VirginiaTech®
Institute for Creativity, Arts, and Technology

Center for Research in SEAD Education

3rd Annual

Southwest Virginia STEM Summit

October 2-3, 2016

Blacksburg, Virginia

Agenda

October 2, 2016 • Moss Arts Center Cube

5-6:45 PM	Registration
5:30-7:15 PM	Reception
6-6:05 PM	Welcome by **Ruth Waalkes**, *executive director and associate provost for the arts, Moss Arts Center,* and **Henry M. Bass**, *president of Automation Creations, Inc.*
6:05-6:20 PM	**Ann Kilkelly**, Ph.D.; *professor emerita, Virginia Tech School of Performing Arts*
6:20-7:30 PM	Keynote: **Tanner Upthegrove** and **Zach Duer**, *Institute for Creativity, Arts, and Technology* **Cube: Immerse Yourself in a Different View of STEM**

October 3, 2016 • The Inn at Virginia Tech

7-8 AM	Registration and Poster Setup
8-9 AM	Welcome by **Ben Knapp**, *director, Institute for Creativity, Arts, and Technology* **Latham A&B**
	Keynote: **Jeremy Ernst**, *associate director, Office of Educational Research and Outreach* **VT School of Education: Re-Designed High Schools for Transformed STEM Learning**
9-9:15 AM	Break
9:15-10 AM	**Concurrent Sessions**
	High School Redesign: Follow-up Conversation Jeremy Ernst, *Virginia Tech School of Education* **Cascades A**
	Learning Across Virginia Tech Penny McCallum, *director, Southwest Virginia Higher Education Center* **Cascades B**
	Adapting Project-Based Learning to Out-of-Classroom Experiences Derek Kellogg and Hannah Weiss, *Science Museum of Western Virginia* **Drillfield**
	Communicating Science: A Participatory Workshop Carolyn Kroehler, *Virginia Tech Graduate School* **Solitude**
10-10:15 AM	Break
10:15-11 AM	**Concurrent Sessions**
	BRCGATE and the Agricultural STEM Lab: Carroll County's Partnerships for Success Rachelle Rasco, Dwayne Huff, and Mark Burnett, *Carroll County Public Schools* **Cascades A**
	Student Success in Math for College and STEM Careers Jennifer Stevens and **Sandy Wilborn**, *Virginia Advanced Study Strategies* **Cascades B**
	Community STEM Education, Just Do It! Thomas "Tweeks" Weeks, *Rackspace* **Drillfield**
	Scaffolding Inquiry through Augmented Reality Todd Ogle, *Technology-enhanced Learning and Online Strategies* **Solitude**
11-11:15 AM	Break
11:15 AM-12 PM	**Concurrent Sessions**
	STEM It up Together: The Benefits of Collaboration Christina Martin, Richard Claus, and Michelle Berg, *Giles County Public Schools/Nanosonic* **Cascades A**

Agenda *continued*

Virginia Tech Science Festival: Science Is Bigger Than You Think!
Phyllis Newbill, *Center for Research in SEAD Education*
Cascades B

STEM Careers in the Classroom – Spotlight on Aviation and Space
Scott Tate and Elli Travis, *Virginia Tech Office of Economic Development*
Drillfield

STEM Opportunities with Virginia 4-H
Shannon Wiley and Dan Swafford, *Department of Agricultural, Leadership, and Community Education/Virginia 4-H*
Solitude

12-1:15 PM — Buffet Lunch and Poster Session
Latham A&B

Greetings by Theresa Mayer, *vice president for research and innovation*

Lunch Keynote: Chuck English, *director of playful learning and inquiry, Science Museum of Virginia*
What's New at the Science Museum of Virginia: STEM as a Pedagogy

1:15-1:30 PM — Special Message by Senator Mark R. Warner

Next Steps and Evaluation

Speakers

Chuck English is the Science Museum of Virginia's director of Playful Learning and Inquiry. His responsibilities include developing and implementing educational programming at the museum, as well as evaluating the effectiveness of the programs instated at the facility. English has designed, developed, and supported new and innovative programs in schools, school districts, and informal education centers in several states. He has helped direct or manage STEM-related national and state grants. Through his previous work as an educational consultant, he helped build education programs, grow localized leadership, and enabled educators to more effectively review their own work and successes. He has also worked in evaluation, which has included formal and informal educator observations and grant/program evaluations.

Jeremy V. Ernst is an associate director of Virginia Tech School's of Education and associate professor of Integrative STEM Education. He is a fellow at the Virginia Tech Institute for Creativity, Arts, and Technology and is an affiliate faculty member of Virginia Tech's Department of Engineering Education. Ernst received a bachelor's degree from Clemson University and a master's and doctorate from North Carolina State University.

Ernst specializes in research focused on dynamic intervention means for STEM education students categorized as at-risk of dropping out of school. This specific strand of research investigates educational models and structures, as well as learning vehicles that promote means of content/conceptual address to further facilitate learning. To more holistically support educational model and structure research, he has authored or co-authored over 70 refereed research publications; presented over 60 times at international, national, and regional conferences; and co-authored, edited, or served on the research team for the publication of 11 textbooks.

A southwest Virginia native, **Tanner Upthegrove** holds undergraduate degrees in recording arts and business from Full Sail University. Upthegrove composes spatial audio for venues with multiple loudspeakers. He joined the Institute for Creativity, Arts, and Technology in 2013 as an audiovisual design and technology engineer, focusing on spatial sound engineering. Previously, Upthegrove taught audio electronics at Full Sail University in Orlando, Florida, and was assistant mastering engineer to Grammy Award recipient Bob Katz. Upthegrove holds an InfoComm CTS certification and is an active member in the Audio Engineering Society.

Zach Duer is an educator, artist, musician, and performer. His work focuses on experimentation in digital technology, multi-media instrument creation, and all forms of collage. Duer holds the position of Immersive Environment Specialist at the Institute for Creativity, Arts, and Technology at Virginia Tech in Blacksburg, VA. He previously taught new media art as an instructor in the kinetic imaging department at Virginia Commonwealth University. He holds an MFA in Kinetic Imaging from Virginia Commonwealth University (2014), an MA in Music Composition from Mills College (2009) and a BM in Music Composition from Minnesota State University Moorhead (2007).

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