

# **38<sup>th</sup> Annual Math, Engineering & Computer Science (MECS) Conference**

## **Perimeter College at Georgia State University**

*February 7, 2025*

**Clarkston Campus**

### **Conference Guest Speakers**

**Welcome**

**Dr. Barbara Johnson, Dean of Perimeter College**

**Introduction of Speaker**

**Stephanie Garofalo**

Chairperson, Perimeter College MECS Conference

**Keynote Address**

**Dr. Talitha Washington, Ph.D., D.Sc.**

Executive Director, Center for Applied Data Science & Analytics

Sean McCleese Endowed Chair in Computer Science, Race and Social Justice

Professor, Department of Mathematics

**Howard University, Washington, DC**

**Closing Remarks**

**Dr. John King**

Chair of the Department of Mathematics, Computer Science, and Engineering

**Georgia State University Perimeter College**

## About the Keynote Speaker



Talitha Washington, Ph.D., is a mathematician committed to advancing education and research that tackle societal challenges through data innovations. She is the Executive Director of the Center for Applied Data Science & Analytics (CADSA) and the Sean McCleese Endowed Chair in Computer Science, Race, and Social Justice at Howard University. Dr. Washington is a Fellow of the American Mathematical Society (AMS), the Association for Women in Mathematics (AWM), and the American Association for the Advancement of Science (AAAS). She holds a

B.S. in Mathematics from Spelman College and a Master's and Ph.D. in Mathematics from the University of Connecticut.

### **Keynote Address:**

#### **Practical Ideas on Infusing Data Science into the First Two Years of College**

Data science and artificial intelligence are reshaping how we learn, think, and innovate. By using real-world datasets and industry-relevant tools, educators can design engaging and impactful learning experiences that equip students with essential skills for success in a data-driven world. Dr. Washington will share practical strategies and actionable examples for embedding data concepts into the curriculum, enabling faculty to prepare students for meaningful contributions in an ever-evolving workforce.

## Welcome from the Conference Planning Committee Chair

On behalf of the conference committee, it is my pleasure to welcome you to the 38<sup>th</sup> Annual MECS Conference (Math, Engineering & Computer Science) at Perimeter College. We are excited to welcome our colleagues in Engineering and Computer Science for the second year! We are also thrilled to have many student presentations at both the graduate and undergraduate levels.

The schedule includes designated exhibitor time after lunch to allow you to learn about their offerings without having to shorten your lunch or miss a session.

Some housekeeping items:

- Parking passes are available at the registration desk for non-GSU attendees. If you do receive a ticket please bring it to registration, and we will take care of it.
- Presenters may send their presentations and any handouts to [mathconference@gsu.edu](mailto:mathconference@gsu.edu) to be posted on the conference website.
- At the end of the day, please fill out the conference evaluation form on the conference website or use the QR code:



We hope you learn something today and are inspired. Thank you for being a part of the 2025 MECS Conference!

Warm regards,

Stephanie Garofalo

Chair of the 38<sup>th</sup> Annual MECS Conference

## **Exhibitors**

The Perimeter College MECS Conference Committee thanks the following for their support of the 38th Annual MECS Conference. Please be sure to visit these exhibitors throughout the day:

Cengage

Got It, Inc.

Hawkes Learning

McGraw Hill

Pearson Education

Wiley

XYZ Homework

## Schedule at a Glance

<b>Friday, February 7, 2025</b>		
<b>Time</b>	<b>Event</b>	<b>Location</b>
<b>8:00 AM</b>	<b>Registration Begins</b>	<b>CN building, 1<sup>st</sup> floor</b>
<b>8:15 AM</b>	<b>Hot Breakfast</b>	<b>CN-2220</b>
<b>9:00 AM – 10:45 AM</b>	<b>Full Sessions</b>	<b>CE building</b>
<b>11:00 AM</b>	<b>Welcome &amp; Keynote Address</b>	<b>LRC - 1100</b>
<b>12:10 PM</b>	<b>Lunch</b>	<b>CN-2220</b>
<b>12:30PM – 1:00PM</b>	<b>GMATYC Meeting</b>	<b>CN-2240</b>
<b>12:40PM – 1:30PM</b>	<b>Exhibitor</b>	<b>CN building, 1<sup>st</sup> floor</b>
<b>1:30 PM – 2:15 PM</b>	<b>Full Sessions</b>	<b>CE building</b>
<b>2:30 PM – 3:50 PM</b>	<b>Mini Sessions</b>	<b>CE building</b>
<b>4:00 PM – 5:00 PM</b>	<b>Closing Reception</b>	<b>CN building, 1<sup>st</sup> floor</b>

## Detailed Schedule

<b>9:00 – 9:45 AM</b> <b>Full Sessions</b>	<b>CE-1130</b>	<b>CE-1140</b>	<b>CE-1150</b>
	1. Introducing Qualitative Data Analysis in Elementary Statistics	2. Integrity-Driven Assessments: Techniques for Enhancing Learning and Maintaining Academic Integrity in Entry-Level Math Courses with AI	3. Numerical Range of a Square Matrix
	<b>CE-1160</b>	<b>CE-1170</b> <b>Exhibitor Presentation</b>	
	4. Mathematical Recreation and Research with Magic Squares and Magic Cubes	5. Elevate the Student Calculus Experience with AI	
<b>10:00 – 10:45 AM</b> <b>Full Sessions</b>	<b>CE-1130</b>	<b>CE-1140</b>	<b>CE-1150</b> <b>Exhibitor Presentation</b>
	6. From Homework to Humor: Generative AI in My Academic Toolbox	7. From Numbers to Narratives: Making Stats Come Alive	8. Bridging the Knowledge Gap with Alta's Dynamic Remediation
	<b>CE-1160</b>	<b>CE-1180</b>	
	9. Enhancing Student Engagement in College Algebra through the Flipped Classroom Model at a Two-Year Community College	10. Data for Justice: Engaging Students Through Culturally Relevant Project-Based Learning	
<b>11:00 AM</b>	<b>Keynote Address: Dr. Talitha Washington</b> <b>LRC - 1100</b>		
<b>12:10 PM</b>	<b>Lunch CN – 2220</b>		
<b>12:30 PM</b>	<b>GMATYC Meeting</b>		

12:40 PM	<b>Exhibitors</b>		
<b>1:30 – 2:15 PM</b> <b>Full Sessions</b>	<b>CE-1120</b>	<b>CE-1130</b> <b>Exhibitor Presentation</b>	<b>CE-1140</b> <b>Exhibitor Presentation</b>
	11. The Use of Magic Squares as A Pedagogical Tool to Diagnose and Reinforce Addition of Integers and Rational Numbers	12. XYZ Homework: Supporting OER with the Latest Features and Courses from Developmental Math to Calculus and beyond	13. Revolutionizing Math Education: Engaging Students with AI-Powered Tools
	<b>CE-1150</b>	<b>CE-1160</b> <b>Exhibitor Presentation</b>	
	14. Calculus in College Algebra and Vice Versa	15. Teaching and Learning CALCULUS with AI	
<b>2:30 – 2:50 PM</b> <b>Mini Sessions</b>	<b>CE-1120</b>	<b>CE-1130</b>	<b>CE-1140</b>
	1. Good Questions in Pre-Calculus	2. Using Desmos in Introductory Statistics	3. Study Skills to Enhance Corequisite Classes
	<b>CE-1150</b> <b>Student Presentation</b>	<b>CE-1160</b>	
	4. The Derivative of Functions and the Ceiling Determinant of a Square Matrix	5. Experiential Learning Career Readiness Integration into General Education Computing Course	
<b>3:00 – 3:20 PM</b> <b>Mini Sessions</b>	<b>CE-1120</b>	<b>CE-1130</b>	<b>CE-1140</b> <b>Student Presentation</b>
	6. Strategies for Motivating Students in 2025	7. Hamiltonian Analysis of Integrable Point Vortices in a Circular Domain	8. BeeCompete: Revolutionizing Competition Access for Students

<b>3:00 – 3:20 PM</b> <b>Mini Sessions</b>	<b>CE-1150</b> <b>Student Presentation</b>	<b>CE-1160</b>	
	9. On Mathematical Modeling of Deposition and Erosion in Porous Media with Elastic Branching Channels	10. AI in Freshman Mathematics: Enhancing Learning While Preserving Critical Thinking	
<b>3:30 PM – 3:50 PM</b> <b>Mini Sessions</b>	<b>CE-1120</b>	<b>CE-1130</b>	<b>CE-1140</b> <b>Student Presentation</b>
	11. Using AI Tools to Enhance Students Engagement	2. Brainstorming Session about Teamwork in Asynchronous Online Algebra Classes	13. The Mysteries of Real Analysis
	<b>CE-1150</b>	<b>CE-1160</b> <b>Student Presentation</b>	
	14. When AMATYC meets MATH 1001, MATH 1401	15. Developing Thermal Measurement Capabilities using the Hot Disk in the Lubner Group	
<b>4:00 PM – 5:00 PM</b>	<b>Reception - CN building</b> <b>Remarks by Dr. John King</b>		



**Abstracts for Full Sessions**  
**Friday, February 7, 2025**

**9:00 a.m. – 9:45 a.m.**

<b>1</b>	<b><i>Introducing Qualitative Data Analysis in Elementary Statistics</i></b>	<b>CE – 1130</b>
	<p><b>Keisha Lanier Brown, <a href="mailto:klanier1@gsu.edu">klanier1@gsu.edu</a> - Georgia State University Perimeter College</b></p> <p>In Elementary Statistics, statistics is commonly defined as an art and/or a science that focuses on collecting, organizing, summarizing, and analyzing data in order to draw conclusions or answer questions. Quickly, students are introduced to data and they classify it as quantitative or qualitative. After that, qualitative data is ignored except for bar charts, pie charts, probability, and hypothesis testing with proportions. In this session we will discuss how qualitative data analysis was introduced in an Elementary Statistics course along with the outcomes and experiences of students.</p>	
<b>2</b>	<b><i>Integrity-Driven Assessments: Techniques for Enhancing Learning and Maintaining Academic Integrity in Entry-Level Math Courses with AI</i></b>	<b>CE - 1140</b>
	<p><b>Sheila McLendon, <a href="mailto:sheila.mclendon@abac.edu">sheila.mclendon@abac.edu</a>; Hope Toole, <a href="mailto:hope.toole@abac.edu">hope.toole@abac.edu</a> - Abraham Baldwin Agricultural College</b></p> <p>This presentation examines AI's role in enhancing learning and mitigating academic dishonesty in entry-level math courses. It provides strategies for designing assessments that foster genuine understanding, critical thinking, and ethical behavior, offering practical insights for creating integrity-driven, fair, and challenging assessments resistant to cheating, especially in online environments.</p>	
<b>3</b>	<b><i>Numerical Range of a Square Matrix</i></b>	<b>CE - 1150</b>
	<p><b>Chris Hill, <a href="mailto:chris.hill@mga.edu">chris.hill@mga.edu</a> - Middle Georgia State University</b></p> <p>The numerical range of a square matrix is a compact convex subset of the complex plane. It contains the eigenvalues of the matrix. For a 2 x 2 matrix, its boundary is an ellipse, sometimes degenerated. Using known properties, we generalize this result to estimate the numerical range of n x n matrices.</p>	
<b>4</b>	<b><i>Mathematical Recreation and Research with Magic Squares and Magic Cubes</i></b>	<b>CE - 1160</b>
	<p><b>Livinus Uko, <a href="mailto:luko@ggc.edu">luko@ggc.edu</a> - Georgia Gwinnett College</b></p> <p>This talk will give an introduction to magic squares and magic cubes including some history and highlight some methods for constructing them. We will also show that it is a topic that contains exciting problems for both fun and research at both the undergraduate and more advanced levels.</p>	
<b>5</b>	<b><i>Elevate the Student Calculus Experience with AI</i></b>	<b>CE - 1170</b>
	<p><b>Sydney Smith Carter, <a href="mailto:ssmith@hawkeslearning.com">ssmith@hawkeslearning.com</a> - Hawkes Learning</b></p> <p>Discover how AI is revolutionizing calculus education! This session will showcase Hawkes Learning's new AI Tutor tool, designed to provide instant, personalized support, and enhance student engagement in a secure environment. Dive into the mastery-based courseware system and explore its features from both the student and instructor perspectives. Gain actionable insights on leveraging AI to create a more effective and engaging calculus learning experience. Win a \$25 gift card!</p>	

6	<b><i>From Homework to Humor: Generative AI in My Academic Toolbox</i></b>	CE - 1130
<p><b>Timothy Brown, <a href="mailto:tbrown179@gsu.edu">tbrown179@gsu.edu</a> - Georgia State University Perimeter College</b></p> <p>From Homework to Humor: Generative AI in My Academic Toolbox" showcases how Generative AI can revolutionize teaching and academic work across disciplines. Whether you're crafting creative content, developing study guides, responding to student queries, or managing professional tasks, this session demonstrates how AI can enhance your teaching toolkit. Designed to appeal to educators in any field, this presentation invites you to explore how AI can streamline your work, foster creativity, and transform your academic practice. Perfect for anyone curious about the possibilities of AI in education!</p>		
7	<b><i>From Numbers to Narratives: Making Stats Come Alive</i></b>	CE - 1140
<p><b>Barry Monk, <a href="mailto:barry.monk@mga.edu">barry.monk@mga.edu</a> - Middle Georgia State University</b></p> <p>Bring statistics to life with engaging activities, real-world projects, and thought-provoking classroom discussions. In this session, Barry Monk, an experienced professor and author of an Elementary Statistics textbook, shares strategies for transforming numbers into compelling narratives that inspire curiosity and deepen understanding.</p>		
8	<b><i>Bridging the Knowledge Gap with Alta's Dynamic Remediation</i></b>	CE - 1150
<p><b>Karla Luetzow, <a href="mailto:kluetzow@wiley.com">kluetzow@wiley.com</a>; Whitney Porter, <a href="mailto:wporter@wiley.com">wporter@wiley.com</a> - Wiley</b></p> <p>The mission of Wiley's affordable, accessible, and adaptive learning platform, Knewton Alta, is to bridge knowledge gaps and put achievement within reach for all students. Attendees will investigate adaptive learning and learn how it can bridge prerequisite knowledge gaps by exploring Alta's mission and data.</p>		
9	<b><i>Enhancing Student Engagement in College Algebra through the Flipped Classroom Model at a Two-Year Community College</i></b>	CE - 1160
<p><b>Michelle Chung, <a href="mailto:mchung12@gsu.edu">mchung12@gsu.edu</a> - Georgia State University Perimeter College</b></p> <p>Discover the experience of implementing a flipped College Algebra classroom. The session will explore the concept of a flipped classroom, discuss planning and implementation strategies, her student survey results, and more. Together, participants can transform their math classrooms into dynamic, interactive learning environments!</p>		
10	<b><i>Data for Justice: Engaging Students Through Culturally Relevant Project-Based Learning</i></b>	CE - 1180
<p><b>Victor Hicks, <a href="mailto:victor.hicks@codingwithculture.com">victor.hicks@codingwithculture.com</a> - Coding with Culture</b></p> <p>This session explores how project-based learning engages students by connecting computational thinking to social justice. Attendees will discover strategies for teaching data analysis and design thinking through real-world challenges like environmental racism. The session includes actionable tools and a sample project to inspire meaningful, culturally relevant learning experiences.</p>		

1:30 p.m. – 2:15 p.m.

11	<b><i>The Use of Magic Squares as A Pedagogical Tool to Diagnose and Reinforce Addition of Integers and Rational Numbers</i></b>	CE – 1120
<p><b>Bernardo Nieto, <a href="mailto:bernardo.nieto@westgatech.edu">bernardo.nieto@westgatech.edu</a> - West Georgia Technical College</b></p> <p>Magic Squares are amazing mathematical objects that have fascinated people since ancient times. In this presentation we will make a brief historical review of the construction of Magic Squares since their origins to the present. We also are going to highlight some famous Magic Squares and the people that have contributed to methods and techniques in their construction. Lastly, we will show how to use Magic Squares to diagnose and reinforce addition of Integers and Rational Numbers.</p>		
12	<b><i>XYZ Homework: Supporting OER with the Latest Features and Courses from Developmental Math to Calculus and beyond</i></b>	CE - 1130
<p><b>Michael N. Hux, <a href="mailto:michael.hux@xyzhomework.com">michael.hux@xyzhomework.com</a> - XYZ Homework</b></p> <p>XYZ Homework makes OER easier to use. Come see how XYZ Homework team can support your OER courses, including Print, custom eBook, and custom assignments. We are more than “MyOpenMath with Support”...come to see new features that can help with large courses management.</p>		
13	<b><i>Revolutionizing Math Education: Engaging Students with AI-Powered Tools</i></b>	CE-1140
<p><b>Adrienne Baldwin, <a href="mailto:adrienne.baldwin@chattahoocheetech.edu">adrienne.baldwin@chattahoocheetech.edu</a> - Chattahoochee Technical College</b></p> <p>This session explores how AI tools like MathGPT transform mathematics education, enhancing student engagement and comprehension. Attendees will learn innovative strategies to integrate AI into teaching, creating dynamic learning experiences that promote reasoning and problem-solving skills in diverse classroom settings.</p>		
14	<b><i>Calculus in College Algebra and Vice Versa</i></b>	CE-1150
<p><b>Chandra French, <a href="mailto:cfrench@gsu.edu">cfrench@gsu.edu</a> - Georgia State University Perimeter College</b></p> <p>There is a strong connection between the concepts taught in College Algebra and those taught in Calculus I. The presenter will discuss using Calculus concepts to motivate College Algebra and using College Algebra to ease the introduction to topics taught in Calculus.</p>		
15	<b><i>Teaching and Learning CALCULUS with AI</i></b>	CE-1160
<p><b>Jose Mesquita, <a href="mailto:jose.mesquita@pearson.com">jose.mesquita@pearson.com</a> - Pearson Education</b></p> <p>This presentation will highlight best practices for integrating Pearson’s AI Learning Tool into calculus courses, showcasing its potential to boost student performance, encourage active learning, and create a more interactive and supportive learning environment. Whether you’re an educator or a student, discover how AI can enhance your calculus journey.</p>		

**Abstracts for Mini Sessions  
Friday, February 7, 2025**

**2:30 p.m. – 2:50 p.m.**

1	<b>Good Questions in Pre-Calculus</b>	<b>CE – 1120</b>
	<p><b>Zhongxiao Li, <a href="mailto:zli@ggc.edu">zli@ggc.edu</a> - Georgia Gwinnett College</b>            Good questions stimulate students' interest and curiosity in mathematics and help them monitor their understanding. What could be good questions in precalculus?</p>	
2	<b>Using Desmos in Introductory Statistics</b>	<b>CE – 1130</b>
	<p><b>Robby Williams, <a href="mailto:jwilliams345@gsu.edu">jwilliams345@gsu.edu</a> - Georgia State University Perimeter College</b>            This presentation will show how Desmos may be used in an introductory statistics course to compute one variable statistics and to compute probabilities using the binomial, normal, and t-distributions.</p>	
3	<b>Study Skills to Enhance Corequisite Classes</b>	<b>CE - 1140</b>
	<p><b>Kathy Garrison, <a href="mailto:kqarrison@ggc.edu">kqarrison@ggc.edu</a>; Jenny Kerven, <a href="mailto:jkerven@ggc.edu">jkerven@ggc.edu</a> - Georgia Gwinnett College</b>            This presentation will give ideas for study skills activities that some Georgia Gwinnett College Faculty use to help students become stronger students. Some activities are specific to mathematics, but some are more general to improve study skills for all disciplines.</p>	
4	<b>The Derivative of Functions and the Ceiling Determinant of a Square Matrix</b>	<b>CE-1150</b>
	<p><b>Kiara Smith, <a href="mailto:ksmit219@student.savannahstate.edu">ksmit219@student.savannahstate.edu</a> - Savannah State University</b>  <b>Faculty advisor: Tilahun Muche, <a href="mailto:muchet@savannahstate.edu">muchet@savannahstate.edu</a> - Savannah State University</b>            In this presentation I will be showing a quicker and efficient way to find the derivative of a function of n order with using the ceiling determinant and as well as the pascal triangle to find the coefficients of the derivative. This formula will be easy to memorize and will help students apply it to their major academic discipline.</p>	
5	<b>Experiential Learning Career Readiness Integration into General Education Computing Course</b>	<b>CE-1160</b>
	<p><b>David Kerven, <a href="mailto:dkerven@ggc.edu">dkerven@ggc.edu</a>; Cindy Robertson, <a href="mailto:crobertson2@ggc.edu">crobertson2@ggc.edu</a>; Roslyn Brown, <a href="mailto:rbrown51@ggc.edu">rbrown51@ggc.edu</a>; Kristie Walsdorf, <a href="mailto:kwalsdor@ggc.edu">kwalsdor@ggc.edu</a>; Karen Perell-Gerson, <a href="mailto:kperellg@ggc.edu">kperellg@ggc.edu</a>; Rebecca Cooper, <a href="mailto:rcooper5@ggc.edu">rcooper5@ggc.edu</a> - Georgia Gwinnett College</b>            Many general education computing classes provide students with a baseline knowledge in computer literacy and a fundamental skill set in productivity tools. An experiential activity in career readiness offers students a chance to apply concepts and skills in a meaningful way aimed to foster deeper learning and retention.</p>	

**3:00 p.m. – 3:20 p.m.**

6	<b>Strategies for Motivating Students in 2025</b>	<b>CE-1120</b>
	<p><b>Xiaoyan Hu Chase, <a href="mailto:shannon.chase@mga.edu">shannon.chase@mga.edu</a>; Tamara Gray, <a href="mailto:tamara.gray@mga.edu">tamara.gray@mga.edu</a> - Middle Georgia State University</b>            It is 2025, what a fascinating number! Let's implement motivating strategies in the classroom. Motivation plays a significant role in student success. In our presentation, we will present both mathematical and practical motivation strategies that can be used to inspire students to learn math.</p>	

7	<b>Hamiltonian Analysis of Integrable Point Vortices in a Circular Domain</b>	CE-1130
	<p><b>Dr. Mohamed Jamalooden, <a href="mailto:mjamaloo@ggc.edu">mjamaloo@ggc.edu</a> - Georgia Gwinnett College; David Coppock - US Air Force Academy</b></p> <p>Using Hamiltonian methods, we study aspects of point vortex motion in a circular domain. We summarize the case with <math>n=1</math> vortex and focus mainly on studying the collapse and equilibrium solutions of <math>n=2</math> vortices. We also present some results for <math>n=3, 4,</math> and <math>5</math> vortices, and with time permitting we may discuss work on other solutions we have found, including quasi-periodic solutions and choreographic solutions.</p>	
8	<b>BeeCompete: Revolutionizing Competition Access for Students</b>	CE – 1140
	<p><b>Hasmika Kesineni, <a href="mailto:hasmika123@gmail.com">hasmika123@gmail.com</a> - Georgia State University</b>  <b>Ritu Rai, <a href="mailto:ritusinghrai16@gmail.com">ritusinghrai16@gmail.com</a> - Georgia Institute of Technology</b>  <b>Venkata Prudhvi Nath A., <a href="mailto:vxannabathina@shockers.wichita.edu">vxannabathina@shockers.wichita.edu</a> - Wichita State University</b>  <b>Faculty advisor: Somaya Muiny, <a href="mailto:smuiny1@gsu.edu">smuiny1@gsu.edu</a> - Georgia State University Perimeter College</b></p> <p>BeeCompete is a platform designed to centralize competition access for students and organizations. It simplifies registration, offers detailed competition insights and relevant resources, and tracks individualized progress for students while enhancing exposure for organizations and their competitions. By fostering a culture of exploration and engagement, BeeCompete promotes access to diverse opportunities within students.</p>	
9	<b>On Mathematical Modeling of Deposition and Erosion in Porous Media with Elastic Branching Channels</b>	CE - 1150
	<p><b>Paloma Hodje, <a href="mailto:phodje1@student.gsu.edu">phodje1@student.gsu.edu</a> - Georgia State University</b>  <b>Faculty advisor: Pejman Sanaei, <a href="mailto:psanaei@gsu.edu">psanaei@gsu.edu</a> - Georgia State University</b></p> <p>In this paper, we study the processes of erosion and deposition in porous structures to demonstrate how these phenomena modify the structure of porous media at a pore level using a branching model. We model porosity, shear stress, particle concentration, and elasticity parameters during erosion and deposition by implementing Darcy's law, in the case of fluid flow and advection diffusion reaction equation for nutrient transport. By applying fluid dynamics principles and performing simulations on MATLAB, our model writes itself in a public health effort to enhance the engineering process of water filtration devices for water safety around the world.</p>	
10	<b>AI in Freshman Mathematics: Enhancing Learning While Preserving Critical Thinking</b>	CE-1160
	<p><b>Qing Liu, <a href="mailto:qing.liu@ung.edu">qing.liu@ung.edu</a> - University of North Georgia</b></p> <p>This presentation examines AI's role in freshman mathematics learning, highlighting its benefits, challenges, and ethical concerns. While AI enhances problem-solving and personalized learning, over-reliance can hinder critical thinking. This presentation also explores practices for responsible AI integration, ensuring students develop analytical skills while critically engaging with AI-generated solutions.</p>	

**3:30 p.m. – 3:50 p.m.**

11	<b>Using AI Tools to Enhance Students Engagement</b>	CE-1120
	<p><b>Dr. Shinemin Lin, <a href="mailto:lins@savannahstate.edu">lins@savannahstate.edu</a> - Savannah State University</b></p> <p>This presentation explores the integration of ChatGPT, an AI-powered language model, into the math classroom as a tool to enhance student engagement and understanding. With its ability to provide immediate assistance, step-by-step problem-solving, and personalized feedback, ChatGPT offers a unique opportunity to transform traditional teaching methods.</p>	

12	<b>Brainstorming Session about Teamwork in Asynchronous Online Algebra Classes</b>	CE-1130
<p><b>Emily Whaley, <a href="mailto:ewhaley@gsu.edu">ewhaley@gsu.edu</a> - Georgia State University Perimeter College</b></p> <p>The USG IMPACTS initiative requires teamwork in core courses, including College Algebra. Let's work together to find ways to do this for asynchronous online algebra classes. What projects can we assign that will cause student to learn both algebra and groupwork skills? Join us to give and get ideas.</p>		
13	<b>The Mysteries of Real Analysis</b>	CE-1140
<p><b>David Margolis, <a href="mailto:dmargolis@student.gsu.edu">dmargolis@student.gsu.edu</a> - Georgia State University Perimeter College</b>  <b>Faculty advisor: Stephanie Garofalo, Somaya Muiny - Georgia State University Perimeter College</b></p> <p>Real analysis is often cited as the most difficult course in undergraduate mathematics. As difficult as the course is for students, I can also imagine that it is equally difficult for teachers to get their students motivated. I wish to propose a new method that teachers can use.</p>		
14	<b>When AMATYC Meets MATH 1001, MATH 1401</b>	CE - 1150
<p><b>Abu Thomas, <a href="mailto:athomas371@gsu.edu">athomas371@gsu.edu</a>; Sam Su, <a href="mailto:jsu10@gsu.edu">jsu10@gsu.edu</a> - Georgia State University Perimeter College</b></p> <p>In this talk, Dr. Su and Dr. Thomas will present some insightful, interesting techniques to solve problems that have appeared in the Student mathematics league conducted by AMATYC. Particularly, focus would be on techniques that can be derived from topics learnt in MATH 1001 Quantitative Reasoning course and MATH 1401 Elementary Statistics. Presenters will also be discussing some innovative pedagogical techniques that can be used while teaching Quantitative Reasoning and Elementary Statistics.</p>		
15	<b>Developing Thermal Measurement Capabilities using the Hot Disk in the Lubner Group</b>	CE-1160
<p><b>Haneen Ahmed, <a href="mailto:haneen04ahmed@gmail.com">haneen04ahmed@gmail.com</a> - Georgia Institute of Technology</b></p> <p>Reducing CO2 emissions alone is no longer enough to combat global warming; direct air capture methods are now needed. Metal-Organic Frameworks (MOFs) are potential sorbents for carbon capture. To better understand MOF thermal properties, which dictate performance, this project focuses on developing Hot Disk capabilities to measure thermal properties.</p>		