35ᵗʰ Annual Mathematics Conference

Perimeter College at Georgia State University

February 11st, 2022

WebEx

Conference Guest Speakers

Welcome	Dr. Cynthia Lester, Interim Dean of Perimeter College
Introduction of Speaker	D**r.** Nikita Patterson Chairperson, Perimeter College Mathematics Conference
Keynote and Panel Speakers	• Dr. Pamela Seda (keynote) • Dr. Kyndall Brown (keynote) • Dr. John King (panel) • Dr. Janna Blum (panel) • Dr. Sahithya Reddivari (panel) • Dr. Christopher Jett (panel)

About the Keynote and Panel Speakers

Dr. Pamela Seda is a veteran math educator with over 30 years of experience. She is the owner of Seda Educational Consulting, creator of The VANG Game math card game, and co-author of the book, *Choosing to See: A Framework for Equity in the Math Classroom*. Dr. Seda received a Bachelor's degree in Math Education from the University of South Florida, a Master's degree in Math Education from Georgia State University, and a Ph.D. in Teaching and Learning with a concentration in Math Education from Georgia State University. She has held various positions in math education including high school math teacher, instructional coach, college math instructor, and district math supervisor. She is currently the Professional Learning Director for NCSM Math Education Leadership and the Treasurer for the Benjamin Banneker Association. Dr. Seda is passionate about changing how students experience mathematics, especially those from marginalized groups, and advocates for mathematics instruction that develops all students as mathematical thinkers and problem-solvers.

Dr. Kyndall Brown has over 35 years of experience in mathematics education. Kyndall holds a bachelor's degree in mathematics, master's degrees in computer-based education and mathematics education, and a Ph.D in Education. He was a secondary mathematics teacher for 13 years. He has been a professional development provider for schools and districts in Los Angeles County for over 25 years. He is currently the executive director of the California Mathematics Project. He presents at local, state, and national conferences on mathematics education. He writes articles for mathematics education publications. His research focuses on the impact of culture and identity on the ways that African-American males learn mathematics. He is the co-author of the book Choosing To See: A Framework For Equity In The Math Classroom.

John D. King is a life-long learner and educator. He received his Bachelor's degree in Mathematics from Mercer University, a Master's and PhD degree in Mathematics Education from the University of Georgia, and an MBA from Kennesaw State University. John has over 25 years of experience in academia, which includes positions as an educational administrator, and a mathematics, computer, and finance instructor. He taught on the middle and secondary school level, as well as the post-secondary (technical, college, and university) level. John has worked for over ten years in various administrative capacities on the college and University level, including Program Coordinator, Undergraduate Coordinator, Department Chair, and Dean of Academics. Additionally, John worked as a Financial Advisor, licensed in insurance, annuities, and securities. John is currently the Department Chair and Associate Professor of Mathematics at Georgia State University at Perimeter College, where he oversees the Mathematics departments of the five Perimeter College campuses and online, as well as manages several grants and other initiatives.

Dr. Reddivari received her Ph.D. in Environmental Engineering from the University of Michigan in 2016. Her doctoral research focused on studying performance losses in current battery technologies to guide the development of novel energy storage materials that will reduce our dependence on fossil fuels in the future. Specifically, she developed computer models that can simulate the complex reaction chemistry of manganese-containing lithium-ion batteries. Dr. Reddivari enjoys working on experiential learning projects and engaging with students outside of the classroom. Her passion led to the startup and running of the STEM Lab on the Clarkston campus. She currently advises the Clarkston Women in STEM student organization that meets every Friday at 11 AM in CC1180. In the past, she worked with female engineering students in Liberia, helping them establish the first student affiliate of the Society of Women Engineers in the continent of Africa (Blog). She was instrumental in implementing a leadership camp for female engineering students from the University of Liberia and the University of Michigan.

Dr. Christopher C. Jett is Professor of Mathematics Education in the Department of Computing and Mathematics at the University of West Georgia. His NSF CAREER project investigates African American male STEM majors' mathematical and racialized experiences. He is a 2019 Presidential Early Career Award for Scientists and Engineers (PECASE) recipient. His research has been published in the *Journal for Research in Mathematics Education, Investigations in Mathematics Learning,* and the *Journal of Higher Education* and he is a co-editor of *Critical Race Theory in Mathematics Education.*

Dr. Janna Blum is an Associate Professor of Chemistry at Georgia State University: Perimeter College and the current Coordinator of the MESA Program and co-Advisor of the WiSE Club at Clarkston Campus. She has been at the college since 2011. After completing her BS degree in Chemical Engineering, she worked in industry for Merck Pharmaceutical company doing API manufacturing and vaccine development. She then earned her Ph.D. in Chemical and Biomolecular Engineering from Georgia Tech with a research focus in enzyme catalysis. Lastly, she is the proud parent of 7 year old boy/girl twins and in her spare time volunteers as an advocate for medically-complex kids.

Keynote Speech Title: **It's Time to Move From Equity Talk to Action**

Description: Ever since NCTM put forward its equity principle in 2000, math educators have grappled with making equitable math instruction a reality. In this presentation, participants will learn how to use a math equity framework to implement practical strategies that create more equitable outcomes for all students, including those from marginalized groups.

Tentative Schedule (all times are Eastern)

- 10:00 a.m. – Welcome, Dr. Cynthia Lester, Interim Dean of Perimeter College
- 10:05 a.m. – Introduction of the Keynote, Dr. Nikita Patterson, 2022 Conference Chair
- 10:10 a.m. – Keynote, Dr. Pamela Seda and Dr. Kyndall Brown
- 11:05 a.m. – Q&A
- 11:30 a.m. – "FREEing our Students: A Panel on Student Success Initiatives", Dr. John King (GSU), Dr. Sahithya Reddivari (GSU), Dr. Christopher Jett (UWG), Dr. Janna Blum (UWG)
- 12:25 pm –   Closing Remarks, send out link for prerecorded sessions
- 2:00 p.m. – GMATYC meeting

Engagement

1	**Elements for Successful Courses in the Digital Age**
	Sydney Smith Hawkes Learning ssmith@hawkeslearning.com
	"With an increasing mix of online, hybrid & in-person course offerings, students are learning differently than ever before. As a result, they require a unique set of resources that not only meet their general course needs but also give them the necessary support to thrive in the array of new learning environments that they may encounter. Join us as we break down the two elements that instructors can implement to help meet students needs in modern classroom setups. We will explore how factors such as equity, scalability and engagement play a role in supporting students as they learn, ensuring positive outcomes in any course structure. Learn new ways to connect with your students, facilitate active participation, prioritize accessibility, and more."
2	**Math in Microlearning**
	Debra Kean DeVry University dkean@devry.edu Vincent Harvey II (student) Georgia Institute of Technology vharvey6@gatech.edu "Whoever wants to understand much must play much." Gottfried Benn What is free, engaging, and educational? Game-based learning platforms, such as Kahoot!, Nearpod, and PlayPosit, as well as social media (e.g., teaching with TikTok). These edutainment options were explored in 16 College Algebra courses. Student retention rates and satisfaction scores improved.
3	**Making Automated Practice Problems with GeoGebra**
	Thomas Cooper University of North Georgia tom.cooper@ung.edu The presenter will provide links and examples of automated practice problems written with GeoGebra for Calculus and College Algebra. These use GeoGebra's "button" feature and pseudo-random numbers to algorithmically generate new versions and provide step-by-step solutions. At least one example will be built during the presentation.
4	**Improve Student Engagement with MÖBIUS**
	Burton Heaslip DigitalEd bheaslip@digitaled.com Burton Heaslip from DigitalEd shares how MÖBIUS, the most innovative and comprehensive learning platform for STEM in higher education, increases student engagement in online and hybrid learning environments.
5	**Teaching Calculus with Desmos**
	Tirtha Timsina Perimeter College at Georgia State University ttimsina@gsu.edu In this presentation, Dr. Timsina will show how Desmos can be useful to engage students in calculus. He will demonstrate examples from Calculus that uses advanced graphing techniques to compute area between two functions, work done in pumping water out of the tank.
6	**Student Achievement within Reach - Knewton ALTA**
	Clay Stone Wiley cstone@wiley.com Alta is Knewton's newest product for higher education. Alta is a complete courseware solution that combines Knewton's expertly designed adaptive learning technology with high quality openly available content to deliver a personalized learning experience that is affordable, accessible and improves student outcomes. All of the instructional content needed for a course – including text and video, examples and assessments – is included in each alta product. Alta is now available in multiple courses in math and statistics.
7	**Visualizing Calculus in MyLab Math**
	Aaron Warnock, Pearson Pearson Faculty Advisor will share effective learning tools and questions types used in his Calculus courses: including conceptual question library, set-up and solve exercises, interactive figures, NEW Geogebra exercises, and Gradescope.

Equity	

8	Easy Ways to Make Your Class More Inclusive and Equitable
	Keisha Brown Georgia State University - Perimeter College klanier1@gsu.edu
	Many educators will say that students perform better when they are in a safe environment where they feel welcomed and appreciated. The question always becomes, "How do I actually do that without a lot of time or effort?" In this session, participants will be given 20 different ways they can make their classrooms more inclusive. Participants will also be able to share techniques they have used to make their classes more inclusive.
9	Mathematics Teachers Conceptualizations of Equity in Track Recommendation Discussions
	Dr. Pam Liu Georgia State University liu.pam1@gmail.com
	What criteria are high school teachers using to recommend students for general (low-track) or honors (high-track) level mathematics courses? This presentation highlights the findings from a case study on a team of Algebra I teachers and their discussions on race, equity, and evaluating students' mathematics ability levels.
10	Academic Help Seeking Behaviors
	Ervin J. China Ph.D. Georgia State University's Perimeter College echina1@gsu.edu April C. Crenshaw Chattanooga State Community College April.Crenshaw@chattanoogastate.edu
	Mathematics help seeking can be an important self-regulated learning strategy and activity engaged in by highly motivated and academically successful students. Join us as we explore the extant literature about academic help seeking and highlight some of the results of a 2019 research study involving the mathematics help-seeking behaviors of African-American two-year college students and the factors that may have influenced these behaviors.

Relevance	

11	Math Comes Alive with Desmos and OneNote
	Revathi Narasimhan Kean University, Union NJ RNarasim@kean.edu Leveraging the graphing app Desmos, this presentation will illustrate how a college algebra course for business majors is brought to life through engaging models and visualization, with OneNote as the content platform for activities and assessments.
12	Excel and the Normal Distribution
	Amos Darrisaw Georgia State University, Perimeter College adarrisaw@gsu.edu
	The normal distribution is the most common distribution in our study of Elementary Statistics. Excel is one of the most common analytical tools in Business and Social Science. This video presentation illustrates how Excel and the normal curve can be used together to make probability intuitive and thus relevant.

Other	

13	A new AI powered Math tutor
	Selcuk Koyuncu University of North Georgia skoyuncu1@gmail.com We introduce an artificial intelligence powered Math app that makes instant video solutions for students Math questions. This is a free SaaS solution called Mylearnmate. Students can download it in their IOS devices and they can also use the web application to ask their Math questions.
13	McGraw Hill ALEKS- Fostering Flexibility, Relevance, Equity and Engagement
	Adrian Hernandez (Student), Mary Merchant (Instructor)Student-Triton College, Illinois & Mary Merchant-Cedar Valley College, Lancaster, TX mmerchant@dcccd.edu McGraw Hill ALEKS will showcase their ALEKS platform by providing examples of various course build models (flexibility), sharing success stories from actual instructors, and hearing from students how ALEKS addresses equity and engagement no matter what math background or level of preparedness you have. ALEKS allows instructors to assign homework, share curated content such as videos and other resources, review student progress and provide student support anytime, anywhere. Instructors can quickly identify what their students know and don't know and, from there, ALEKS will deliver the most efficient and cost effective learning path to ensure we unlock the potential of every learner.