

MATHEMORPHOSIS



IT'S TIME FOR A CHANGE

33RD Annual Mathematics Conference
Georgia State University, Perimeter College

Clarkston Campus

Friday and Saturday
February 7-8, 2020



33rd Annual Mathematics Conference

Perimeter College at Georgia State University

February 7th -8th, 2020

Clarkston Campus

Conference Guest Speakers

Welcome

Dr. Nancy Kropf PhD
Dean | Perimeter College

Introduction of Speaker

Hong Du
Chairperson, Perimeter College Mathematics Conference

Keynote Address

Dr. Padmanabhan Seshaiyer

About the Keynote Speaker

Dr. Padmanabhan Seshaiyer is a tenured Professor of Mathematical Sciences at George Mason University and serves as the Associate Dean for Academic Affairs in the College of Science, Director of the STEM Accelerator and the Director of COMPLETE (Center for Outreach in Mathematics Professional Learning and Educational Technology) at George Mason University in Fairfax, Virginia. His research interests are in the broad areas of computational mathematics, scientific computing, computational biomechanics and STEM education. In particular, his research in computational mathematics includes the development of new analytical techniques and efficient computational algorithms to obtain numerical solutions to differential equations describing multi-physics interactions. His research in computational biomechanics includes developing, extending and applying mathematics for the purposes of better understanding the physiology and pathophysiology of the human vascular system. Integrated with the research plan is a STEM education plan where the primary goal is to teach students and teachers at all levels to apply well-developed research concepts, to fundamental applications arising in STEM disciplines. During the last decade, Dr. Seshaiyer initiated and directed a variety of educational programs including graduate and undergraduate research, K-12 outreach, teacher professional development, and enrichment programs to foster the interest of students and teachers in STEM at all levels. During this time he received multiple grants from several agencies, including the National Science Foundation, the National Institutes of Health, Whitaker Foundation, Texas Advanced Research Program, Virginia Department



of Education and State Council for Higher Education in Virginia. In addition to his research accomplishments, Dr. Seshaiyer contributed extensively to teaching and won several prestigious awards, including the President's Excellence Award in Teaching which is the highest award for teaching offered at two different institutions, the faculty mentoring excellence award in 2013, the GMU Alumni Faculty of the Year in 2014 and also has been nominated for the Presidential Awards for Excellence in Science, Mathematics and Engineering Mentoring (PAESMEM). He has delivered keynote and plenary talks at several national and international meetings. He is also one of the Nifty-Fifty speakers and an X-STEM Symposium Speaker for the USA Science and Engineering Festival invited for a fourth time and also has given two TEDx talks, the most recent one being "The M in STEM". He serves on several prominent local and national organizations including a newly formed VA-STEM learning network; the Virginia Mathematics and Science Coalition; the WashingtonExec STEM Council; the LEGO Education Advisory Panel (LEAP), Advisory Board (Station1), Children's Science Center STEM Advisory Board and the Northern Virginia MATHCOUNTS board. In 2013 he was elected both as a new Councilor for the Mathematics and Computer Science Division of the Council on Undergraduate Research as well as the US National Commission for Mathematics Instruction by the National Academy of Sciences. He is also actively involved in multiple global STEM collaborative projects and training programs that engage students and faculty from various countries including Tanzania, Suriname, Philippines, Myanmar, Tunisia, India, Colombia, Ecuador, South Korea, Jamaica, Belize, Bahamas, Brazil, Nepal Laos, Singapore and a more recently formed Latin-American Consortium of researchers.

In summary, Dr. Seshaiyer's contributions have included directing two major funded centers of excellence; mentoring research projects for over 180 students at all levels; publishing over 110 peer-reviewed journal articles and proceedings; authoring two graduate texts (one in Numerical Analysis and another on mathematical modeling for teachers); acquiring over \$11 Million in grant funding (both state and federal) to promote multidisciplinary research, training and mentoring programs for students, teachers and faculty; directing over 25 new initiatives to accelerate STEM learning in formal and informal environments; developing global partnerships with over 12 countries for student and faculty exchange programs; leading new State-wide and Federal consortiums in teacher Professional Development; winning over 20 individual teaching, mentoring as well as program awards; delivering over 250 invited talks both nationally and internationally; being selected as a member of several prestigious National organizations and; with accomplishments featured through more than 60 media news coverage articles and stories; holding adjunct and affiliate professor positions at four different institutions and; has served as a Program Director at the National Science Foundation. More details about his work can be found at: <http://math.gmu.edu/~pseshaiyer/outreach.html>

Description of Keynote Address

Transforming institutional practices through innovative approaches in Mathematics Teaching and Research

In this talk, participants will have the opportunity to learn how to incorporate a variety of educational frameworks to make innovations in pedagogical and research practices that can help enhance student learning. Examples will include active learning spaces, evidence based teaching, experiential learning, project based learning, challenge based learning, digital innovations and undergraduate research. Participants will also recognize that not only do these integrated approaches provide an opportunity for a shared collaborative experience for students, teachers and faculty to develop professionally but also will help to give them an opportunity to become change agents to transform their respective institutional and organizational practices.

Announcements

Evaluation Forms

Please complete an evaluation form for the conference, which can be found at our website, <http://sites.gsu.edu/pc-gsu--mathconference/end-of-conference-survey/>. We value your feedback and appreciate you taking the time to submit your comments!

Name Badge Holders

Please return your name badge holder to the registration table after you have attended your last conference event.

Parking

If you receive a parking ticket, turn it in at the registration table.

Handouts

Copies of handouts will be available online at the conference website <http://sites.gsu.edu/pc-gsu--mathconference/>

Thank you for attending!

We hope that you enjoy the conference!

Thank you!

The Perimeter College Mathematics Conference Committee thanks the following for their contributions and generous support of the 33rd Annual Perimeter College Mathematics Conference.

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Schedule at a Glance

Friday, February 7, 2020		
Time	Event	Location
8:00 AM	Registration Begins	CN building, 1 st floor
8:30 AM	Hot Breakfast	CN-2220
9:00 AM – 10:45 AM	Full Sessions	CE building
10:55 AM	Welcome & Keynote Address	LRC - 1100
12:00 PM	Lunch	CN-2220
12:00PM – 12:55PM	GMATYC Meeting	CN-2240
1:00 PM – 3:45 PM	Full Sessions	CE building
4:00 PM – 4:20 PM	Mini Sessions	CE building
5:00 PM	Dinner	CN building, 1 st floor
Saturday, February 8, 2020		
Time	Event	Location
8:00 AM	Registration Begins	CN building, 1 st floor
8:30 AM	Continental Breakfast	CN-2220
9:00 AM – 11:20 AM	Student Presentations	CE building
11:30 AM – 12:30 PM	Lunch	CN-2220

Detailed Schedule

Friday, February 7, 2020

Full Sessions

Session Time	CE-1120	CE-1130	CE-1140
9:00 – 9:45 AM	1. How To: Co-Reqs	2. Teaching Introductory Statistics: Ask Good Questions	3. I'm Breaking Up with My Graphing Calculator...
Session Time	CE-1150	CE-1160	CE-1170
9:00 – 9:45 AM	4. Marrying History of Mathematics and Technology in a Mathematics Class	5. Could you/would you stop talking? Enhancing Student Engagement by Decreasing Your Lecture Time	6. Coming Fall 2020: A New Corequisite Course for Elementary Statistics
Session Time	CE-1120	CE-1130	CE-1140
10:00 – 10:45 AM	7. Morphing Ideas into Grants: Finding External Funding	8. Teaching to Facilitate Self-Directed Learning	9. An effective Co-requisite framework and OpenMathLab
Session Time	CE-1150	CE-1160	CE-1170
10:00 – 10:45 AM	10. Small Teaching: How it can have a powerful impact on student learning	11. So they forced you to teach Statistics? It's really not as bad as you think	12. Supporting Underprepared Students with Scaffolding & Accountability in a Corequisite Courses
10:55 AM	Keynote Address: Dr. Padmanabhan Seshaiyer LRC - 1100		
12:00 PM	Lunch CN – 2220		
12:00PM – 12:55PM	GMATYC Meeting CN-2240		

	Full Sessions		
Session Time	CE-1120	CE-1130	CE-1140
1:00 – 1:45 PM		14. Experimenting with Knewton-Alta and the e-text OpenStax Calculus Vol I	15. Mindset, Mindfulness, & Math
Session Time	CE-1150	CE-1160	CE-1170
1:00 – 1:45 PM	16. Strategies for a Rapid Transition to a Low Cost Math Courseware	17. Developing Effective Content for a College Algebra with Corequisite Support Course.	18. Increasing Self-Regulation: A Way to Improve Learning for All Students
Session Time	CE-1120	CE-1130	CE-1140
2:00 – 2:45 PM	19. My Experience with Corequisite College Algebra	20. Three Ways to Coreq with a Low Cost Math Solution Three Ways to Coreq with a Low Cost Math Solution	21. Creating Documents in D2L Brightspace
Session Time	CE-1150	CE-1160	CE-1170
2:00 – 2:45 PM	22. Using Edfinity (NSF Award #1758301) - an affordable, textbook-agnostic homework system - to reach every student	23. Untapped Goldmine! Unlock the Secrets to Maintaining & Sustaining Student Engagement	24. Helping Struggling Students Master Mathematics
Session Time	CE-1120	CE-1130	CE-1140
3:00 – 3:45 PM	25. Cengage Unlimited and WebAssign: A New Way for Students to \$Save Money\$ when accessing their Course Materials.	26. Using Real Population Data and Sampling to Illustrate Difficult Statistical Concepts	27. TI84: Beyond the basics

Full sessions			
Session Time	CE-1150	CE-1160	CE-1170
3:00 – 3:45 PM	28. Math Can Be a Bridge, Instead of a Barrier, to the Future	29. Small Teaching, Big Impact: Integrating Active Learning into your Classroom	

Friday, February 7, 2020

Mini Sessions

Session Time	CE-1120	CE-1130	CE-1140	CE-1150	CE-1160
4:00 – 4:20 PM	1. Musical Vectors and Spaces	2. The Effects of a Platform Digital Game-Based Learning on Undergraduate Students' Achievement and Motivation in A Multivariable Calculus Course	3. The Mathematical Music Composition Workshop	4. MOOC Foundations for Area A Math Courses	5. Scantron - New(ish) and Improved

5:00 PM

Dinner - CN building, 1st floor

Saturday, February 8, 2020

Student Sessions

Time	Event	Location
8:00 AM	Registration Begins	CN building, 1st floor
8:30 AM	Continental Breakfast	CN-2220

Session Time	CE-1120
9:00 – 9:20 AM	The Mathematical Music Composition Workshop from the Students' Perspective
9:30 – 9:50 AM	Topographic Drone Surveying
10:00 – 10:20 AM	What is a Perfect Free Throw?
10:30 – 10:50 AM	Cryptography: From Caesar to RSA
11:00 – 11:20 AM	Harry Douglas Huskey

Time	Event	Location
11:30 AM	Lunch	CN-2220

Abstracts for Full Sessions
Friday, February 7, 2020

9:00 a.m. – 9:45 a.m.

1	How To: Co-Reqs	CE – 1120
	<p>Alex Pasquine, Wiley Publishing, apasquine@wiley.com</p> <p>Wiley's adaptive courseware, Knewton alta, provides personalized learning for students in Co-Req classes. This session covers how alta can create unique opportunities for instructor-student engagement, and can be leveraged, alone or in conjunction with campus resources, to support students who struggle while enrolled in co-req classes.</p>	
2	Teaching Introductory Statistics: Ask Good Questions	CE - 1130
	<p>Allan Rossman, Cal Poly - San Luis Obispo, arossman@calpoly.edu</p> <p>This session presents questions for helping students to learn introductory statistics. These questions follow the ASA's GAISE recommendations about teaching statistical thinking, emphasizing conceptual understanding, using real data, and using technology effectively. Both in-class activities and summative assessments will be included, some of which use freely available interactive applets.</p>	
3	I'm Breaking Up with My Graphing Calculator...	CE-1140
	<p>Wendy Davidson, Perimeter College at Georgia State University, wdavidson1@gsu.edu</p> <p>I made a radical change in my Quantitative Reasoning course: I did not require students to purchase any specific type of calculator. Instead students learned comparable skills in EXCEL. What went down? What happened? Come find out.</p>	
4	Marrying History of Mathematics and Technology in a Mathematics Class	CE-1150
	<p>Christopher G. Serkan, University of North Georgia, christopher.serkan@ung.edu</p> <p>Within the mathematics education literature, the need for using historical mathematical ideas as well as the need for integrated technology in mathematics classes have separately been proposed by various mathematics educators. However, possible integration of these ideas has not yet been investigated. This paper argues the need for a successful integration of historical mathematics resources with an appropriate application of technological tools. The authors of this article not only demonstrate how this aim can be achieved but also provide a theoretical explanation for this need. This paper aims to present how and why historical problems should be integrated in a meaningful way with incorporation of technology to create a constructivist-teaching environment. In this paper, authors will present classroom activities that make basic numerical analysis ideas accessible to high school and college students by taking into account the historical development of these ideas across civilizations.</p>	
5	Could you/would you stop talking? Enhancing Student Engagement by Decreasing Your Lecture Time	CE-1160
	<p>Keisha Brown, Perimeter College at Georgia State University, klanier1@gsu.edu</p> <p>Research says that students must be actively engaged in order to best understand and learn the material. How can we have both active engagement during class while still covering all of the material necessary? If students no longer read their textbooks, how can you confirm that they have the prior knowledge necessary? In this session, we will answer those questions and participate in Elementary Statistics activities that demonstrate how we can teach the content without being completely lecture- based.</p>	
6	Coming Fall 2020: A New Corequisite Course for Elementary Statistics	CE-1170
	<p>Marvelyn Tapp and Lynda Cain, Perimeter College at Georgia State University mtapp@gsu.edu, lcain3@gsu.edu</p> <p>During this session, the presenters will discuss GSU Perimeter College's plans to implement a new corequisite course, MATH 0996, Support for Elementary Statistics, designed to help students acquire essential skills and knowledge to successfully complete MATH 1401 Elementary Statistics.</p>	

Abstracts for Full Sessions
Friday, February 7, 2020

10:00 a.m. – 10:45 a.m.

7	Morphing Ideas into Grants: Finding External Funding	CE – 1120
	Glenn Pfeifer, Georgia State University, gpfeifer@gsu.edu Faculty will learn about places to search for external funding and how to evaluate funding opportunities.	
8	Teaching to Facilitate Self-Directed Learning	CE - 1130
	Diana McGinnis, Perimeter College at Georgia State University, dmcginnis@gsu.edu The presentation will address how the instructor modified her teaching style so that she prioritizes student self-direction both inside and outside the classroom. Some activities that have been implemented include reading worksheets, self-assessments, five minute closing questions, interleaving techniques, and student reflections. These low-stakes activities, many of which are supported by research, have created a more student centered classroom environment as well as a happier teacher.	
9	An effective Co-requisite framework and OpenMathLab	CE-1140
	Dr. Man M. Sharma, Educo International Inc. (Educosoft), Ashim@eduosoft.com Educosoft offers a unique and effective way to deliver any corequisite course with built-in system guided just-in-time remediation. Educosoft OpenMathLab as supplemental technology & digital resource for Math skill review and mastery.	
10	Small Teaching: How it can have a powerful impact on student learning.	CE-1150
	Jennifer Williford, University of North Georgia, jennifer.williford@ung.edu Learn how small changes in course preparation and classroom presentations can lead to big changes in student learning. This presentation is based on the work of James Lang and will include practical takeaways to apply to a college mathematics classroom.	
11	So they forced you to teach Statistics? It's really not as bad as you think.	CE-1160
	Keisha Brown, Perimeter College at Georgia State University, klanier1@gsu.edu Statistics is the science (some say art) of collecting, organizing, summarizing, and analyzing information in order to draw conclusions or answer questions. Using the 2018 salary data from GSU, we will complete a high-level overview of a Math 1401 course and discover the mysteries our data has in store for us.	
12	Supporting Underprepared Students with Scaffolding & Accountability in a Corequisite Courses	CE-1170
	Jessica Lickeri, Columbus State Community College, jlickeri@cscs.edu Jessica Lickeri and Amy Hatfield (Columbus State Community College) will share how they use “the science of learning,” growth mindset theory, and research-based pedagogy to scaffold positive student behaviors, effective study skills, and student accountability so that college-level expectations are attainable for today’s Corequisite students.	

Abstracts for Full Sessions
Friday, February 7, 2020

1:00 p.m. – 1:45 p.m.

14	Experimenting with Knewton-Alta and the e-text OpenStax Calculus Vol I	CE - 1130
	<i>Kouok Law, Georgia State University Perimeter College, klaw@gsu.edu</i> Affordable Learning Georgia is a USG initiative to expand and explore new approaches to textbook transformation. We are piloting the OpenStax e-text with the support of the Knewton-Alta courseware in Calculus I during the Fall-2019 and Spring-2020. We will present the outcomes of our experiment: the results, what works, and the challenges.	
15	Mindset, Mindfulness, & Math	CE-1140
	<i>Lauren Frazier, Georgia State University Perimeter College, lfrazier8@gsu.edu</i> During this session the presenter will demonstrate how she incorporated mindset mindfulness in Quantitative Reasoning and its corequisite through the use of MyLab Math (MLM), in-class teamwork through MLM's Learning Catalytics, and what students thought about it all.	
16	Strategies for a Rapid Transition to a Low Cost Math Courseware	CE-1150
	<i>Maureen McGee, Albany Technical College, mmcgee@albanytech.edu</i> How does a wide-scale shift impact faculty and students? Albany Technical College transitioned six courses to a low cost (\$25) courseware in less than a year. Strategies and lessons learned from course redesign initiatives using customizable OER courseware will be shared at this session.	
17	Developing Effective Content for a College Algebra with Corequisite Support Course	CE-1160
	<i>Julie Miller, Daytona State College, Julie.miller.math@gmail.com</i> As Corequisite courses are implemented across the country, finding materials that fits the needs of this emerging audience has provided unique challenges for today's instructors. In this session, Julie Miller will discuss the market research and effort that went into developing her new College Algebra with Corequisite Support 1e and dive into some of the unique features and ancillary resources developed specifically for today's corequisite student.	
18	Increasing Self-Regulation: A Way to Improve Learning for All Students	CE-1170
	<i>Dr. Jane Reed, Way to Succeed, LLC, waytosucceed@mail.com</i> Mathematics is a gatekeeper class for first-year students. However, students' learning practices are critical for success. A new product, Way to Succeed, encourages development of self-regulating factors through self-reflective assessments, personalized feedback, and recommendations for improvement in thirteen areas of effective learning resulting in significant increases in mathematics achievement.	

Abstracts for Full Sessions
Friday, February 7, 2020

2:00 p.m. – 2:45 p.m.

19	My Experience with Corequisite College Algebra	CE – 1120
	<p><i>Michael Sullivan, Joliet Junior College, sullystats@gmail.com</i></p> <p>This presentation will begin with a discussion of the various corequisite models that exist and explain the rationale behind the model used at Joliet Junior College. Then, we will discuss the structure of the corequisite course and review the course layout (corequisite material, college algebra material, and soft skills). Participants will be given the courseID (MyLab) for the course. Finally, the group will discuss best practices based on our experiences. Anyone who has taught a corequisite course (or plans to) will benefit.</p>	
20	Three Ways to Coreq with a Low Cost Math Solution	CE - 1130
	<p><i>Paul Golisch, Manuela Ambrosino, Lumen Learning, paul@lumenlearning.com, manuela@lumenlearning.com</i></p> <p>As math faculty build and refine courses with corequisite support, OER offer unprecedented flexibility to shape learning experiences and increase student success. This session features how to customize courses with a \$25 solution in three different corequisite course models. Examples of how Desmos will be integrated will also be shared.</p>	
21	Creating Documents in D2L Brightspace	CE-1140
	<p><i>Robby Williams, Georgia State University Perimeter College, jwilliams345@gsu.edu</i></p> <p>There are several advantages to creating documents directly in D2L as HTML files; the documents are mobile-friendly and accessible. The presentation will demonstrate creating files in D2L, inserting equations using both the graphical equation editor and LaTeX, inserting links, and using Desmos to create and insert graphs.</p>	
22	Using Edfinity (NSF Award #1758301) - an affordable, textbook-agnostic homework system - to reach every student.	CE-1150
	<p><i>Sid Grover, Edfinity, sid@edfinity.com</i></p> <p>We present case studies of educators who developed low-cost online homework using Edfinity, an open, WeBWork-compatible homework system supported by the NSF. Using Edfinity, educators at 100+ institutions assembled 'textbook-agnostic' homework with peer-reviewed problems mapped to publisher/OER textbooks, thereby 'unbundling' expensive textbook/homework bundles and dramatically increasing student access</p>	
23	Untapped Goldmine! Unlock the Secrets to Maintaining & Sustaining Student Engagement	CE-1160
	<p><i>Shawna Johnson, Microsoft, shawnajohnsonspeaks@gmail.com</i></p> <p>This presentation will focus on classroom interventions to increase engagement of special needs and exceptional students.</p>	
24	Helping Struggling Students Master Mathematics	CE-1170
	<p><i>VALENCIA THORNTON, CRAM ACADEMY, ramacademy@yahoo.com</i></p> <p>Join Valencia as she shares practical strategies in math for students who struggle. Come see how state standards are clustered and practiced while focusing on the big idea. Creative ways of assessing students will be modeled.</p>	

Abstracts for Full Sessions
Friday, February 7, 2020

3:00 p.m. – 3:45 p.m.

25	Cengage Unlimited and WebAssign: A New Way for Students to \$Save Money\$ when accessing their Course Materials.	CE -1120
	<p><i>Michael Lafreniere, Ohio University - Chillicothe Campus, lafrenie@ohio.edu</i></p> <p>In this session, we will demonstrate the newest features of WebAssign and how Cengage Unlimited provides Access to all your Cengage courses, online textbooks + extra study support and more when your students purchase Cengage Unlimited for WebAssign.</p>	
26	Using Real Population Data and Sampling to Illustrate Difficult Statistical Concepts	CE - 1130
	<p><i>Michael Sullivan, Joliet Junior College, sullystats@gmail.com</i></p> <p>Two topics that students struggle with are the concepts of sampling distributions and confidence intervals. Real (and large) population data is used to illustrate the distribution of the sample mean. We then transition to using population data to explore both the conditions upon which a confidence interval for a mean may be constructed and the meaning of level of confidence. Participants will be exposed to the power of the statistical package StatCrunch.</p>	
27	<i>TI84: Beyond the basics</i>	CE-1140
	<p><i>David Vogel, Middle Georgia State University, david.vogel@mga.edu</i></p> <p>In this talk we will highlight several less well-known features of the Texas Instruments graphing calculator "TI84" that are useful in a differential equations course. We will test solutions to differential equations, and implement recursive processes such as "Euler's method" without the use of expensive applications such as Mathematica.</p>	
28	<i>Math Can Be a Bridge, Instead of a Barrier, to the Future</i>	CE-1150
	<p><i>Jennifer Walker and Ruben Casseus, Georgia State University Perimeter College, jwalker158@gsu.edu; rcasseus@gsu.edu</i></p> <p>Remedial math can become an overwhelming barrier for college students, impeding and altering their success. Math should be a bridge, instead of a barrier, to a successful education. This interactive presentation will enlighten awareness on key topics that have been proven to aid in a successful academic performance.</p>	
29	Small Teaching, Big Impact: Integrating Active Learning into your Classroom	CE-1160
	<p><i>Kathryn Crowther, Georgia State University Perimeter College, kcrowther@gsu.edu</i></p> <p>Based on Jim Lang's book 'Small Teaching: Everyday Lessons from the Science of Learning', this presentation will discuss how small teaching changes can have a positive impact on student engagement and success in your courses. Participants will work through an inventory of small teaching practices that positively impact student learning</p>	

Abstracts for Mini Sessions
Friday, February 7, 2020

4:00 p.m. – 4:20 p.m.

1	Musical Vectors and Spaces	CE – 1120
	<p><i>Candace Carroll, Gordon State College, ccarroll@gordonstate.edu</i></p> <p>A vector is a quantity which has both magnitude and direction. In music, an interval is a vector. This paper discusses the notion of musical vectors in musical spaces. Keywords: pitch space, pitch class space, chord space, vector space, affine space, J. S. Bach, Frédéric Chopin</p>	
2	The Effects of a Platform Digital Game-Based Learning on Undergraduate Students' Achievement and Motivation in A Multivariable Calculus Course	CE - 1130
	<p><i>Dr. Malcom Devoe, malcomdevoe@ymail.com</i></p> <p>This study examined the effects of a researcher-designed digital game-based learning (DGBL) environment called Adventures of Krystal Kingdom on undergraduate students' mathematics achievement and motivation in a Multivariable Calculus course.</p>	
3	<i>The Mathematical Music Composition Workshop</i>	CE-1140
	<p><i>Dr. Mariana Montiel, Georgia State University, mmontiel@gsu.edu</i></p> <p>Mathematics and music composition students participated in an interdisciplinary project employing compositional techniques based on mathematics (STEAM). The work resulted in "lecture-concerts". This talk will explain some of the mathematical areas used and how this unique collaboration and application can enhance understanding and motivation of mathematical subjects.</p>	
4	MOOC Foundations for Area A Math Courses	CE-1150
	<p><i>Mary Dwyer Wolfe, Middle Georgia State University, mary.wolfe@mga.edu</i></p> <p>With the removal of LS Foundations course from our curriculum, the proposal to create free MOOC options for each Area A course was born. Since Brightspace/D2L allows for self-registration, it was only necessary to carefully determine prerequisite skills, and collect/create materials to self-teach those skills, along with pre/post-tests.</p>	
5	Scantron - New(ish) and Improved	CE-1160
	<p><i>Stephanie Garofalo, Georgia State University Perimeter College, sgarofalo@gsu.edu</i></p> <p>Scantron ScoreIT is a program that the presenter recently discovered. It provides in-depth data on your exams and is relatively user friendly. Learn how to find it and the basics of use. (Disclaimer: presenter is a novice user!)</p>	

Abstracts for Student Presentations

Saturday, February 8, 2020

	9:00 – 9:20	
1.	The Mathematical Music Composition Workshop from the Students' Perspective	CE – 1120
	<p><i>Arun Suresh, Georgia State University, asuresh2@student.gsu.edu</i></p> <p>Mathematics and music composition students participated in an interdisciplinary project employing compositional techniques based on mathematics (STEAM). Through their presentations and some audio-visual excerpts, they transmit what they learned, how they explained these novel mathematical applications to music, and the outreach possibilities that arise from this unique collaboration</p>	
	9:30 – 9:50	
2.	Topographic Drone Surveying	CE – 1120
	<p><i>Jose Gámez, Georgia State University Perimeter College, jgamez2@student.gsu.edu</i></p> <p>Land surveying has been around since the earliest of times when Greek philosophers developed mathematics. Surveying is the science, technique and discipline of determining the terrestrial dimensions of a given piece of land using three dimensional positions. The presentation will be going over the benefit of implementing drone surveying to generate accurate topographic maps as opposed to traditional surveying techniques proving to be much more efficient and time saving.</p>	
	10:00 – 10:20	
3.	What is a Perfect Free Throw?	CE – 1120
	<p><i>Jesus Kandeyaya, Georgia State University Perimeter College, jkandayeya1@student.gsu.edu</i></p> <p>Athletes have been shooting free throws for over 120 years. An open shot at the basket with no one to prevent you from scoring. Sounds enticing doesn't it? Which is why it's remarkable to learn that it has proven to be the most difficult shot for even the greatest basketball players to master. So, the question arises, what is a perfect free throw? Come learn how you can conquer a shot many of history's greatest athletes have failed to overcome.</p>	
	10:30 – 10:50	
4.	Cryptography: From Caesar to RSA	CE – 1120
	<p><i>Quyen Pham and Maisa Basher, Georgia State University Perimeter College,</i> <i>Faculty Advisor: Somaya Muiny, Georgia State University Perimeter College,</i> <i><u>smuiny1@gsu.edu</u></i></p> <p>Cryptography is an ancient art that permeates every aspect of our lives. With the development of electronic communications networks, an extensive use of cryptography is required. In this presentation, we shed some light on the RSA cipher; why was it developed, and the mathematical idea behind it</p>	
	11:00 – 11:20	
5.	Harry Douglas Huskey	CE-1120
	<p><i>Bilqis Seddiqi and Nestor Kaputo, Georgia State University Perimeter College,</i> <i>bseddiqi@gmail.com</i></p> <p>This is a presentation on a man named Harry Huskey who was a computer pioneer. His whole life was dedicated to computers and computer science. He worked on the ENIAC and EDVAC and lived through the development of computers.</p>	