2018 ATLANTA GEORGIA
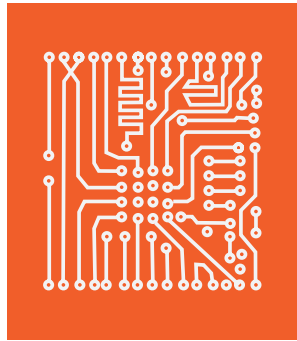MARCH 22 & 23
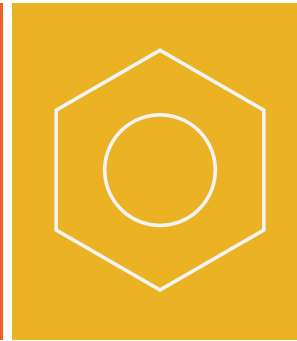
CEISMC @ GEORGIA TECH
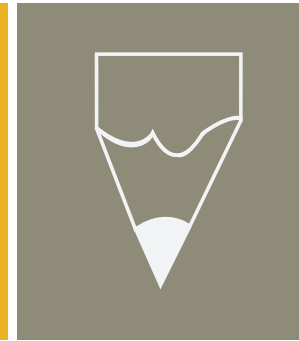
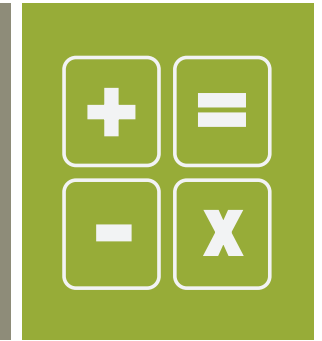**SCIENCE** **TECHNOLOGY** **ENGINEERING** **ARTS** **MATHEMATICS**

STEAM LEADERSHIP CONFERENCE

G. Wayne Clough Undergraduate Learning Commons

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CEISMC @ Georgia Tech STEAM Leadership Conference

Welcome to Georgia Tech!

Thank you for attending the 2018 CEISMC @ Georgia Tech STEAM Leadership Conference. We believe deeply in the potential of STEAM education to empower young people with the 21st century skills needed to improve the world we live in. As such, we are deeply committed to seeing it advance.

It is our hope to connect you with the ideas and tools to spur innovation for your students and school, whether you are a STEAM beginner or your school is already STEAM certified. In our experience, successful STEAM implementation requires complementary vision and shared commitment from diverse stakeholders, and we have tried to model that in our selection of speakers and topics: K-12 district and school leaders, GT faculty, artists, community groups and classroom experts. Through their perspectives and voices, and through the meaningful connections and conversations we hope you encounter, it is our goal for you to leave feeling challenged and inspired.

When you return to your own professional setting, promise to use and apply the knowledge, skills and insights you gain at this conference. As leaders, you are the advocates for effective and engaging STEAM education. Full STEAM ahead!

Sincerely,

2018 STEAM Leadership Conference Committee

Casey Bethel, Sirocus Barnes, Es Famojure, Alba Gutierrez, Shellby Johnson,
Meghan McFerrin, Tiarra Moore, Tamara Pearson, and Steven Taylor

Our Sponsors

This conference was made possible by the generosity of the following sponsors:

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ATLANTA SCIENCE FESTIVAL

STE(A)M TRUCK

HIGH — HIGH MUSEUM OF ART ATLANTA

» Thursday Opening Keynote Speaker

Dr. Cayanna Good
Executive Director, Governor's Office of Student Achievement (GOSA)

Dr. Cayanna Good is the Executive Director of GOSA. She was previously the Deputy Director of Innovation and Academic Strategy for the agency and has also served as the Director of School Improvement for the Georgia Department of Education.

Dr. Good has experience as both a high school and elementary school teacher. She has also worked as an overseeing partner of the New Teacher Project's Georgia Teaching Fellows and as the managing director of the Teach for America School Leadership Initiative. Dr. Good earned a bachelor's degree in English Literature from Fisk University, a master's degree in Education from Georgia State University and a doctoral degree from Mercer University.

During the Thursday morning opening keynote address, Dr. Cayanna Good will dive into that overused and misunderstood word, innovation. What does innovation really mean? Why does education need innovation? What are the different types of innovation? Are innovation and problem-solving the same thing?

THURSDAY, MARCH 22, 2018

7:30 AM - 8:45 AM: Conference Check-in and Breakfast - Atrium

8:45 AM - 10:30 AM: Conference Opening - Main Auditorium

Welcome

Opening Keynote
Disruptive Innovation in Education
Dr. Cayanna Good, Executive Director of GOSA

Special Announcement from CEISMC and Honeywell

10:30 AM - 10:40 AM: Break

10:40 AM - 11:40 AM: Concurrent Sessions

Adding the "A" in STEAM
Location: Room 123   **Session Type:** Hands-on workshop
Conference Strands: Arts integration

Meghan McFerrin, Georgia Department of Education Program Specialist

Join this session to learn more about putting the A in STEAM. Explore the advantages of design thinking and arts-based teaching and learning. Participants will walk away with an understanding of the intersections between content areas and ideas to support a STEAM curriculum.

Avoiding STEM/STEAM Certification Potholes and Pitfalls - Principals' Panel
Location: Room 102   **Session Type:** Panel discussion
Conference Strands: Logistics

Lawanzer Smith, Principal, Chapel Hill Elementary School
Dr. Renita McMillan, Principal, Ashford Park Elementary School
Dr. Delores Paschall, Principal, Oakcliff Elementary School
Tracey Crenshaw, Principal, Vanderlyn Elementary School
Brian (Scott) Heptinstall, Principal, Peachtree Charter Middle School
Jennifer Sanders, Principal, Dunwoody Elementary School
Mitch Green, Principal, Henderson Mill Elementary School

This panel is comprised of principals who prepared for certification for a number of years before becoming certified. With a wealth of experience, across a range of demographics within the DeKalb County School District, they are highly qualified to speak to challenges and triumphs of becoming STEM/STEAM certified.

10:40 AM - 11:40 AM: Concurrent Sessions

Charged for STEAM - Incorporating Creative Writing into Your Science or Math Class
Location: Room 131   **Session Type:** Hands-on workshop
Conference Strands: Curriculum; Innovative lessons; Arts integration

Dr. Jennifer Leavey, Professor, School of Biological Sciences

Charged Magazine is a science magazine for young adults designed to be as engaging as a music or entertainment magazine. Articles include personal reflections on what it is like to do or learn about science or math, features of cool scientists, DIY science and math crafts, reviews of the science behind science fiction, and more. In this session you will learn about Charged and how incorporating creative science writing into your classroom can help students learn. You will be presented with several sample articles and a rubric and brainstorm ideas for your own article. You will also learn about Neutrino, the version of Charged for children 12 and younger.

Innovation in the House! - A model for Including STEM Professionals in Your STEAM Implementation

Location: Room 129   **Session Type:** Panel Discussion
Conference Strands: Arts Integration, Logistics, Innovative Lessons, Curriculum

Paulette Richards, Animatronic Puppeteer
Rachel Tierney, Computer Scientist
Ryan Snelling, Aerospace Engineer
Kevin Arne, Civil Engineer and Woodworker

How can a team of STEAM professionals support your teachers as they integrate more hands-on STEAM projects into the curriculum? CEISMC's Innovators in Residence at Hollis Innovation Academy will share insights from their experience.

Project Music Connector: Making the Musical Instruments of the Future
Location: Room 144   **Session Type:** Performance
Conference Strands: Innovative lessons; Arts integration

Alice Barbe, Founder
Beatriz Fusaro, Founder

Many teachers and educators struggle to engage or motivate students in STEAM or maker projects, and it is often difficult for students to imagine the breadth of possibilities in using STEM skills and methods to express oneself artistically. This presentation will demonstrate the creation of Project Music Connector, in which participants invent, design, and build new digital musical instruments with the goals of democratizing music technology and presenting to children different ways that engineering can be used to create tools for artistic expression.

This performance will lead the audience through Barbe and Fusaro's journey of learning how to make new musical instruments, and how they taught themselves the necessary technical skills and developed abilities to imagine new products that make musical expression and exploration more accessible to people. The session will conclude by discussing how educators can effectively implement iterative learning in STEAM/making projects as a way to foster students' imaginations and help them make interdisciplinary connections with the goal of enabling artistic expression.

Show Don't Tell - Using a Robot Puppet Show to Teach Writing and Drama
Location: Room 125   **Session Type:** Hands-on workshop
Conference Strands: Curriculum; Innovative lessons; Arts integration

Shawn Canney, Teacher Leader, Drew Charter School
Antavious Baker, Teacher Leader, Drew Charter School

This session will show participants how creating a robot puppet show can teach students Theater standards and reinforce strong writing skills. The session will walk participants through the planning process as well as an introduction to Hummingbirds and coding. Also, participants will learn the rationale of the project and receive all materials used to evaluate the project as well.

Traditional School to STEM/STEAM School: The Obstacles of the Journey
Location: Room 127   **Session Type:** Hands-on workshop
Conference Strands: Logistics

Kajia Spencer, Academic Coach, Chapel Hill Elementary School

The decision to make the leap to converting a school from the traditional concept of teaching and learning to the STEM/STEAM concept of teaching and learning is a daunting task. There are more questions than there are answers and few people to ask. In this session, Kajia Spencer will share her experiences of converting the thinking of administrators, teachers, and stakeholders to embark upon the journey of changing schools. She will share her experience of both whole school lead program conversions, the different implementation methods (integration and burst), and obstacles that were presented along the way. This session will activate the thinking of participants by challenging them to confront the most common obstacles; engage the participants by providing them with in the field scenarios that we can work through as a group; and provide participants with the ability to produce a plan of action that they can implement.

» Thursday Afternoon Keynote Speaker

Gil Teixeira
Developer of Collaborative Experiential Electronic Musical Instrument (CEEMI)

This presentation tackles the underlying and rapidly growing social disconnect in the "real world" associated with the hyper-connectivity in the digital realm. We are losing timeless and basic human social skills like maintaining eye contact or engaging fully focused in a face-to-face conversation. Most of the solutions to this problem are based on a reactionary return to how things were in the pre-digital world, in total denial of our here and now. They impose some sort of a ban on digital devices in space or time.

Gil Teixeira believes that the problem is not in the tool itself but in its usage and that's why he created CEEMI, a digital Trojan horse that challenges groups of people to play music together using the same tools that are separating them. The vision behind CEEMI is to harness the power of technology and music combined to connect people in real time, in a live setting. It's not so much about humans interacting with technology, but about technology as a means to human interaction.

11:40 AM - 12:35 PM: Lunch - Atrium

12:35 AM - 1:30 PM: Afternoon Keynote - Main Auditorium

Rehumanizing Screentime Through the Arts
Gil Teixeira, Art Educator, Developer of Collaborative Experiential Electronic Musical Instrument (CEEMI)
Location: Room 144

1:30 PM - 1:40 PM: Break

1:40 PM - 3:10 PM: Concurrent Sessions

Designing Meaningful Partnerships
Location: Room 129   **Session Type:** Hands-on workshop
Conference Strands: Logistics

Sally Creel, STEM and Innovation Supervisor, Cobb County Schools

Partnerships that extend beyond the school walls are essential for high quality STEM experiences for students. Many schools struggle with finding and developing sustained, long-term, mutually beneficial partnerships. This interactive work session will explore a variety of partnership examples, model a first meeting with a potential partner and spend time identifying specific steps and strategies to get the most out of your partnerships.

EarSketch - Computer Science Taught Through Music
Location: Room 125   **Session Type:** Hands-on workshop
Conference Strands: Curriculum; Arts integration

Douglas Edwards, Research Associate, CEISMC

EarSketch is a STEAM intervention that teaches computer programming through music mixing. CEISMC has partnered with EarSketch as part of an NSF DRK-12 project to create a high school Computer Science Principles curriculum that includes EarSketch, to create professional development for teachers, to implement the program in schools within Georgia, and to investigate, using systems modeling, what factors enhance or impede implementation. Edwards hosts hands on introduction to using EarSketch to teach introductory computer science principles through making and sharing music.

Merging Creativity & Computational Thinking
Location: Room 102   **Session Type:** Hands-on workshop
Conference Strands: Curriculum; Innovative lessons; Arts integration

Gail Tate, Academic Coach & Certified Robotics Trainer, AVez Select, LLC.

The purpose of this hands-on workshop is to provide education leaders and teachers with a way to introduce design challenges into the core curriculum, which is the only way to ensure that all students take part. This session will use an educational robotics kit known as Hummingbird, in combination with a suite of curriculum and programs that have successfully been used to create design challenges in core subjects such as math, language arts, science, and social studies. Participants learn best by doing, and prior knowledge of programming or electronics is not at all a prerequisite for participants to successfully build and program robots!

1:40 PM - 3:10 PM: Concurrent Sessions and TED-style Talks

Science.Art.Wonder
Location: Room 127   **Session Type:** Hands-on workshop
Conference Strands: Logistics; Art integration

Nicole Gerardo, Professor, Department of Biology, Emory University
Pamela Romero, Emory Student

Science.Art.Wonder (SAW) is an Emory-based but Atlanta-wide initiative that partners scientists with college student artists to create scientific art. Currently, over 100 artist-researcher matches are working together to create engaging pieces, which will be showcased at an arts-science symposium this Friday, March 23rd at Emory University. SAW directors will reflect on key factors for successful STEAM integration, artist-scientist matches will share a sample of their work, and an open panel will discuss how the SAW model can be integrated into K-12.

This or That: Using Technology to Inform Instruction
Location: Room 123   **Session Type:** Hands-on workshop
Conference Strands: Curriculum; Innovative lessons

Andrea Wright, STEAM Coordinator, DeKalb County School District
LaTonya Brown, Professional Learning, DeKalb County School District

This interactive presentation focuses on the integration of technology by educators to facilitate instruction and assess students formatively. Through guided practice, technology programs students can use to validate their learning while fostering creativity will also be shared. Through experience and rich conversation, participants will leave with a plethora of ideas and resources to enhance STEM/STEAM educational experiences.

Using Recycled Materials to Create Art in the Urban School
Location: Room 131   **Session Type:** Hands-on workshop
Conference Strands: Curriculum; Innovative lessons; Arts integration

Sophia Saxon, STEM Coordinator, Stone Mountain Middle School

How can STEM best be used in our classrooms? The answer: showing students that they are going to be the future innovators and problem solvers of the century. This session focuses on how children will be presented with an ongoing problem: If we as a nation do not reduce, reuse, and recycle materials, it will have a huge negative impact on the natural environment. The question for students is: "How or what are some of the ways we can reduce, reuse, and recycle materials that will make an impact on the world through art?" This session is a segue into developing fun, meaningful, and innovative approaches to recycling materials that can be beneficial to their community and environment. Attendees will learn how recycling can tie into their core curriculum and how students can become problem solvers.

TED-style Talks - Main Auditorium

Highlighting the "A" in S.T.E.A.M.
Tambra Harris, Teacher Leader (Dance), Drew Charter School

This presentation will utilize an event called Space Is the New Place to demonstrate how performing arts can power S.T.E.A.M. events, offering engaging and unique experiences for school audiences.

The Georgia STEAM Asset Map
Caitlin Daugherty-Kokenes, Research Associate, Georgia Partnership for Excellence in Education

The STEAM Asset map is a map designed to show where investments have been made in STEM and STEAM education across Georgia. There are several layers of information in the map including information on schools, out of school opportunities, grants, and area conditions. The STEAM Asset Map is a tool for investors, advocates, parents, teachers, and students.

Teaching Outside the Box
Jason Martin, Executive Director, STEAM Truck

How can an innovation lab on wheels disrupt and transform public education? The maker movement is increasingly mentioned as an effective way to encourage youth to innovate and learn 21st century skills. The hope is that this approach eliminates opportunity gaps too often predicted by zip code.

Want More Girls in STEAM? Put More Tools in Their Hands
James Campbell, STEAM Specialist, Atlanta Girls School

During this talk Campbell will share his journey to implement STEAM at the Atlanta Girls' School.

What Happens When Students are Truly ENGAGED in STEAM
Jeffrey Martin, Founder & CEO, honorCode

This TED-style Talk will address the advantages of teamwork and shared vision among K12 education professionals, STEAM industry professionals, and community organizations. Jeffrey aims to foster deeper relationships among these stakeholders to further the development of relevant educational programming.

3:10 PM - 3:20 PM: Break

3:20 PM - 3:50 PM: Musical Performance and Closing - Auditorium 152

Leucine Zipper & the Zinc Fingers
Session Type: Performance
Conference Strands: Innovative lessons; Arts integration

Leucine Zipper and the Zinc Fingers is a science-themed rock band comprised of the genetically-modified clones of several local scientists.

5:30 PM- 7:00 PM: STEAM Networking Mixer, Sponsored by Honeywell

Location: Institute for People and Technology (IPaT) - 75 5th St NW, 6th Floor, Atlanta, GA, 30308

FRIDAY, MARCH 23, 2018

9:15 AM - 10:05 AM: Morning Keynote - Main Auditorium

Remaking STEAM - Learning from Our Community
Dr. Lew Lefton, Decatur Makers, Assistant Dean of IT - College of Sciences
Irm Diorio, Decatur Makers, Executive Director

» Friday Morning Keynote Speakers

Irm Diorio
Executive Director of Decatur Makers

Decatur Makers is a family-friendly makerspace in downtown Decatur, GA. After spending some time at BellSouth Corporation in the strategic planning group supporting the company's wireless businesses, she was inspired to work with several small and startup education-based companies. She has over 20 years of experience teaching STEAM education and mentoring K-12 aged kids, and is a firm supporter of youth addressing real-world problems in a hands-on environment with failures considered an integral part of learning; It is these tenets of making that develop the 21st century skills needed for people to positively impact their communities. Irm, a graduate of Cornell University, is currently a member of the Board of Directors heading the mentor leadership team of the Decatur Education Foundation.

Dr. Lew Lefton
Assistant Dean of IT for the College of Sciences

Dr. Lew Lefton is a faculty member in Georgia Tech's School of Mathematics and he serves as the Assistant Dean of IT for the College of Sciences. He also has a partial appointment as Assistant Vice President for Research Cyberinfrastructure in the office of Georgia Tech's Executive Vice President for Research. Lefton is the founding director of Decatur Makers, an inclusive community makerspace that emphasizes STEAM opportunities. He is on the board of the Southeast Makers Alliance where he has been a co-producer of Maker Faire Atlanta. In addition, Lefton is also an accomplished and experienced comedian who has done stand up and improv comedy for over three decades and studys the use of humor as a means to enhance technical innovation and creativity.

Decatur Makers presents a STEAM Learning Talk Show. The opening monologue will be a "TED-style Talk" by our founding director Lew Lefton. Next, they will engage the audience with three short interviews of pioneering STEAM educators, hosted by our executive director Irm Diorio. The final act will involve one or more audience members engaged in a fun activity on stage.

10:05 AM - 10:15 AM: Break

10:15 AM - 11:15 AM: Concurrent Sessions

Combining Craft and Performance in STEM through Hybrid Puppets
Location: Room 127   **Session Type:** Hands-on workshop
Conference Strands: Innovative lessons; Arts integration

Dr. Michael Nitsche, Professor, School of Literature, Media, and Communication

This work is based on a NSF supported grant that combines craft and performance to teach basic prototyping skills to early middle school students with the help of puppetry. To do so, the project has developed informal STEM workshops following three steps: 1) narrative framing 2) craft-inspired building 3) validation through performance. The workshop will introduce these steps, the puppet designs we created, and provide time for discussion. This key approach combines craft, performative self-expression, and basic hardware prototyping with the goal to attract new audiences to STEM.

Equity and Access in STEAM Education
Location: Room 102   **Session Type:** Panel discussion
Conference Strands: Logistics; Curriculum

Dr. Tamara Pearson, Associate Director of School and Community Engagement, CEISMC
Chris Thompson, Associate Director of Technology & Student Activities, CEISMC
Dr. Marion Usselman, Associate Director for Federal Outreach & Research, CEISMC
Dr. Meltem Alemdar, Associate Director for Educational Research & Evaluation, CEISMC
Bonnie Harris, GIFT Program Director, CEISMC

As the nation turns its attention to STEAM, it is important that underrepresented minorities and girls are encouraged and given opportunities to participate. The Center for Education Integrating Science, Mathematics, and Computing (CEISMC) advocates for and leads systemic changes to increase interest and achievement for all students, especially those underrepresented in STEAM, by drawing upon the expertise and scholarly contributions of the Georgia Tech community. In this session, hear from a panel of CEISMC staff members about specific strategies, curricula and programs developed at CEISMC that encourage and inspire all students.

Grounding STEM in NGSS Practices
Location: Room 129   **Session Type:** Hands-on workshop
Conference Strands: Innovative lessons

David Lockett, Teacher Leader, Lake Wales Charter Schools

Interested in exploring ways to support classroom teaching in integrating the NGSS practices? Want to move toward an inquiry-based approach in which students take more responsibility for their learning? Then come to this session.

Incorporating Design Thinking into Curriculum
Location: Room 131   **Session Type:** Hands-on workshop
Conference Strands: Curriculum; Innovative lessons; Arts integration

Wayne Li, Professor, School of Industrial Design

This session will examine some of the transdisciplinary tenets of design thinking, and it's application to varied coursework here at Georgia Tech's Innovation & Design Collaborative (Design Bloc). Hands on workshop and example case study are included in this session.

Learning Biology through Printmaking
Location: Room 125   **Session Type:** Panel discussion
Conference Strands: Curriculum; Arts integration

Dr. Jennifer Leavey, Professor, School of Biological Sciences
Alison Valk, College Librarian, Georgia Tech
Ashley Schick, Artist, Lovett School

In this session participants will learn how to design and implement class projects that integrate science based topics and the arts, thus engaging students with course content and developing their communication skills. Panelists will first share how they successfully developed a course project that blended relief printing and the study of immunology at Georgia Tech. Using this collaboration as an educational model, attendees will participate in a hands-on activity with provided worksheets that prompts them to think about the key elements necessary in designing such projects. Attendees will leave the session having completed a basic outline for how to craft their own assignment and where to locate needed resources. Finally, speakers will also share adaptable lessons plans and methods of assessment utilizing these same techniques that could be used in a wide variety of educational settings.

» Friday Afternoon Keynote Speakers

Rhidi Choragudi
Co-Founder, Project STEAM, Inc.

Meghan Kulkarni
Co-Founder, Project STEAM, Inc.

Ridhi and Meghan are high school juniors who are already having an impact on the world. They co-founded Project STEAM Inc. during their sophomore year of high school to raise STEAM awareness locally and globally through seminars and workshops. Their work has earned national recognition.

This session will be an inspirational lecture with hands-on activities to promote STEAM volunteering and teaching, based on the organization Project STEAM Inc., a nonprofit organization based in Johns Creek, GA that works on a global and local level. The co-founders of the organization will explain why STEAM is important across the world, and why change begins with improvements in education.

Educators have such a unique gift: the ability to spread knowledge and change children's lives. This session wil explain how important the educators themselves are to the future generation of scientists, engineers, and artists. By the end ofthe session, the educators will be motivated to step out of their teaching boundaries and realize their potential to teach STEAM concepts to both locally and globally.

10:15 AM - 11:15 AM: Concurrent Sessions

Protein 3D Structure Visualization Using PYMOL
Location: Room 123   **Session Type:** Hands-on workshop
Conference Strands: Innovative lessons, Arts integration

Casey Bethel, Program Director, CEISMC at Georgia Tech
Dr. Raquel Lieberman, Professor, School fo Chemistry and Biochemistry

The features of protein three-dimensional structure are aesthetically fascinating once you learn how to look at them. This lesson takes advantage of the fact that PYMOL, the software platform that many researchers use to study and document protein shape, is available as a free download for educational purposes. Students utilize this platform to manipulate images of these proteins, producing personalized, artistic renditions of the features of important proteins involved in biological disorders, all while developing a deeper understanding of the scientific concepts that underlie studies like these. Imagine this: what would your picture of hemoglobin look like? And would it help you to grasp and retain the important role that it plays in sickle cell anemia?

11:15 AM - 12:15 PM: Lunch - Atrium

12:15 PM - 1:15 PM: Afternoon Keynote - Main Auditorium

Raising STEAM Awareness Across the Globe
Rhidi Choragudi and **Meghan Kulkarni**, Co-Founders, Project STEAM Inc.

1:15 PM - 1:25 PM: Break

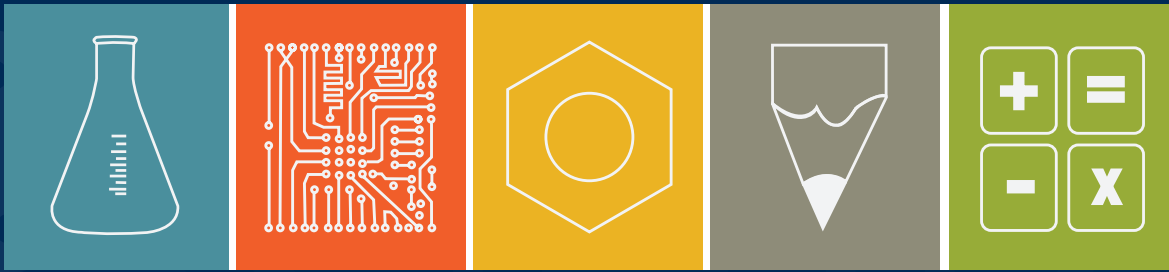## 1:25 PM - 2:55 PM: Concurrent Sessions

Bio-Inspired Design
Location: Room 123   **Session Type:** Hands-on workshop
Conference Strands: Innovative lessons; Arts integration

Ann Gerondelis, Professor, School of Industrial Design
Marc Weissburg, Professor, School of Biological Sciences

Biologically-inspired design (BID; aka biomimicry) is a highly interdisciplinary activity that uses biological mechanisms to solve human technological problems. This workshop will introduce tools and techniques to develop participants' understanding of how to use BID in their classroom. Participants will be introduced to BID concepts and resources, learn a variety of BID activities that can be used to teach STEAM content, discuss the intellectual challenges students face when doing BID, and examine strategies for evaluation. Participants will acquire a working knowledge sufficient to develop and assess BID learning activities suitable for courses in Biology, Environmental and Physical Sciences, and Engineering at levels from 3rd to 12th grade.

1:25 PM - 2:55 PM: Concurrent Sessions

Creating a CS (computer science) Plan for Your School / District
Location: Room 127   **Session Type:** Hands-on workshop   **Conference Strands:** Logistics; Curriculum

Chris Thompson, Associate Director of Technology & Student Activities, CEISMC
Bryan Cox, CS Specialist, Georgia Department of Education

Georgia Tech CEISMC serves as the Regional Partner for Code.org, the largest free Computer Science (CS) curriculum provider in the world. This session will help participants understand why offering CS in K-12 schools is so important today. After reviewing the current state of K-12 CS in Georgia, strategies for increasing opportunities for every student to study CS will be presented. Professional development opportunities for teachers, curriculum choices, and resources for creating your own implementation plan will be presented.

Leading for STEAM
Location: Room 131   **Session Type:** Hands-on workshop   **Conference Strands:** Logistics; Curriculum; Innovative lessons; Arts integration

Mitch Green, Principal, Henderson Mill Elementary School
Rebecca Pogue, Institute Program Manager, Alliance Theatre

Developing a quality STEAM program requires leadership of all levels. Join the leader of Henderson Mill ES and one of their actively involved business partners, the Alliance Theatre, as they together lay out the path as to how you too can work toward building a culture of authentic STEAM integration in your school.

Make Music Count - Math Remixed
Location: Room 125   **Session Type:** Hands-on workshop   **Conference Strands:** Curriculum; Innovative lessons

Marcus Blackwell, Founder & CEO, Make Music Count

Come experience an engaging math class taught by learning how to play the piano. Participants will learn a lesson just like our 3rd - 9th grade students, where we will solve math equations that involve adding, subtracting, multiplying, and dividing fractions or solving algebra equations in order to derive the piano notes to play the featured songs. You'll play the piano even if you've never played before. In this class we are improving math confidence and performance through learning an instrument.

Making Virtual Reality Real for Learning Environments
Location: Room 102   **Session Type:** Hands-on workshop   **Conference Strands:** Curriculum; Innovative lessons

Aditya Vishwanath, Researcher, Georgia Tech; Founder of inspiritVR
Amrutha Vasan, Content Lead, inspiritVR

An Atlanta based virtual reality firm, inspiritVR explores affordances of VR for empathy-building and creating higher learning outcomes on core and non-core subjects in classrooms. Over the past year, this research initiative involved students across different socioeconomic groups in the design and development of meaningful VR content for learning environments around the globe. This workshop will offer educators and administrators a deep dive into the inspirit VR curriculum that has been designed and developed through in-depth research and several design thinking and co-design workshops with educators across the state of Georgia. This workshop will also cover opportunities and challenges that low-cost VR might bring to diverse learning environments in real-world settings, and the conditions and partnerships that support such efforts.

Science and Drama - Really?
Location: Room 129   **Session Type:** Hands-on workshop   **Conference Strands:** Innovative lessons; Arts integration
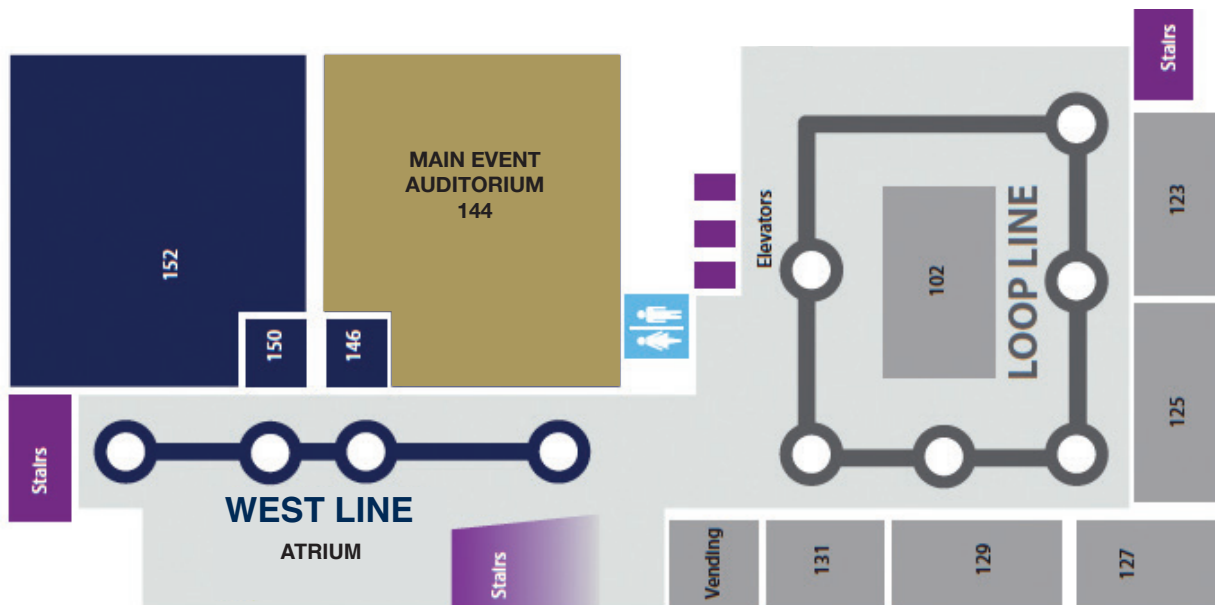
Barry Stewart Mann, Teaching Artist, Alliance Theatre

Science and Drama don't always seem like natural candidates for fusion, but integrating Drama and Science can be surprisingly easy and effective. Essentially, both center on conflict and change, and both depend on an array of 'actors' with diverse traits and tendencies. In this interactive workshop, participants will use five points of entry - Theatre Games, Story Enactment, Folklore as Scientific Inquiry, Scientists and Science History, and Metaphorical Constructions - to engage imagination and activate learning across the science curriculum. Participants will walk away with exercises and approaches to easily apply the very next day.

2:55 PM-3:05 PM: Break

3:05 PM - PM 3:30 PM: Conference Closing - Main Auditorium

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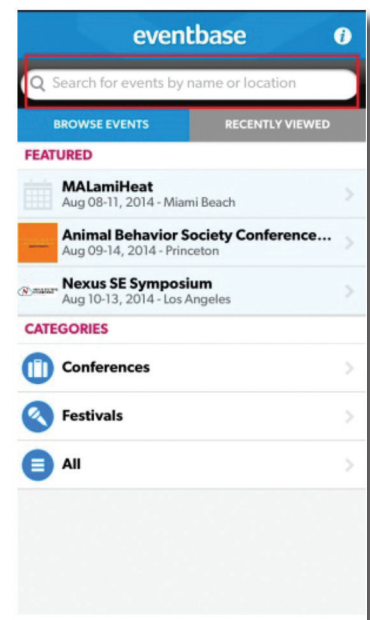

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The Eventbase app is the mobile app platform trusted by more events than any other, including conferences, trade shows, festivals, sporting and community events worldwide.

Eventbase gives you a complete guide to events in your area, in a feature-rich native app for popular smartphone platforms, and a mobile website.

1. Download the Eventbase app from the App Store (iPhone or iPad) or Google Play (Android) or visit **http://free.eventbase.com/download**

2. Once you have downloaded the app, search for: "**CEISMC @ Georgia Tech STEAM Leadership Conference 2018**" in the search bar. Click on the event.

3. Click "Launch Event Guide" to view the schedule, speakers, locations, and more!

CEISMC @ Georgia Tech
STEAM LEADERSHIP CONFERENCE

March 22 & 23, 2018

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Atlanta, GA 30313

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Georgia Tech