

*Innovative Technology Experiences for Students & Teachers (ITES) Program project presentations at upcoming conferences outside of AERA and NSTA.*

### Thursday, March 27, 2014

**WaterBotics Exhibit** • [ITEEA](#), Orlando, FL

*Thursday, March 27 - Friday, March 28, Exhibit Hall* • WaterBotics employs an innovative design challenge — building submersible robots from LEGO and other parts that can perform a series of increasingly complex and sophisticated underwater tasks. Middle and high school students learn and apply concepts of buoyancy and stability, gears and gear ratios, torque, 2D and 3D motion, and computer programming in the design of their robots. In the exhibit, sample underwater robots will be set up in a small pool and participants will have the opportunity to examine and control the robots. **Presenter:** Mercedes McKay

### Tuesday, April 1, 2014

**Discovering Place: Developing Community Connections through an Informal STEM Summer Experience for American Indian Youth** • [NARST](#), Pittsburgh, PA

*Tuesday, April 1, 2:30-4:00pm, Brigade* • This case study investigates the affordances and barriers that an informal multi-week science, technology, engineering, and mathematics (STEM) experience provided Native American (NA) youth in connecting them to their communal place. Elders, community members, and university staff co-developed and facilitated hands-on activities designed to deepen community connections for participating youth. Students created a variety of artifacts including digital stories of their place. **Presenter:** Marcie A. Galbreath

### Wednesday, April 2, 2014

**Impacts of gaming, teachers, and interest on student science learning associated with innovative biotechnology curricula** • [NARST](#), Pittsburgh, PA

*Wednesday, April 2, 2:45-4:15pm, Wyndam Grand Pittsburgh Downtown, King's Garden* • In this study, we compare student learning associated with two biotechnology curricula designed to teach basic biological principles. One curriculum features Mission Biotech, a computer-based game; the other curriculum, Viral Quest, features a biotechnology related narrative with no game. The study provides evidence for the effectiveness of innovative curricula situated in biotechnology as tools for supporting learning of biological content. **Presenter:** Troy Sadler

### Friday, April 4, 2014

**Invited talk: Measuring Learner Engagement with Data Mining** • [NCME](#), Philadelphia, PA

*Friday, April 4, 11:50am-12:40pm, Washington, Loews Hotel* • In recent years, there has been increasing interest in measuring learner engagement in automated ways. In this talk, I discuss my group's work to develop and validate measures of a range of engaged and disengaged behaviors, as well as affect, within student use of online learning, using a combination of field observation and data mining. **Presenter:** Ryan Baker

### Thursday, April 10, 2014

**Building Puzzles: Promoting Engagement, Logical Reasoning, and Mathematical Communication** • [NCTM](#), New Orleans, LA

*Thursday, April 10, 1:00-2:15pm, Hilton, Grand Salon 15-18* • Mathematical puzzles support problem-solving, algebraic reasoning, and Mathematical Practice Standard #1. Students enjoy the challenges of mathematical problem-solving and learn to organize the given information with their own discoveries. Discover how students become producers of mathematics as they build their own mathematical puzzles to share. **Presenters:** Mary Fries, Jane Kang, Paul Goldenberg

**Problem Posing: Bringing Logic to Problem-Solving for At-risk Algebra Students** • [NCTM](#), New Orleans, LA

*Thursday, April 10, 3:30-4:30pm, Convention Center, R0* • Problem posing is part of a development approach to word problems that encourages students to be active producers of mathematical ideas. As consumers, struggling students often get stuck thinking "what-am-I-supposed-to-do?" As producers, the same students are free to explore, discuss, and engage in powerful mathematical thinking. **Presenters:** Jane Kang, Paul Goldenberg, and Mary Fries

### Saturday, April 26, 2014

**WaterBotics Exhibit** • [USA Science & Engineering Festival](#), Washington, D.C.

*Saturday, April 26 - Sunday, April 27, Exhibit Hall as part of Stevens Institute of Technology booth* • WaterBotics employs an innovative design challenge — building submersible robots from LEGO and other parts that can perform a series of increasingly complex and sophisticated underwater tasks. Middle and high school students learn and apply concepts of buoyancy and stability, gears and gear ratios, torque, 2D and 3D motion, and computer programming in the design of their robots. In the exhibit, sample underwater robots will be set up in a small pool and participants will have the opportunity to examine and control the robots. **Presenter:** Mercedes McKay

### Monday, May 12, 2014

**Real World Externships for Teachers of Science, Mathematics, and Technology: The best professional development for bridging industry and education** • [EDC's STEM Smart workshop](#), Needham, MA

*Monday, May 12, 10:45am-12pm, Franklin W. Olin College of Engineering* • Profile of the three year project now involving over 40 Iowa companies such as John Deere, Principal Financial, Pella Window, Monsanto, Tones, and others, hosting over 200 secondary teachers adding authentic value to operations while earning graduate credit, a stipend, and 'street cred' in their fields of expertise. **Presenter:** Jeff Weld



### Wednesday, May 14, 2014

**Real World Externships for Teachers of Science, Mathematics, and Technology: The best professional development for bridging industry and education • [NSTA STEM Forum & Expo](#), New Orleans, LA**

*Wednesday, May 14* • Profile of the three year project now involving over 40 Iowa companies such as John Deere, Principal Financial, Pella Window, Monsanto, Tones, and others, hosting over 200 secondary teachers adding authentic value to operations while earning graduate credit, a stipend, and 'street cred' in their fields of expertise.  
**Presenter:** Jeff Weld

### Saturday, May 24, 2014

**Motivating Underserved High School Students in Computer Science • [APS](#), San Francisco, CA**

*Saturday, May 24, 11:30am-12:30pm, APS Exhibit Hall-Grand Ballroom* • Selection of computer science major is declining. A computer curriculum using games and graphics for programming and maintaining motivation can teach underserved high school students. Gain score analysis of 3 data waves shows that student motivation increases or maintains. Results support and relate to academics, well-being, and persistence. **Presenters:** Kimberly A G Biddle, Scott Gordon

### Tuesday, June 17, 2014

**Studio STEM: Engineering After School • [ASEE](#), Indianapolis, IN**

*Tuesday, June 17, 4:00-5:30pm, Indiana Convention Center - Grand Ballroom 1* • This session allows engineering education curriculum developers to come together and share ideas with the ASEE attendees. The curriculum and philosophy of Studio STEM will be shared with participants through hands on manipulatives, video, images and text.  
**Presenter:** Christine Schnittka

### Sunday, June 29, 2014

**STEM IDEA: Inquire, design, engineer, articulate • [ISTE](#), Atlanta, GA**

*Sunday, June 29, 8:30-9:30am, Building/Room: T* • Would you like to get students excited about STEM? Learn how middle school teachers integrate Scratch and LilyPad Arduino in developing inquiry and design process skills. **Presenter:** Mano Talaiver

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*For more information about these and other sessions, click on the conference name to be directed to the website for each event.*

