Special Session Schedule

Friday, April 19, 2024

Session	History of Mathematics at Colorado College and Beyond	Research in Undergraduate Mathematics Education (RUME)	Innovations in Teaching with OER	Curriculum Redesign
Moderators	*Janet Heine Barnett and George Heine*	*Gulden Karakok and Liz Arnold*	*Oscar Levin and Patricia McKenna*	*Kristin Kang , Robert Powers , Robert Benim*
Room Number	Tutt Science Center 214	Tutt Science Center 221	Tutt Science Center 126	Tutt Science Center 218
2:30-2:50	**Jolly Stories of Logarithms and More: History in the Classroom á la John Fauvel** Janet Heine Barnett	**The Shear Knows (Part A)** Ashley Armbruster, Francisco De Jesus Pagan	**OER textbooks with embedded interactive assessments** Oscar Levin	**Do the Shuffle: Randomized Simulations in Introductory Statistics** Kristin Kang, Rob Powers
2:55-3:15		**The Shear Still Knows (Part B)** Ashley Armbruster, Emily Varney	**How do Graphs Work?** John Carter	**Expanding the Reach of Mathematics Curriculum with Data Science** Adam Spiegler
Coffee Break 3:20-3:45				
3:45-4:05	**Wilson's Store** Carl Lienert	**Support the work of CCTM (Colorado Council for Teachers of Mathematics)** Mary Pittman, Joseph Bolz	**Immersive mathematics through interactive OER notebooks** Joshua French	**An Aspirational Approach to the Mathematical Preparation of Teachers** Liz Arnold
4:10-4:30	**GENERAL SESSION** **When a Google search fails** Geoff Howard	**Coordination at Mines** Rebecca Swanson, Deb Carney	**Processes for Instituting OER in Introductory Math and Stats Courses** Ben Dyhr	**Building Bridges Between High School and College Math Pathways** Raymond Johnson

Special Session Schedule

Saturday, April 20, 2024

Session	History of Mathematics at Colorado College and Beyond	Research in Undergraduate Mathematics Education (RUME)	General Session	Curriculum Redesign
Moderators	*Janet Heine Barnett and George Heine*	*Gulden Karakok and Liz Arnold*	*Beth Malmskog*	*Kristin Kang , Robert Powers , Robert Benim*
Room Number	Tutt Science Center 214	Tutt Science Center 221	Tutt Science Center 126	Tutt Science Center 218
10:15-10:35	**The Value of Mathematics: A Medieval Islamic View** George Heine	**Mastery-Based Testing in Linear Algebra** Rebecca Swanson, Aram Bingham	**The Nonsymmetric Strong Multiplicity Property** Colin Garnett	**A Complete Video Series for Precalculus as a Potential Resource** Forest O. Mannan
10:40-11:00	**A critique of R.A. Fisher's "The Logic of Inductive Inference"** Paul Constantine	**"It Feels Personal": Motives for Engagement in Collective Equity Work in Undergraduate Mathematics Education** Rachel Tremaine	**The Test for Divisibility by Seven** John Ethier	**Getting Caught Up: Winter Calculus 1** Bobby Benim
11:05-11:25	**David Hilbert's Only Topology Student, Werner Boy** Mike Siddoway	**Aspects of Conceptual Chunking in Proving Algebraic Conjectures** Vladislav Kokushkin	**Summing over the Twelve Days of Christmas** Bill Weber	**From "Calcu-Lame" to "Data-Delight:" An Analysis of Textbook adapted in USAFA's Revised Calculus Curriculum"** Maila Hallare, Jessica Hauschild
11:30-11:50		**Teaching Abstract Algebra Concretely via Embodiment** Alissa Romero		**Entrepreneurial Mindset in teaching Mathematics** Wojciech Kossek

Special Session Schedule

Friday, April 19, 2024

Session	Developments in Operator Algebras	Random Matrices and Free Probability Theory	Undergraduate Student Research	General Session: Education	General
Moderators	*Alonso Delfín and Menevse Eryuzlu*	*Kyle Luh, Sean O'Rourke, Ping Zhong*	*Luis Garcia Puente*	*Ike Agbanusi*	*David Brown*
Room Number	Tutt Science Center 101	Tutt Science Center 105	Tutt Science Center 229	Tutt Science Center 223	Tutt Science Center 108
2:30-2:50	**Extensions of Z-stable algebras** Zach Pence	**Finite Free Probability** Daniel Perales	**Homomorphisms of Weighted Graphs** Bailey Bitzer, Cullen Robinette	**Boosting Group Work in Precalculus** Eric Miles	**Lagrange Points and the James Webb Space Telescope (Again)** Donald Teets
2:55-3:15	**A Low-Dimensional Counterexample to the HK-Conjecture** Rachel Chaiser	**Roots of polynomials under repeated differentiation** Brian C. Hall	**Categorical Properties of Weighted Graphs with Generic Weights** Emily Egolf	**Collaborative Grading in an Introduction to Proofs Course** Megan Patnott	**A Public Election via Partially Homomorphic Encryption** Jeremy Muskat
Coffee Break 3:20-3:45					
3:45-4:05	**A Cuntz-Krieger uniqueness theorem for Cuntz-Pimsner algebras** Mark Tomforde	**Fractional free convolution of R-diagonal operators** David Renfrew	**Computation of Hodge Parameters for Calabi-Yau Threefolds…** Dr. P. Nag	**The Thinking Classroom - Be Amazed By Your Students** Kira Heater	**How to Win Sylver Coins and the Hearts of Algebraists** Neil Steinburg
4:10-4:30		**Free probabilistic limits of differentiation** Andrew Campbell	**Computation of Hodge Parameters for Calabi-Yau Threefolds…** Steven Williams	**… How can we improve students' success in mathematics?** Taik Kim	**Pushups, Pigskins, and Partitions: Tackling the Math Behind Football Rituals** Beth Schaubroeck

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Session	Developments in Operator Algebras	Random Matrices and Free Probability Theory	General Session: Education	General
Moderators	*Alonso Delfín and Menevse Eryuzlu*	*Kyle Luh, Sean O'Rourke, Ping Zhong*	*Ike Agbanusi*	*Flavia Sancier Barbosa*
Room Number	Tutt Science Center 101	Tutt Science Center 105	Tutt Science Center 223	Tutt Science Center 108
10:15-10:35	**Ergodic coactions and actions are the same** John Quigg	**Non-backtracking methods for sparse hypergraphs and tensors** Yizhe Zhu	**Developing a Supportive Framework for an Inclusive Undergraduate Research Program** Rebecca Garcia	**Examination of Potential Relationship between Corporate Revenue and Local Art Spending in Washington State** Elizabeth Vinson
10:40-11:00		**On atoms of commutator in free probability** Sheng Yin	**Why The Graphing Calculator We've All Been Recommending is Overpowered, Overpriced, and Unnecessary** Ashley Clayton	**Surprising strategies in a dice-rolling game** Dan Swenson
11:05-11:25	**A Short Introduction to L^p-Operator Algebras** Ellen Weld	**Spectrum of Laplacian matrices associated with large random elliptic matrices** Ping Zhong	**Second-Order Differential Equations Springing to Life and Other Student Projects** Marti Garlick	**Is knowing the moments of a random variable equivalent to knowing its probability distribution?** Shahar Boneh
11:30-11:50	**The Generator Problem for C*-Algebras** Vincent Ruzicka	**Extreme eigenvalues of random Laplacian matrices** Sean O'Rourke	**Applying the Scientific Method to Teaching** Ana Berrizbeitia	**Estimate the Value at Risk with Jump Process in Corn Market** Minglian Lin