9:40AM Opening Remarks.** Kenneth M Monks, ColoMATYC President and Jonathan Poritz, CDHE OER Council Chair Emeritus.

- **9:40AM-10:30AM Keynote Address.** Oscar Levin, University of Northern Colorado. *The Source of OER.*

- **10:30AM-11AM TindOer.** OER matchmaking session! What have you created that you would be willing to share? What do you wish someone would share with you? We will make a list within this group as well as share out a wish list to the LOR manager.

- **11AM-12PM Lunch!** Lunch. Individual boxed lunches from Mad Greens. Good day to avoid buffets.

- **12PM-4PM Breakout sessions!** Parallel sessions in rooms C1602, C1620, and C1750. See next page for abstracts and more detailed schedule.

- **4PM-4:15PM Closing Remarks.** Back in the community room.

Talk Schedule and Abstracts

Oscar Levin, Keynote Address: *The Source of OER*. 9:40AM-10:30AM in the Community Room.

Open Educational Resources (OER) are becoming a viable alternative to commercial textbooks. A common argument for adopting OER is that the course materials are just as good as expensive options but are free for students. This does not go far enough. There are opportunities for open source textbooks to far exceed their commercial counterparts. We will highlight advantages in accessibility, flexibility, and creativity that working with OER provides. This will require that we dive in the source of open source textbooks. We will explore how the markup language PreTeXt, together with other open source tools, allows instructors to realize the full potential of OER.

First Breakout Session: 12pm-12:50pm

- Jonathan Poritz, CSU-Pueblo. *Rolling the OER Dice: Building and Using an Open Textbook for Intro to Stat*. **Room C1620**

  Abstract: This session will describe one faculty member's personal experience with going from a vague idea that commercial statistics textbooks, while excellent, are too expensive, through the process of creating a new OER statistics textbook and delivering sections of a basic introduction to statistics using that book. The emphasis will be on practical matters of where the starting pieces came from, what took the most work, and what seemed to work the best (and what the worst) for the students. While the main motivation was certainly to save students money, the end result – and possible plans for the future – revolve mostly around the great pedagogical freedom building one's own OER provides the instructor.

- Oscar Levin, University of Northern Colorado. *Getting started with PreTeXt*. **Room C1750**

  Abstract: Ready to start using PreTeXt to create high quality, accessible, and free course materials for your students? This hands-on session will provide you the tools and resources to get started. Bring a laptop if you would like to follow along.

- Marki Allegar and Mike Miller, Aims Community College. *Old School and New School using OER*. **Room C1602**

  Abstract: Two instructors, two philosophies, two methods, one goal – afford College Algebra students access to quality content at zero cost. We will show what materials and technologies we utilize in our College Algebra courses and demonstrate how we use them.

Second Breakout Session: 1pm-1:50pm

- Dan Ly, Lumen Learning. *The Power of Open Content: Designing Low Cost, Highly Effective Math Courses.* **Room C1750**

  Abstract: As math faculty refine the design of math courses, OER offers unprecedented flexibility to shape the learning experience, test its effectiveness, and make improvements to better support students and learning. Open educational resources (OER) in mathematics education include not only open textbooks, but also extensive video content and online homework systems with massive teacher-created question banks and algorithmically-generated problem sets. This session will include demos of 2-3 high-enrollment math courses and the process for easily designing and remixing courses. See how far math OER has come, thanks to a vibrant open education math community. Bring your questions about customizable OER course design, LMS integration, learning outcome alignment, courseware support and other topics.

- Stephanie Beck, Front Range Community College - Boulder County Campus. *Intro to Statistics – An Active Learning Redesign.* **Room C1620**

  Abstract: Best practices for teaching introductory statistics are changing as fast as the technological world around us. This presentation will provide a recap of the AMATYC 2019 emphasis on statistics, GAISE college recommendations, and a look into how Introduction to Statistics is being redesigned at FRCC with an active learning focus.

- Kenneth M Monks, Front Range Community College - Boulder County Campus. *Fan of Active Learning? Try Active Homework!* **Room C1602**

  Abstract: In my differential equations class, I tried replacing both the textbook and the traditional paper-and-pen homework with collaborative Overleaf projects. In these projects, I have references for the students including course notes, worked examples, and links to recommended videos and websites for each topic. There are also unsolved exercises with boxes underneath for comments, questions, and feedback. The students are tasked with solving exercises, peer reviewing each other's work, and revising their solutions based on peer feedback as well as my feedback. This has lead to the benefits of active learning permeating their homework, along with the ability to get far better feedback from me than I could possibly provide in a paper-and-pen setting.

Third Breakout Session: 2pm-2:50pm

- Aaron Allen, Front Range Community College - Boulder County Campus. *A Novel Factorization Technique and Proof of the Quadratic Formula from Po-Shen Loh.* **Room C1602**

  Abstract: In late 2019, Po-Shen Loh published a novel proof of the Quadratic Formula. In this talk we will discuss his technique and the applications to replacing bulky techniques of factorization in College Algebra and related classes.

- Paul Gessler, Overleaf. *How to Use Overleaf: Beginner to Advanced.* **Room C1620**

  Abstract: This session will be a demonstration of the functionality of Overleaf, with level of sophistication tailored towards the audience's experience level. All are welcome, from beginners to advanced users.

- Sid Grover, Edfinity. *Using Edfinity (NSF# 1758301) - an open, affordable, textbook-agnostic homework system - to reach every student.* **Room C1750**

  Abstract: We present case studies of educators who developed online homework using Edfinity, an NSF- supported, modern, 'textbook-agnostic' homework system that uses an open-source problem format (WeBWorK). Educators at 100+ institutions have paired Edfinity with both publisher and OER textbooks, thereby 'unbundling' expensive textbook/homework bundles and dramatically increasing student access.

Fourth Breakout Session: 3pm-3:50pm

- Matt Mackritis, Front Range Community College - Boulder County Campus. *Culturally-Relevant and Social Justice Pedagogies in the Mathematics Classroom.* **Room C1602**

  Abstract: In this session, I will discuss the theoretical and practical underpinnings employing Culturally-relevant (CRP) and Social Justice (SJP) Pedagogies in the mathematics courses. In particular, topics of discussion will revolve around the "WHY?" and "HOW?". Amongst others, answers to the following questions will be explored: Why should we strive to use CRP and SJP? What are the benefits? Who do they benefit? What does CRP and SJP look like when manifested in the classroom? How can I begin to use these pedagogical approaches? Can you show me examples of their implementation and efficacy? How can Open Educational Resources be used in this light? Please come join us for a lively discussion, and engage with these important issues of equity and inclusion.

- Daniel Haiem, CEO of ClassCalc. *ClassCalc Demo!* **Room C1620**

  Abstract: This session will revolve around using ClassCalc, a lockdown calculator app that allows professors to lock students out of all outside distractions such as Photomath, Instagram, calls and texts - which prevents cheating on tests and makes the purchase of expensive handheld calculators unnecessary. The session will involve interactive components where we will learn to use the calculator (including pre-calculus, calculus and statistics features), and how to lock down each other's devices to simulate a testing environment.

Lastly, a big thanks to this year's sponsors, Overleaf and Lumen Learning!

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Lumen Learning provides simple-to-adopt digital course materials designed to strengthen learning and replace expensive textbooks using open educational resources (OER). Lumen's low-cost ($25) courseware is accessible and interactive, with well-aligned assessments and supplemental resources. Term over term, Lumen content gets better and better at supporting student learning through data-driven continuous improvement. Enjoy day one access and ease-of-use through Lumen's best-in-class LMS integration (for Canvas, Blackboard, Brightspace, and Moodle). Learn more: `lumenlearning.com`.

FRONT RANGE COMMUNITY COLLEGE

Boulder County Campus

Classroom Building
2121 Miller Drive
Longmont, CO

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Public Map
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