

The ITEEA Headliner

The Most Recent and Pertinent News and Information for the Technology and Engineering Education Field

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ITEEA Kicks off 2018 Atlanta Conference Registration

In mid-September, ITEEA officially kicked off preregistration for its 80th anniversary conference in Atlanta, GA to be held April 12-14, 2018. [Online registration](#) is the simplest and most efficient method of preregistering. However, there is also a [print version](#) of the registration form available for those who prefer not to register online. Preregistration offers multiple benefits for attendees, including lower rates and eligibility for a drawing for two Amazon gift cards. Preregistration will remain open until March 20, 2018. We will also create specially tailored versions of the registration form for attendees of the Georgia association's conference, which will be held in conjunction with the ITEEA conference. Special forms were also created for other groups such as the Society of Elementary President Awardees, school administrators, and STEAM strand attendees. The [Atlanta Preliminary Program](#) provides a great deal of information regarding conference highlights, scheduling, and logistics.



We **NEED YOUR HELP** to reach out to your constituencies and share this important information on preregistering for ITEEA's Atlanta conference – early and often! It is also helpful to you to share conference promotional materials as they are developed. We have found that personal contacts – sent more than once – can have an enormous impact.

ITEEA Keynoter to Address How Modified Racecars Will Change Classrooms Forever

ITEEA is pleased to announce Dr. Cole Galloway as its 2018 Atlanta Conference Program Excellence General Session keynote speaker. Galloway is the Director of the Pediatric Mobility Lab at the University of Delaware. Neuroscientist and physical therapist Cole Galloway is most interested in rapidly prototyping novel technology (often DIY) to assist children and adults in maximizing their real-world exploration—specifically combining low tech and high tech into “Go Tech.” His lab enjoys funding from NIH, NSF, the Department of Education, and the toy and assistive technology industry. He was awarded American Physical Therapy Association Awards in 2005, 2009, and 2016. In 2014, he was included in BuzzFeed's “31 moments that restored our faith in humanity” and was named one of the “twenty people making a difference in healthcare” by *Health Leaders Media Journal*. He is most proud of his association with the international Go Baby Go movement, whose mission is to help everyone co-create their world through mobility.

The recipe for growing (and regrowing) a human brain is simple: allow the human to actively interact within socially and physically enriched environments. In his fast-paced keynote address, Dr. Galloway will briefly introduce how the current model of rehabilitation for children and adults with brain injuries is failing. He will then describe how the 70-chapter Go Baby Go (GBG) “movement” is providing a community-based alternative that is more fun, functional, family friendly, and feasible. He will end with a practical roadmap of how ITEEA and GBG together can provide “brains on/hands on” education while saving the world!

Watch Cole's work, which was featured in a TEDMED talk at www.tedmed.com/talks/show?id=292991.

ITEEA Supports New York Technology Education Statute

ITEEA's New York Affiliate Representative, Chuck Goodwin, along with the NYSTEEA Association, has worked actively to encourage its constituents to contact the New York Board of Regents to keep current technology education requirements according to NY Education regulation 100.4. NYSTEEA sent a "CALL TO ACTION: Changes to Middle School Technology Education Mandate" to his attention stating the following:

"Proposed Change in Regulation: The New York Board of Regents met earlier this month and proposed an emergency regulation to give schools the flexibility to meet the Technology and Family Consumer Science middle school mandate in new ways. This is not an elimination of the mandate but a change in the existing regulation 100.4. There is currently a mandate in place for one unit of Technology and \leq unit of Home and Career Skills. The new regulation stipulates that schools that have vacancies in Technology and FACS for the 2017-2018 school year, those schools can provide $1 \leq$ units of study in any of the six CTE disciplines. In those situations, CTE courses must be taught by persons certified to teach in that particular CTE subject area. It is important to reiterate that this is not an elimination of the middle school mandate but a restructuring." In response, ITEEA prepared and sent an individual letter to each of the 17 Board of Regents members requesting they do not alter this mandate to the current regulations.

USA Hosts PATT 34 International 2017 Conference in Philadelphia

The Pupils' Attitudes Towards Technology (PATT) 34 International Conference was held July 10-14, 2017 in the Historic District of Philadelphia, PA. The theme for this year's presented research findings was *Fostering the Creativity of Youth Around the Globe.* The Conference was directed and hosted by Millersville University of Pennsylvania, under the direction of Dr. Len Litowitz, Department Chair, along with Dr. Sharon Brusica, Dr. Scott Warner, and Dr. Joseph McCade. The Millersville team did a wonderful job of coordinating all the logistics and making sure our international guests were well informed and comfortable throughout the week. Ed Reeve and Steve Barbato represented ITEEA and delivered a presentation to the group. The international community was quite interested in how ITEEA works to support the profession and invited us to present at the PATT 36 program scheduled for Athlone, Ireland next June 18-21. The goal will be to grow our international centers and build a stronger global support network. [Click here to view photos from the conference.](#)

The "TSA 100 Program" and ITEEA Partnership

TSA has launched a special program that is sponsored through the Verizon Corporation as a part of the Verizon App Challenge. ITEEA is also benefiting from this TSA-led program. In support of the Verizon Foundation's Innovative Learning initiative of inclusion for all students in STEM learning and careers (#weneedmore), TSA announced its collaborative effort, The TSA 100. TSA is working directly with historically underserved and underrepresented populations to offer participation in The TSA 100 to some qualified middle and high schools. Each school will be sponsored through TSA and Verizon to have one teacher join as a professional member of ITEEA. This program will support the ITEEA memberships of 100 new teachers through TSA!

ITEEA to Continue as Partner for DiscoverE "Global Day of the Engineer"

ITEEA was invited once again to participate as a Partner with DiscoverE in supporting its "[Global Day of the Engineer.](#)" ITEEA joins many engineering organizations around the world in promoting the third Global Day on April 4, 2018. Global Day is the annual opportunity to celebrate and recognize the importance of engineers – worldwide. In 2017, people from nearly 50 countries participated in Global Day, leading to over 1,300 pledges. ITEEA is pledging to disseminate the "Global Day of the Engineer" project(s) through our website, IdeaGarden, Facebook, Twitter, and Instagram accounts whenever appropriate throughout the school year leading up to the April 4, 2018 launch date.

ITEEA STEM Center for Teaching and Learning™ News

2017 Fall Leadership Forum

The Fall meeting of ITEEA's STEM CTL™ Consortium Directors was held September 12-14, 2017 in Herndon, Virginia with 12 of the 15 Consortium States represented. This year's Leadership Forum was designed by Dr. Jennifer Buelin with the STEM CTL™ team to reflect strategic initiatives to upgrade and implement standards-based curriculum, instruction, and assessments. The agenda was designed to promote a meaningful exchange of ideas and for STEM CTL™ staff to gather strategic feedback and direction from the Consortium Directors. Key takeaways from the meeting were:

1. New EbD™ Director Meeting: There are a number of new Consortium Directors, either representing new Consortium States of VA and KY or new to their position at their state level.
2. "Bring Your State Team" Initiative: Strategies were presented on how state teams are approaching implementation of the curriculum, professional development, and assessment.
3. Professional Development: Updates were shared on the professional development held during Summer, 2017 and our plans to expand EbD™ Summer Institutes for next summer.
4. Curriculum Enhancements: EbD™ curricula is undergoing continuous significant upgrades and revisions.
5. ITEEA Website: Updates to iteea.org STEM by State pages was discussed, and Directors had the opportunity to request updates to state pages onsite.
6. EbD-Buzz Assessment: Consortium Directors practiced accessing new data analytics in EbD-BUZZ and explored the online resources available to all users.

The Consortium Directors and STEM CTL staff will convene again during the ITEEA 2018 Annual Conference in Atlanta, GA to discuss progress toward deliverables and services discussed at the Fall Leadership Forum. [Click here to view photos.](#)

ITEEA STEM CTL™ Professional Development in Kuwait

ITEEA is partnering with the Sabah Al-Ahmad Center for Giftedness & Creativity (SACGC-Kuwait) to provide Engineering byDesign™ professional development in support of the implementation of the EbD™ curriculum program. Dr. Nathan Mentzer and Mohamad Barbarji, ITEEA's STEM CTL™ certified National Teacher Effectiveness Coaches (NTEC), delivered a three-week professional development program, which included course modifications, implementation and evaluation, and use of local resources to contextualize learning experiences. The professional development team provided leadership for a two-week train-the-trainer event, Authorized Trainer Institute (ATI), for the following EbD™ courses—Grade 6: *Exploring Technology*, Grade 7: *Invention and Innovation*, Grade 8: *Technology Systems*, and Grade 9: *Foundations of Technology*. In addition, immediately following the Authorized Trainer Institute, the NTECs delivered a five-day professional development workshop for the 9th grade course, *Foundations of Technology*.

The PD was prepped and supported by ITEEA's STEM CTL™ under the leadership Dr. Jennifer Buelin (Director), Dr. Anita Deck (Innovation, Research, and Assessment Director) and Nancye Hart, STEM CTL Professional Development Coordinator. Nathan and Mohamad provided daily updates via an electronic journal detailing the PD experience for the SACGC teachers. Dr. Mentzer reported on Day 7 of the training, "Today was the last presentation in the second round. It is clear (and confirmed via discussion) that the teachers all have strengths and unique ideas and approaches; however, they have not had a chance to share with each other. This forum provided the opportunity for them to improve because (among other things) they can observe each other and us teaching. We noticed some of the strategies used in earlier lessons being implemented in later lessons. Today they were so engaged that they worked through the first break. "The teachers demonstrating more strategies when teaching is evidence that the team is modeling best practices for teachers to incorporate into their lessons. These journal entries afford the STEM CTL with a valuable tool when planning for future international projects. Stay tuned for more at the conclusion of the program!"

ITEEA STEM CTL™ Attends National STEM Learning and Research Center Summit

Dr. Anita Deck attended the National STEM Learning and Research Center (STELAR) ITEST PI & Evaluator Summit: Building the Foundational Skills of the Future Science and Engineering Workforce, held June 15-16 in Arlington, VA. The Summit is an annual opportunity for ITEST PIs and evaluators to meet to share successes, challenges, and lessons learned from the ITEST program. This year's Summit explored the foundational skills needed to prepare youth to participate in the future science and engineering work-

force. Attendees explored ways in which the ITEST community can collaborate and build on each other's work.

Sessions focused on diversity of programming, brokering connections between individuals in the ITEST community, and NSF opportunities. Keynote speakers discussed the strategic direction of research and development for projects with a focus on student awareness and preparation for STEM careers. For example, NSF asserts that artificial intelligence, the Internet of Things (IoT), robotics, and machine learning are driving a new vision of the future where various technologies will be embedded around, on, and in us. These technological advances are driving changes in the workplace, and education must be reactive in preparing K-12 students with the foundational skills needed to pursue STEM careers—work at the frontier.

ITEEA'S STEM CTL Attends Advisory Board Meeting for the NSF Innovative Technology Experiences for Students and Teachers (ITEST) Grant Program

The Advisory Board for the NSF Innovative Technology Experiences for Students and Teachers (ITEST) grant, Soft Robotics to Broaden the STEM Pipeline, met over the summer at Purdue University. Dr. Anita Deck, Director of Innovation, Assessment, and Research for STEM CTL™, serves as Co-PI on the project and was in attendance. ITEST is a research and development program that supports projects to promote PreK-12 student interests and capacities to participate in the STEM and information and communications technology (ICT) workforce of the future. The ITEST program supports research on the design, development, implementation, and selective spread of innovative strategies for engaging students in technology-rich experiences that: (1) increase student awareness of STEM occupations; (2) motivate students to pursue appropriate education pathways to STEM occupations; or (3) develop disciplinary-based knowledge and practices, or promote critical thinking, reasoning skills, or communication skills needed for entering STEM workforce sectors. In the second year of the three-year grant, the Soft Robotics project seeks to develop a promising method of teaching Science, particularly the Next Generation Science High School Engineering and Technology Standard (NGSS) within Engineering Design. The intervention is designed to maintain learning outcomes while increasing student motivation and engagement, particularly in females, in engineering design, and STEM disciplines overall. Our STEM CTL hopes to build on this NSF funding grant for additional opportunities to lead and support our field moving forward!

Introducing a New Project and Fresh Look at P-12 Engineering Education

The Advancing Excellence in P-12 Engineering Education (AEEE) project is an exciting new ongoing research venture to promote collaboration across the engineering and education community, to pursue a vision and direction for P-12 Engineering Education, and to develop a coherent and dynamic content framework for scaffolding the teaching and learning of engineering and design at the high school level. Drs Michael Grubbs, Gregory Strimel, and Tanner Huffman are the project leaders and ITEEA has a primary role in supporting their efforts. ITEEA is hosting the AEEE project on our website located at the [P-12 AEEE project site](#).

The goal of the project is to afford selected leaders, concerned about technology and engineering education at the P-12 level, a platform to present their views on engineering education future directions for the field through a series of action-oriented gatherings and to conduct research on the learning of engineering within primary and secondary schools. ITEEA Executive Director, Steve Barbato, and ITEEA President, Dr. Edward Reeve, serve on the AEEE Advisory Board. Steve and Ed, along with Drs. Jennifer Buelin and Anita Deck, attended the first of the “action-oriented gatherings” in Baltimore in mid-August and participated in several online meetings.

ITEEA is Official Reseller of Safer Makerspaces Guide

Through an agreement with ITEEA Safety Expert, Dr. Tyler Love, and NSTA Safety Expert, Dr. Ken Roy, ITEEA has been named an official reseller of *Safer Makerspaces, Fab Labs, and STEM Labs: A Collaborative Guide*. The brand-new guide is being initially offered in print format only, with an electronic version to be released in about one year. The Guide provides the latest information about how to design and maintain safer makerspaces, Fab Labs, and STEM labs in both formal and informal educational and community settings. It is easy to read and provides practical recommendations and examples for instructors, administrators, and media specialists. [Take a look on ITEEA's estore](#).

ITEEA Children's Council Announces Elementary Innovative Design Challenge

ITEEA's Children's Council is sponsoring the Global Design Challenge for Elementary STEM (GDC) to provide students with a chance to solve a real problem and show the world that everyone can help find solutions to global challenges. [Please click here to view the full description share with your colleagues](#).

ITEEA Releases “Books to Briefs” Publication

For nearly twenty years, each issue of ITEEA’s Children’s Technology and Engineering journal has included a popular feature called “Books to Briefs.” Educator authors begin with children’s books and make clear connections to technology and engineering elementary curriculum through ready-to-use lesson plans, goals, worksheets, and more. *The Best of Books to Briefs* is divided into content areas including The Engineering Design Process, The Environment, and Making Connections. You can take a look at the new product in the [ITEEA eStore](#). We are promoting this information on our website as well as upcoming publications, *STEM Connections*, *Idea-Garden*, and our social media outlets.

ITEEA Continues Professional Development Webinar Series

ITEEA has conducted two Professional Development Webinars thus far for the 2017-2018 school year. The webinars are free to ITEEA members and available for \$45 to nonmembers. In September, the webinar focused on Classroom and Lab Safety, while the October Webinar was on the topic of “The Design Matrix.”

Upcoming on November 13th at 4pm EST is a webinar on “Engineering for All: A Middle School Program to Introduce Students to Engineering as a Potential Social Good.” Engineering for All (EFA) is a collaboration between Hofstra University and ITEEA. The Project, funded by the National Science Foundation, has created two six-week curriculum units for secondary school technology and engineering education classes that are situated in the important social contexts of food and water. The units employ engineering design as the core pedagogy and integrate content and practices from the *Next Generation Science Standards* and *Standards for Technological Literacy*. EFA is part of the ITEEA’s Engineering byDesign Program. [Click here to learn more.](#)