

OnLine Seminar on Undergraduate Mathematics Education

<https://olsume.org>

2017–2018

- Sep 12 Curated Courses in Mathematics**
Petra Bonfert-Taylor, Dartmouth
Sara Eichhorn, University of California, Irvine
David Farmer American Institute of Mathematics
Jim Fowler, Ohio State University
- Sep 26 Rolling the dice: Flipping an introductory probability and statistics class**
Jerry Orloff and Jon Bloom, Massachusetts Institute of Technology
- Oct 10 Mathematical manipulatives: The MIT Mathlets**
Haynes Miller and Jennifer French, Massachusetts Institute of Technology
- Oct 24 From lecture to active learning: Rewards for all, and is it really so difficult?**
David Pengelley, Oregon State University
- Nov 7 MAA's Instructional Practice Guide: Introduction to a new resource**
Beth Burroughs, Montana State University
- Nov 21 Transforming the gateway: Redesigning large introductory-level courses**
Teena Gerhardt, Michigan State University
- Dec 5 Active learning at Penn: 2013–2017**
Robin Pemantle, University of Pennsylvania
- Dec 19 Supporting graduate students for successful teaching experiences**
Emily Braley, Harvard University and Duke University
Robin Gottlieb, Harvard University
- Feb 6 Impacting students' practice of mathematics, especially at critical moments**
Dev Sinha, University of Oregon
- Feb 20 Active learning 2.0: Making it inclusive**
Darryl Yong, Harvey Mudd College
- Mar 6 The Illinois Geometry Lab: Fostering a culture of undergraduate research and community engagement in mathematics departments**
Jeremy Tyson, University of Illinois at Urbana-Champaign
- Apr 3 Mathematics emporium with adaptive technology**
Andrew Tonge, Kent State University
- Apr 17 A radical approach to calculus**
David Bressoud, Macalester College
- May 1 The Inquiry Oriented Differential Equations Project**
Chris Rasmussen, San Diego State University
- May 15 Inquiry based learning calculus**
Angie Hodge, University of Nebraska Omaha

2018–2019

- Sep 18** **Rising to the challenge of diversifying the mathematics community**
Allisa Crans, Loyola Marymount University
Dave Kung, St. Mary's College of Maryland
- Oct 2** **Active Calculus**
Matt Boelkins, Grand Valley State University
- Oct 16** **Educating the future professoriate:
Summer Institute for Graduate Teaching Assistants**
Catherine Snyder, Peter Turner, Seema Rivera, Clarkson University
- Oct 30** **The College Mathematics Instructor Development Source (CoMInDS):
Supporting faculty who provide professional development
to the next generation of college mathematics instructors**
Jack Bookman, Duke University
Natasha Speer, University of Maine
- Nov 13** **Ask. Don't tell.**
Alfonso Gracia-Saz, University of Toronto
- Nov 27** **Teaching students to communicate as mathematicians:
threshold concepts and their application at MIT**
Susan Ruff, Massachusetts Institute of Technology
- Dec 11** **A mathematics learning community on inclusive teaching**
Gavin LaRose, University of Michigan
- Feb 5** **Inquiry and engagement in an interactive classroom**
Annalisa Crannell, Franklin and Marshall College
- Feb 19** **Redesigning a large linear algebra service course – a travel report**
Philipp Hieronymi, University of Illinois at Urbana-Champaign
- Mar 5** **Teaching probability and statistics from a purely Bayesian point of view**
Sanjoy Mahajan, Olin College of Engineering
- Mar 19** **Video textbooks in the active learning classroom**
Mike Weimerskirch, University of Minnesota
- Apr 2** **Inquiry based learning at Michigan**
Ralf Spatzier, University of Michigan
- Apr 30** **Active learning in calculus at Cornell**
Steve Bennoun and Tara Holm, Cornell University
- May 14** **Managing college group work and creating groupworthy tasks**
Eric Hsu, San Francisco State University

2019–2020

- Sep 10** **Course-based undergraduate research experiences: Two examples**
Sunil Chebolu, Illinois State University
Haynes Miller, Massachusetts Institute of Technology
- Sep 24** **A focus on student buy-in: Why it matters and what to do about it**
Stan Yoshinobu, California Polytechnic State University
- Oct 8** **Student-centered assessment of mathematical proficiency**
Benjamin Braun, University of Kentucky
- Nov 5** **Integrating sustainability into the mathematics curriculum**
Bree Ettinger, Emory University
- Nov 19** **Incorporating service-learning into math courses**
Sara Billey, University of Washington
- Dec 3** **Co-creating interactive online exercises**
Annoesjka Cabo, Delft University of Technology
- Feb 4** **A scalable hybrid introductory ODE course**
Dave Levermore, University of Maryland, College Park
- Feb 18** **Who are we?: On the diversity and demographics of the mathematics community**
Ron Buckmire, Occidental College
- Mar 17** **Active learning online: A panel discussion**
Rick Cleary, Babson College
Rachel Levy, MAA
Mike Weimerskirch, University of Minnesota
- Mar 31** **TPSE's top ten things every online instructor should do**
Abbe Herzig, AMS
Dave Kung, TSPE
- Apr 7** **Keep it active: Engaging students in virtual classrooms**
Rena Levitt, Minerva Schools at KGI
- Apr 14** **Calculus in context: Introducing calculus ideas through epidemiology models**
Eric Stadel, University of Colorado, Boulder
- Apr 28** **Project-based learning**
Rachel Levy, Mathematical Association of America
- May 12** **What mathematical knowledge improves high school math teaching?**
Yvonne Lai, University of Nebraska, Lincoln
- May 26** **Reliable classification of classroom practices using lecture recordings**
George Kinnear, University of Edinburgh

2020–2021

- Sep 15** **A touch of calculus: Shaking up the pre-requisite structure of college mathematics**
Rick Cleary, Babson College
- Sep 29** **Assessing students' proofs online**
Chris Sangwin, University of Edinburgh
- Oct 13** **Creating accessible materials**
Rob Beezer, University of Puget Sound
- Oct 27** **Quantitative reasoning and intellectual need as design principles for instructional materials**
Jason Martin, University of Central Arkansas,
Michael Tallman, Oklahoma State,
Matt Thomas and Aaron Weinberg, Ithaca College
- Nov 10** **Welcoming freshmen to the world of mathematics**
Uri Treisman and Erica Winterer, University of Texas, Austin
- Dec 1** **A fun, engaging, and effective approach to teaching calculus**
Shay Fuchs, University of Toronto
- Dec 15** **Tuning up your remote mathematics teaching**
Maria Anderson, Westminster College
- Jan 5** **Meaningful, motivating online assessments**
Paul Bourdon, University of Virginia
- Jan 19** **The value of computational thinking in statistics education**
Jo Hardin, Pomona College
- Feb 2** **Mathematical proof, online assessment, and high school connections in first-year discrete mathematics**
Doug Ensley, Shippensburg University
- Feb 16** **Using inquiry and active learning in mathematics - and how COMMITs can help**
Christine von Renesse, Westfield State University
- Mar 2** **PrairieLearn: A flexible platform for writing randomized auto-grading questions**
Matt West, University of Illinois
- Mar 16** **Documents for teaching a lesson: Lecture notes and their production**
Vilma Mesa, University of Michigan
- Mar 30** **A course to prepare students for careers in business, industry, and government – PIC Math**
Michael Dorff, Brigham Young University
- Apr 13** **The Mathematical Inquiry Project**
Bus Jaco and Mike Oehrtman, University of Oklahoma
- Apr 27** **Mastery-based grading in higher education**
Silvia Huebach and Sharona Krinsky, Cal State LA
- May 11** **Onboarding instructors to an active-learning class**
Jason Siefken, University of Toronto

2021–2022

- Sep 14** **A cheat-proof calculus exam?**
Lew Ludwig, Denison University
- Sep 28** **Linear algebra and deep learning**
Gil Strang, Massachusetts Institute of Technology
- Oct 12** **Incorporating research opportunities in undergraduate math courses**
Pamela Harris, Williams College
- Oct 26** **Manipulative calculus: Active learning with 3D models**
Stepan Paul, North Carolina State University
- Nov 9** **Rethinking linear algebra**
Rekha Thomas, University of Washington
- Nov 23** **Mentoring community college math students through transfer**
Eddie Tchertchian, Pierce College
- Dec 7** **Fostering positive collaboration**
Kathryn Leonard, Occidental College
- Jan 11** **Active learning in a remote classroom**
Angie Hodge-Zickerman, Northern Arizona University
- Feb 8** **Open Textbook Initiative**
Kent Morrison, American Institute of Mathematics
- Feb 22** **New Horizons: Exploring the possibilities and benefits of study abroad programs post-pandemic**
Vladimir Ivanov (Math in Moscow)
Ran Libeskind-Hadas (Aquincum Institute of Technology)
Ryota Matsuura (Budapest Semesters in Math Education)
Rogelio Ramos Quiroga (Mathematical Sciences Semesters in Guanajuato)
Kathryn A. Ziegler-Graham (Budapest Semesters in Mathematics)
- Mar 8** **Calculus at multiple scales: Successes and challenges**
Phil Gressmann, University of Pennsylvania
- Mar 22** **Adapting active learning in precalculus and calculus courses to changing conditions**
Martina Bode, University of Illinois at Chicago
- Apr 5** **Geometric reasoning in multivariable calculus**
Tevian Dray, Oregon State University
- Apr 19** **Computer theorem provers in the classroom?**
Kevin Buzzard, Imperial College London
- May 3** **Reimagining mathematical experiences for students in introductory courses**
Brendan Kelly, Harvard University

2022–2023

- Sep 13** **The Inquiry-Oriented Linear Algebra Project**
Megan Wawro, Virginia Tech
- Sep 27** **Reshaping the calculus sequence for engineering majors**
Gianluca Guadagni, University of Virginia
- Oct 11** **Embodied cognition: What is it? How does it involve mathematics?**
Hortensia Soto, Colorado State University
- Oct 25** **Improving student outcomes in mathematics: What do we know?
What can we (reasonably) do?**
Wendy Smith, University of Nebraska
- Nov 8** **An implementation of standards-based grading in a large linear algebra class**
Rose Morris-Wright, Middlebury College
- Nov 22** **Assessing mathematical virtues, not just skills**
Francis Su, Harvey Mudd College
- Dec 6** **Reflections on a year at the Museum of Mathematics**
Steve Strogatz, Cornell University
- Jan 24** **Playing from the sidelines: Sports analytics**
Tim Chartier, Davidson College
- Feb 7** **Authentic assessment for today's students**
Diana Skrzydlo, University of Waterloo
- Mar 7** **Using Slopes to enhance learning in differential equations**
Tim Lucas, Pepperdine University
- Mar 21** **Establishing sustainable active learning in linear algebra**
Marie MacDonald, Cornell University
- Apr 4** **The studio and the stadium**
Fok-Shuen Leung, University of British Columbia
- Apr 18** **A survey of programs for preparing graduate students
to teach undergraduate mathematics**
Emily Braley, Johns Hopkins University
- May 2** **Using conceptual analysis to resolve the tension between advanced
and secondary mathematics: The cases of equivalence and inverse**
John Paul Cook and April Richardson, Oklahoma State University

2023–2024

- Sep 12** **Implementing projects in abstract algebra**
Judy Holdener, Kenyon College
- Sep 26** **Reducing the research to practice gap (R2PG) with faculty team collaboration**
Sheila Tabanli, Rutgers University
- Oct 10** **Teaching dynamics to biology undergrads**
Alan Garfinkel, UCLA
- Oct 24** **Encouraging and supporting the adoption of alternative grading methods in higher education**
Rachel Weir, Allegheny College
- Nov 7** **Active learning in proof-based math courses**
Lisa Carbone, Rutgers University
- Nov 21** **Developing math projects that are authentic and allow student voice and choice**
Paul Hand, Northeastern University
- Dec 5** **Math (Education) for AI safety**
Lionel Levine, Cornell University
- Feb 6** **Strategies for equitable and engaging mathematics teaching**
Daniel Reinholz, San Diego State University
- Feb 20** **The calculus baseline assessment**
Caroline Junkins, McMaster University
- Mar 5** **Designing an inductive course for probability and statistics**
Niek de Kleijn, Delft University of Technology
- Mar 19** **Linear algebra and optimization**
Ankur Moitra, Massachusetts Institute of Technology
- Apr 2** **Building an active classroom using the Active Learning Pedagogy Sequence**
Suzanne Dorée, Augsburg University
Jennifer Quinn, University of Washington, Tacoma
- Apr 16** **Rigor in data science**
Rachel Levy, North Carolina State University
- Apr 30**
Deborah Moore-Russo, University of Oklahoma