



**STELAR ITEST**  
**Principal Investigator  
and Evaluator Summit**  
*Equity and Access at the  
Human-Technology Frontier*

**Westin Alexandria  
Alexandria, VA  
May 14-15, 2018**

#ITEST2018  
@STELAR\_CTR  
stellar@edc.org



STEM LEARNING AND RESEARCH CENTER



# STELAR ITEST Principal Investigator and Evaluator Summit: *Equity and Access at the Human-Technology Frontier*

May 14–15, 2018  
Alexandria, VA

## Twitter Event Hashtags

#ITEST2018 #STELAR2018

Detailed program, materials, and logistics: <https://go.edc.org/2018itest>

## Wireless Internet Access (meeting space only)

Network: WESTIN\_MEETINGROOMS

Password: ITEST2018

**Meeting Evaluation** (please complete after the meeting):

<https://go.edc.org/evaluation>

The STELAR Center: Helping prepare a diverse, skilled, and innovative STEM workforce

Website: <http://stelar.edc.org/>

Email: [stelar@edc.org](mailto:stelar@edc.org)

Twitter: [@STELAR\\_CTR](https://twitter.com/STELAR_CTR)

Facebook: <https://www.facebook.com/stelarctr>



This event is supported by NSF grant # DRL-1614697. Any opinions, findings, and conclusions or recommendations expressed in this event are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.



## Acknowledgments

### MEETING CHAIRS

Caroline E. Parker, Education Development Center  
Sarah MacGillivray, Education Development Center

### STELAR STAFF AT EDUCATION DEVELOPMENT CENTER

Melody Hachey, Project Coordinator, mhachey@edc.org, 617-618-2801  
Sarah MacGillivray, Project Associate, smacgillivray@edc.org, 617-618-2931  
Joyce Malyn-Smith, Senior Advisor, jmsmith@edc.org, 617-618-2386  
Caroline E. Parker, STELAR Co-PI, cparker@edc.org, 617-618-2740  
Sarita Pillai, STELAR PI, spillai@edc.org, 617-618-2164  
Brianna Roche, Research Associate, broche@edc.org, 617-618-2760  
Becca Schillaci, Research Associate, bschillaci@edc.org, 617-618-2772

*The meeting chairs and STELAR staff thank the program committee for the innovative ideas and thoughtful input that helped shape the agenda for this meeting.*

### PROGRAM COMMITTEE MEMBERS

Ram Alagan, Alabama State University  
Kristin Bass, Rockman et al  
Anne Gold, University of Colorado Boulder  
Rebekah Hammack, Albert Einstein Distinguished Educator Fellow, NSF: EHR/DRL  
Ruth Kermish-Allen, Maine Math and Science Alliance  
Natalie King, Georgia State University  
Sheron Mark, University of Louisville  
Wendy Martin, Education Development Center  
Ashleigh McFadden, Advance CTE  
Wendy Smythe, AAAS ST&P Fellow, NSF: EHR/DRL  
Tony Streit, Education Development Center  
Eli Tucker-Raymond, TERC  
Keisha Varma, University of Minnesota

**DAY 1 AGENDA**

**Sunday, May 13**

Start	End		Session Description
5:00 PM	7:00 PM	<i>Prefunction Hall</i>	<b>Early Registration</b>
6:00 PM		<i>Prefunction Hall</i>	<b>Birds of a Feather Dinner</b> (self-pay)
6:00 PM		<i>Prefunction Hall</i>	<b>Fellows Orientation Dinner</b> (by invitation)

**Monday, May 14**

Start	End	Location	Session Description
7:00 AM	8:30 AM	<i>Prefunction Hall</i>	<b>Registration and Breakfast</b>
8:30 AM	9:45 AM	<i>Ballroom D</i>	<b>Welcome and Opening Remarks</b> Carrie Parker, STELAR Co-PI Sarita Pillai, STELAR PI David Haury, Program Director, Division of Research on Learning, NSF William (Jim) Lewis, Acting Assistant Director, Directorate for Education and Human Resources, NSF
9:45 AM	11:00 AM	<i>Ballroom D</i>	<b>Keynote Presentation</b> Matthew Nurse, Vice President, Nike Explore Team Sport Research Lab
11:00 AM	11:30 AM		<b>Networking Break</b>
11:30 AM	12:30 PM	<i>Ballroom D</i>	<b>Plenary Flash Talks</b> Thought-provoking, 5-minute project presentations, followed by small group discussions
12:30 PM	2:00 PM	<i>Ballroom D</i>	<b>Lunch</b> STELAR Fellows Program Introductions
2:00 PM	3:30 PM		<b>Breakout Session 1</b>
		<i>Ballroom A</i>	Stealthy STEM: Unexpected and Alternative On-ramps toward STEM Careers
		<i>Ballroom B</i>	Welcoming Workplaces: How can ITEST Partnerships Contribute to Creating Inclusive, Diverse, and Equitable Organizations?
		<i>Ballroom C</i>	Emerging STEM Evaluation and Research Frameworks
		<i>Ballroom D</i>	Ethics: How ITEST Projects Do and/or Could Prepare Youth to Work in Spaces that May Not Welcome Them
		<i>Bell</i>	Nurturing Work-Based Learning Models to Prepare Learners for Success in Future Work
		<i>Whitney</i>	New PI Orientation
3:30 PM	4:00 PM		<b>Networking Break</b>
4:00 PM	5:00 PM		<b>Expertise Roundtables</b>
		<i>Ballroom A</i>	- Preparing Scientists for Work with Educators and Youth
		<i>Ballroom B</i>	- Partnerships with Schools - Publishing in Journals
		<i>Ballroom C</i>	- Methods for STEM Interest
		<i>Ballroom D</i>	- Culturally Relevant Curriculum - Culturally Sensitive Technology - Disrupting Barriers in Low-Income Communities - Equity in Project Implementation - Industry Partnerships
		<i>Bell</i>	- Inequity in Informal Education - ITEST Collaborations - Longitudinal Participant Outcomes - Research Dissemination
		<i>Whitney</i>	- Art in STE(A)M - Intergenerational STEM
			- Disrupting Barriers for Underrepresented Groups
5:00 PM	5:30 PM	<i>Prefunction Hall</i>	<b>Networking Break and ITEST Project Expo Setup</b>
5:30 PM	7:00 PM	<i>Prefunction Hall</i>	<b>Reception and ITEST Project Expo</b>

**DAY 2 AGENDA**

**Tuesday, May 15**

Start	End	Location	Session Description
7:30 AM	8:30 AM	Ballroom D	<b>Breakfast and Networking</b>
8:30 AM	8:45 AM	Ballroom D	<b>Day 1 Reflections and Day 2 Orientation</b> Sarita Pillai, STELAR PI
8:45 AM	9:00 AM	Ballroom D	<b>National Science Foundation Remarks</b> Sylvia James, Acting Deputy Assistant Director, Directorate for Education and Human Resources, NSF
9:00 AM	10:00 AM	Ballroom D	<b>Equity and Access at the Human-Technology Frontier: Three Perspectives from the Field</b> June Ahn, Associate Professor of Learning Sciences/Educational Technology, New York University Megan Bang, Associate Professor, University of Washington College of Education Ingrid Dahl, Director, Service Design, Education @Scale, Adaptive Path at Capital One
10:00 AM	10:15 AM		<b>Break</b>
10:15 AM	11:45 AM		<b>Breakout Session 2</b>
		Ballroom A	Unresolved Issues: Reflections on Working Amidst Tensions and Dilemmas
		Ballroom B	Beyond the STEM Classroom: Families and Parents as STEM Education Partners
		Ballroom C	Ask an Evaluator
		Ballroom D	Incorporating Indigenous Perspectives into STEM Workforce Development
		Bell	Understanding the Value of Informal STEM Programs for Diverse Youth: A Guide for Institutions of Higher Learning
		Whitney	Strategies for Culturally-Responsive Evaluation
11:45 AM	12:45 PM	Ballroom D	<b>Lunch</b> ITEST Legislative Visits Overview NSF Lunch with Dr. Julia Clark (by invitation)
12:45 PM	2:00 PM		<b>Breakout Session 3</b>
		Ballroom A	STEM and Civic Engagement: Connecting Research and Society
		Ballroom B	STEM Education Research: Evidence that Answers Research Questions vs. Evaluation Questions
		Ballroom C	Planning for SPREaD grants
		Ballroom D	The Next Generation
		Bell	Preparing the Skilled Technical Workforce of the Future: How ITEST Projects Approach Dispositions and Skills
		Whitney	How to Make Data Beautiful: A Hands-On Workshop
2:00 PM	2:15 PM		<b>Break</b>
2:15 PM	3:00 PM	Ballroom D	<b>Closing Reflections and NSF Town Hall</b> Matthew Nurse, Vice President, Nike Explore Team Sport Research Lab David Haury, Program Director, Division of Research on Learning, NSF Evan Heit, Director, Division of Research on Learning in Formal and Informal Settings, NSF
3:00 PM	5:00 PM		<b>Meetings with NSF Program Officers</b> <i>Program officers have set aside time to meet with their projects on a drop-in basis during this time. An "NSF Program Officers Info Sheet" will be available at registration with further information.</i>

**Wednesday, May 16**

**Legislative Visits** (by appointment)



## Sessions Table of Contents

Plenary Flash Talks Page 1

Breakout Sessions Pages 2-7

Expertise Round Tables Page 8

ITEST Project Expo List Pages 9-11

ITEST Project Expo Map Page 12

## Plenary Flash Talks

Monday, May 14, 11:30 am – 12:30 pm

Ballroom D

Flash Talks are brief presentations modeled on Ignite Talks (<http://www.ignitetalks.io/>), in which presenters are given 20 slides that automatically advance every 15 seconds. The result is a fast, informative, and fun presentation which lasts just 5 minutes.

This year's Flash Talks will consist of seven presentations by ITEST projects whose work connects to our conference theme, Equity and Access at the Human-Technology Frontier. Presentations will be given in three groups, with time given between each set to allow tables to engage in discussion before hearing from the next group of presenters.

**2018 Plenary Flash Talks** (listed alphabetically by presenter):

**Chief Science Officers: Empowering Youth to Make a Global Impact in STEM**

*Jeremy Babendure, Institute for Learning Innovation*

*Chief Science Officer Brandon*

**The Tuskegee BUILDERS Academy**

*Martha Escobar, Oakland University*

**Changing the Faces of Computing, One Stitch in Time**

*Yasmin B. Kafai, University of Pennsylvania*

**Data Science through Digital Storytelling**

*Seth Marceau, Youth Radio*

**Using Spatial Narratives to Link Community Engagement and Awareness of STEM Careers**

*Beth Schlemper, University of Toledo*

**Design Notebooking and Knowledge Building Practices during Elementary School Engineering**

*Kristen Wendell, Tufts University*

**Think Data, Act Local**

*Cassie Xu, Columbia University*

## Breakout Sessions

### Session 1

Monday May 14, 2018- 2:00-3:30PM

Room	Facilitators and Presenters	Session Descriptions
Ballroom A	<p><b>Stealthy STEM: Unexpected and Alternative On-ramps toward STEM Careers</b></p> <p><b>Facilitator:</b> Ruth Kermish-Allen, Maine Math and Science Alliance</p> <p><b>Presenters:</b> Lauren Birney, Pace University New York Stacey Forsyth, CU Science Discovery Cat Stylinski, University of Maryland Center for Environmental Science</p>	<p>The ITEST community offers many innovative “hooks” to expose youth audiences to STEM, and these often move beyond lab coats and computers. In this session, we will hear from a variety of projects sharing the many unexpected entry points to engage student interests in STEM learning, including but not limited to the arts and addressing community needs or challenges. The session will start with short visual talks from projects and then transition to small table groups to discuss key drivers and themes the field needs to focus on in order to go beyond STEM.</p>
Ballroom B	<p><b>Welcoming Workplaces: How can ITEST Partnerships Contribute to Creating Inclusive, Diverse, and Equitable Organizations?</b></p> <p><b>Facilitator:</b> Eli Tucker-Raymond, TERC</p> <p><b>Presenters:</b> Kenric Kesler, Northern Arizona University Jamie Larsen, Educational Gaming Environments (EdGE) @ TERC Matt Nurse, Nike Explore Team Sport Research Lab (NSRL) Cassie Xu, Lamont-Doherty Earth Observatory, Columbia University</p>	<p>Workplaces in STEM have been historically inhospitable places for people who are othered from the dominant culture in a setting, including women of color, people with disabilities, or those who are simply perceived as different. What can workplaces of the future learn from ITEST projects and what can ITEST projects learn from organizations that foreground diversity and equity? This session will include perspectives from both industry and ITEST projects.</p>
Ballroom C	<p><b>Emerging STEM Evaluation and Research Frameworks</b></p> <p><b>Facilitators:</b> Kristin Bass, Rockman et al Anne Gold, University of Colorado Boulder</p> <p><b>Presenters:</b> Alec Bodzin, Lehigh University Matthew Cannady, Lawrence Hall of Science Bob Coulter, Missouri Botanical Garden Melissa K. Demetrikopoulos, Institute for Biomedical Philosophy Berri Jacque, Tufts University Michael Johnson, Texas A&amp;M University Steven McGee, The Learning Partnership David Uttal, Northwestern University</p>	<p>What is the role of models and theoretical frameworks in ITEST program evaluation and research design? This session will start with an overview of evaluation and research frameworks, followed by five-minute summaries from ITEST project evaluators or researchers describing the frameworks they use for their work, such as STEM identity and STEM ecology.</p>



## Session 1

Monday May 14, 2018- 2:00-3:30PM

Room	Facilitators and Presenters	Session Descriptions
Ballroom D	<p><b>Ethics: How ITEST Projects Do and/or Could Prepare Youth to Work in Spaces that May Not Welcome Them</b></p> <p><b>Facilitators:</b> <i>Rebekah Hammack, Einstein Fellow at NSF</i> <i>Wendy Smythe, AAAS Fellow at NSF</i></p> <p><b>Presenters:</b> <i>Sunggye Hong, University of Arizona</i> <i>Rita Karl, Twin Cities Public Television</i> <i>Merredith Portsmouth, Tufts University</i> <i>Karl Reid, National Society of Black Engineers</i></p>	<p>Current ITEST PIs will describe their work with diverse populations (e.g., girls, minorities, individuals with disabilities), including successful strategies for working with diverse populations and the ethical implications for preparing them to enter the STEM workforce.</p>
Bell	<p><b>Nurturing Work-Based Learning Models to Prepare Learners for Success in Future Work</b></p> <p><b>Facilitator:</b> <i>Kimberly Hauge, National Governors Association</i></p> <p><b>Presenters:</b> <i>Ashleigh McFadden, Advance CTE</i> <i>Dana Westgren, National Governors Association</i></p>	<p>Experiential learning during middle school, high school and postsecondary education is crucial for learners to be fully prepared for the world of work once they have completed their training. This interactive workshop will explore policies related to work-based learning, and focus on how to recruit and prepare employers to provide meaningful experiences to learners.</p>
Whitney	<p><b>New PI Orientation</b></p> <p><b>Facilitator:</b> <i>Becca Schillaci, Education Development Center</i></p> <p><b>Presenters:</b> <i>David Hauray, National Science Foundation</i> <i>John Ristvey, University Corporation For Atmospheric Research</i> <i>Bob Russell, National Science Foundation</i> <i>Jill Zande, Monterey Peninsula College</i></p>	<p>Are you new to the ITEST community? Wondering what resources are available to support your work? This session will provide an orientation to the STELAR Center and the ITEST program. (New PIs are encouraged, but not required, to attend.)</p>

## Session 2

Tuesday May 15, 2018 - 10:15-11:45AM

Room	Facilitators and Presenters	Session Descriptions
<b>Ballroom A</b>	<b>Unresolved Issues: Reflections on Working amidst Tensions and Dilemmas</b>  <b>Facilitator:</b> <i>Caroline E. Parker, Education Development Center</i>  <b>Presenters:</b> <i>June Ahn, New York University</i> <i>Megan Bang, University of Washington College of Education</i> <i>Ingrid Dahl, Education @Scale, Adaptive Path at Capital One</i>	In this workshop, the three plenary panelists will briefly share an unresolved tension in their work as a stepping off point for small group conversations around specific, real-world, current challenges in promoting equity and access for youth to future, emerging workplaces.
<b>Ballroom B</b>	<b>Beyond the STEM Classroom: Families and Parents as STEM Education Partners</b>  <b>Facilitator:</b> <i>Keisha Varma, University of Minnesota</i>  <b>Presenters:</b> <i>Monica Cardella, Purdue University</i> <i>Jamie Clayton, Morehouse College</i> <i>Carole Greenes, Arizona State University</i> <i>Lakshmi Iyer, Appalachian State University</i> <i>Matt Militello, East Carolina University</i> <i>David Uttal, Northwestern University</i>	In this session, participants will share ideas about how to include families and parents in efforts to support STEM education. Presenters will give brief presentations to provide an overview of their ITEST projects. Following the presentations, all participants and presenters will break up into small groups to discuss ITEST specific topics in relation to working with parents and families such as using technology, increasing interest and awareness of STEM careers, and working with underserved populations. Participants will share successes and address challenges they are experiencing as they strive to involve families and parents in their work. The session will end with a brief Q&A panel discussion with youth participants from the Chief Science Officers: A Strategy for Student Awareness and Industry Engagement project, who will share their ideas about including families and parents as STEM education partners.
<b>Ballroom C</b>	<b>Ask an Evaluator</b>  <b>Facilitator:</b> <i>Anne Gold, University of Colorado Boulder</i>  <b>Presenters:</b> <i>Bradford Davey, Technology for Learning Consortium</i> <i>Kevin Glass, EdAdvance</i> <i>Kirk Knestis, Evaluand LLC</i> <i>Rucha Londhe, Research and Evaluation Consultant</i> <i>Kavita Mittapalli, MN Associates, Inc</i> <i>David Reider, Education Design LLC</i>	Who's got questions about evaluation? Bring them to this session, and a team of evaluators will provide their best answers. The session will start with 30 minutes of short (5 minute) presentations of evaluators' favorite evaluation tips or tricks. Presenters will then address audience questions in an open Q&A session.

## Session 2

Tuesday May 15, 2018 - 10:15-11:45AM

Room	Facilitators and Presenters	Session Descriptions
Ballroom D	<b>Incorporating Indigenous Perspectives into STEM Workforce Development</b>  <b>Facilitator:</b> <i>Wendy Smythe, AAAS Fellow at NSF</i>  <b>Presenters:</b> <i>Kathy Berry Bertram and Glenn Markel, Alaska Pacific University</i> <i>Rachel Byington, University of Wisconsin-Madison</i> <i>Laura Conner, University of Alaska Fairbanks Campus</i> <i>Sharon Nelson-Barber, WestEd</i>	This workshop will provide an opportunity for PIs working with Indigenous populations to engage in small group discussions about their projects. Goals of the workshop are to provide a venue for discussion about best practices, project conceptualization, successful strategies, and employing Traditional Ecological Knowledge (TEK) education for STEM education and workforce development in Indigenous communities, in addition to ethical considerations of working with diverse populations.
Bell	<b>Understanding the Value of Informal STEM Programs for Diverse Youth: A Guide for Institutions of Higher Learning</b>  <b>Facilitator:</b> <i>Wendy Martin, Education Development Center</i>  <b>Presenters:</b> <i>James Diamond, Education Development Center</i> <i>Vikram Kapila, NYU Tandon School of Engineering</i> <i>Marc Lesser, Mouse</i> <i>Fan Wu, Tuskegee University</i>	The ITEST community is deeply committed to providing innovative STEM experiences to underrepresented youth. While youth benefit from the experiences, to really move the needle on increasing diversity in the STEM workforce, it will be important for the gatekeepers in higher education, such as admissions officers and faculty, to recognize the value of these experiences when they recruit and admit students, especially since many of the students our projects serve may not have access to the opportunities these gatekeepers typically value. In this session, staff from several different informal projects talk about the ways in which they are helping create pathways to higher education for program participants by engaging with those institutions.
Whitney	<b>Strategies for Culturally-Responsive Evaluation</b>  <b>Facilitator:</b> <i>Kristin Bass, Rockman et al</i>  <b>Presenters:</b> <i>Rachel Becker-Klein, Two Roads Consulting</i> <i>Hilarie Davis, Technology for Learning Consortium</i> <i>Melinda Davis, University of Idaho</i> <i>Monique Jethwani, Columbia University</i> <i>Enos Massie, Massie &amp; Associates</i> <i>Tandra Tyler-Wood, University of North Texas</i>	This session will explore frameworks and methods for working with diverse populations on evaluation projects. Panelists and participants will review and discuss approaches they have used in their ITEST projects, and exchange resources and best practices.



### Session 3

Tuesday, May 15, 2018 - 12:45-2:00PM

Room	Facilitators and Presenters	Session Descriptions
<b>Ballroom A</b>	<b>STEM and Civic Engagement: Connecting Research and Society</b>  <b>Facilitator:</b> <i>Ram Alagan, Alabama State University</i>  <b>Presenters:</b> <i>Karla Eitel, College of Natural Resources, McCall Outdoor Science School, Natural Resources and Society, University of Idaho</i> <i>Ruth Kermish-Allen, Maine Mathematics and Science Alliance</i> <i>Bruce MacFadden, Florida Museum of Natural History, University of Florida</i> <i>Beth Schlemper, Department of Geography and Planning, University of Toledo</i>	This session will begin with five-minute presentations from ITEST PIs focused on how they incorporate civic engagement in their projects, followed by a roundtable conversation that will consider different forms of civic engagement models for STEM projects.
<b>Ballroom B</b>	<b>STEM Education Research: Evidence that Answers Research Questions vs Evaluation</b>  <b>Facilitator:</b> <i>Rebekah Hammack, Einstein Fellow at NSF</i>  <b>Presenters:</b> <i>Jake Grohs, Virginia Tech</i> <i>Berri Jacque, Tufts University</i> <i>Lisa Kaczmarczyk, Lisa Kaczmarczyk Consulting LLC</i> <i>Sarah Kay-McDonald, National Science Foundation</i> <i>Caroline E. Parker, Education Development Center</i>	This session will begin with a presentation by NSF program director Sarah-Kay McDonald who will discuss NSF's perspective on research and evaluation. STELAR co-PI Carrie Parker will provide information about STELAR resources. Current ITEST PIs and evaluators will then describe how they are operationalizing research and evaluation in their projects.
<b>Ballroom C</b>	<b>Planning for SPrEaD Grants</b>  <b>Facilitator:</b> <i>Sarita Pillai, Education Development Center</i>  <b>Presenters:</b> <i>Bradley Barker, University of Nebraska - Lincoln</i> <i>David Haury, National Science Foundation</i> <i>Kirk Knestis, Evaluand LLC</i> <i>Lori Rubino-Hare, Northern Arizona University</i>	Successful Project Expansion and Dissemination (SPrEaD) ITEST Projects are given 3-5 years and up to \$2,000,000 of funding to further the design and development of established interventions that have demonstrated impact. During this session participants will learn how to plan a SPrEaD proposal through presentations from ITEST program officer David Haury and project members from three SPrEaD ITEST projects.

### Session 3

Tuesday, May 15, 2018 - 12:45-2:00PM

Room	Facilitators and Presenters	Session Descriptions
Ballroom D	<b>The Next Generation</b>  <b>Facilitators:</b> <i>Jeremy Babendure, Institute for Learning Innovation</i> <i>Natalie King, Georgia State University</i>  <b>Presenters:</b> <i>CSO Anthony</i> <i>CSO Brandon</i> <i>CSO Mackenzie</i> <i>CSO Mayra</i> <i>CSO Sebastian</i> <i>CSO Shalae</i>	In this student-led session, youth from the Chief Science Officers (CSO) project will present the changing dynamics of learning from a student perspective. CSOs will share their experiences in the program, including working with industry partners, STEM professionals and opportunities that encouraged them to visualize themselves as the future. They will share strategies on how PIs can include students in the planning process and curriculum development, and how PIs can create learning environments that place students in control of their efforts. They will also share how they are scaling up the program, and how projects can benefit from including students as partners for the impact to be more meaningful.
Bell	<b>Preparing the Skilled Technical Workforce of the Future: How ITEST Projects Approach Dispositions and Skills</b>  <b>Facilitator:</b> <i>Joyce Malyn-Smith, Education Development Center</i>  <b>Presenters:</b> <i>Eric Greenwald, University of California-Berkeley</i> <i>Vikram Kapila, New York University</i> <i>Chengcheng Li, University of Cincinnati</i> <i>Victor Minces, University of California-San Diego</i> <i>David Reider, Education Design</i>	To be successful in work at the Human-Technology Frontier, people will need to expand their skill sets and develop dispositions that are conducive to working in dynamic, interdisciplinary teams with machines as fully participating partners in formulating and solving problems. What can we learn about needed skills and dispositions from current research into future work and what can ITEST projects tell us about how they are helping youth develop these skills and dispositions? This session will begin with short presentations which will lead into group discussions.
Whitney	<b>How to Make Data Beautiful: A Hands-On Workshop</b>  <b>Facilitator:</b> <i>Kristin Bass, Rockman et al</i>  <b>Presenters:</b> <i>Kristin Bass, Rockman et al</i> <i>Asha Richardson, Youth Radio</i>	Learn how to present your project's research and evaluation findings with compelling tables, graphs, and infographics. No graphic design experience or expensive software necessary! Presenters will share tips and resources for data visualization, and give participants hands-on experience making data beautiful.

## Expertise Roundtables

Monday, May 14, 4:00 – 5:00 pm

The purpose of this session is to learn about and discuss a specific topic of interest. Each table is dedicated to a topic and hosts up to 10 people. Leaders at each table will take about 10 minutes each to introduce the topic and their research and then lead an inclusive and constructive conversation. The session will last one hour. We ask that participants stay at the same table for the entire session.

Select a table by picking up a ticket for that topic at the registration desk. The number of tickets per table is limited. First come, first served.

<b>Ballroom A</b>	
Preparing Scientists for Work with Educators and Youth	Jerrod Henderson, Cat Stylinski
<b>Ballroom B</b>	
1 Partnerships with Schools	Lauren Birney, Steven McGee
2 Publishing in Journals	Pavlo Antonenko, Edward Fletcher, Xiufeng Liu
<b>Ballroom C</b>	
Methods for STEM Interest	Mac Cannady, Kevin Glass
<b>Ballroom D</b>	
1 Culturally Relevant Curriculum	Alec Bodzin, Victor Minces
2 Culturally Sensitive Technology	Karla Eitel
3 Disrupting Barriers in Low-Income Communities	Lisa Kaczmarczyk, Maggie Renken
4 Equity in Project Implementation	Heidi Carlone, Beth Sappe
5 Industry Partnerships	Ilene Kantrov, Jamie Larsen
6 Inequity in Informal Education	Sunggye Hong, Eli Tucker-Raymond
7 ITEST Collaborations	Jeremy Babendure, Melissa Demetrikopoulos
8 Longitudinal Participant Outcomes	Yue Li, Anna Woodcock
9 Research Dissemination	Nancy Songer, Paola Sztajn
<b>Bell</b>	
1 Art in STE(A)M	Kavita Mittapalli
2 Intergenerational STEM	Rachel Byington, David Uttal
<b>Whitney</b>	
Disrupting Barriers for Underrepresented Groups	Monique Jethwani, John Tillotson



## ITEST Project Expo

During the ITEST Project Expo, participants can explore different project stations to experience demonstrations, interactives, posters, videos, and/or artifacts from project work. The expo will feature the following projects and presenters.

1. **ITEST Proposal Development Course\*** *STELAR Team, Educational Development Center*
2. **2018 NSF STEM for All Video Showcase: Transforming the Educational Landscape\*** *A collaboration of TERC and the six NSF-funded resource centers: MSPnet, CADRE, CIRCL, CAISE, STELAR, and CS for All Teachers*
3. **Ideas: Inventing, Designing and Engineering on the Autism Spectrum** *Wendy Martin, Education Development Center & Jennifer Yu, SRI International*
4. **All Included in Mathematics--Expanding Professional Development Opportunities** *Paola Sztajn, North Carolina State University*
5. **Integrating Computer Science into all Disciplines in Middle School and High School\*\*** *Susan Rodger, Duke University*
6. **Broadening identities for diverse youth in STEM through socioenvironmental problem solving** *Heidi Carlone, University of North Carolina at Greensboro & Lakshmi Iyer, Appalachian State University*
7. **Building Computer Science Identity and Career Interest in Latina High School Girls in an Extended Hackathon Program** *Anna Woodcock, California State University San Marcos & Lisa Kaczmarczyk, Lisa Kaczmarczyk Consulting LLC*
8. **Collaborative Digital Interrupted Case Studies to Build Bioscience Career Awareness** *Berri Jacque, Tufts University*
9. **Lowering Barriers to Engage Students to Pursue STEM+C Degrees & Careers\*\*** *Bruce Segee & Amy Gaspar, University of Maine*
10. **Promoting Robotic Design and Entrepreneurship Experiences\*\*** *Vikram Kapila, NYU Tandon School of Engineering*
11. **Build a Better Book: Engaging Teens in the Design and Fabrication of Multi-Modal Books\*** *Stacey Forsyth & Kathryn Penzkover, University of Colorado Boulder*
12. **Coding to Learn Science\*** *Eric Greenwald, University of California Berkeley*
13. **Demonstration of StarLogo Nova (agent based modeling tool)\*** *Bob Coulter, Missouri Botanical Garden*
14. **Making Music with Physics\*** *Victor Minces, University of California San Diego*

\* Technology Demonstration

\*\* Poster & Technology Demonstration

15. **Nebraska WearTec Project** *Bradley Barker & Neal Grandgenett, University of Nebraska*
16. **Ramping Up to the BODYMODELS Project** *Neal Grandgenett, University of Nebraska & Xin Wang, RMC Research*
17. **Urban Youth Tracking the Biodiversity of Philadelphia\*** *Nancy Songer, Drexel University*
18. **Community-based Problem Solving to Introduce Inclusive STEM Pedagogies** *Richard Wagner, Metropolitan State University Denver & Mariana Enriquez, Program Evaluation Consultant*
19. **Design-based IT Learning Experiences at University of Cincinnati** *Chengcheng Li, University of Cincinnati*
20. **Earth Partnership: Indigenous Arts & Science-Connecting STEM to Native Science** *Rachel Byington, Earth Partnership, UW-Madison*
21. **Empowering Youth to Make a Global Impact in STEM** *Jeremy Babendure, Institute for Learning Innovation*
22. **Engaging Elementary School Aged African Americans, Latinx, and Girls in Summer Engineering Experiences with Rich Contexts** *Monica Cardella, Purdue University*
23. **Flight Simulation Technology to Improve Math and Science Skills for Middle School Students** *Chadia Aji & M. Javed Khan, Tuskegee University*
24. **From Toys to Tools - UAVs in Middle-School Engineering Education** *John Ristvey, UCAR*
25. **Gender Differences in Career Interest in Rural 7th Grade Students** *Tandra Tyler-Wood, University of North Texas*
26. **iDigFossils: Engaging K-12 Students in Integrated STEM via 3D Digitization, Printing and Exploration of Fossils** *Pavlo Antonenko & Bruce MacFadden, University of Florida*
27. **Lens on Climate Change - Engaging Students in Learning About Locally Relevant Climate Change Through Videography** *Anne Gold, University of Colorado Boulder*
28. **MAKING IT STICK!** *Peter Veronesi, The College at Brockport SUNY*
29. **Next Step Learning: Bridging Science Education and Cleantech Careers with Innovative Technologies** *Charles Xie, Concord Consortium*
30. **Preparing Students to be College, Career, and Future Ready** *Edward Fletcher & Victor Hernandez-Gantes, University of South Florida & Thomas Horwood, ICF*

\* Technology Demonstration

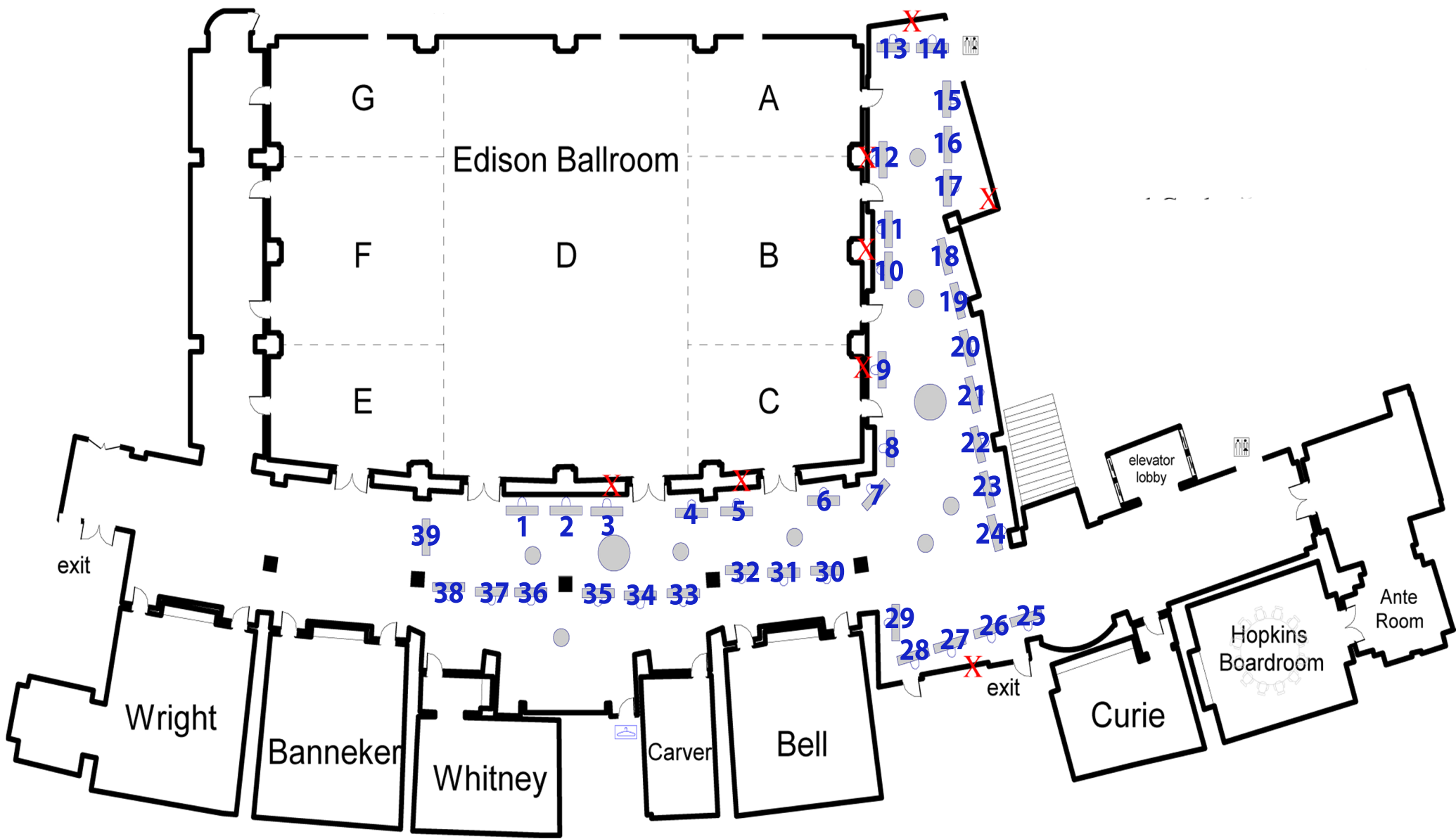
\*\* Poster & Technology Demonstration

31. **Project BUILD (Building Using an Interactive Learning Design): Bringing Together Library Staff and Professional Engineers to Facilitate Engineering Activities for y\Youth (Grades 2-5) and Their Caregivers** *Paul Dusenbery & Keliann LaConte, Space Science Institute & Jen Jocz, Education Development Center*
32. **Promoting STEM Interests and Careers Through Families and Museums Exploring** *Gail Jones, NC State University*
33. **SciGirls Strategies** *Rita Karl, Twin Cities PBS SciGirls & Hilarie Davis, Technology for Learning LLC*
34. **Seeding the Future of STEM Researchers through Emerging Agricultural Technologies** *Helen Zhang & David Jackson, Boston College*
35. **Socio-Environmental Science Investigations Using the Geospatial Curriculum Approach with Web Geographical Information Systems** *Alec Bodzin, Lehigh University*
36. **Soft Robotics to Broaden the STEM Pipeline** *Nathan Mentzer, Purdue University*
37. **Strategic Problem-based Approach to Rouse Computer Science (SPARCS)** *Harvey Siy, University of Nebraska at Omaha*
38. **The CryptoClub: Cryptography and Mathematics in the Middle Grades** *Janet Beissinger, University of Chicago*

\* Technology Demonstration

\*\* Poster & Technology Demonstration

# Project Expo



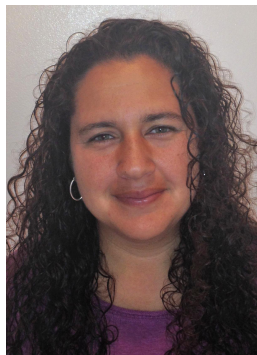
## Keynote Speaker Bios



**Matthew Nurse** is the Vice President of the Nike Explore Team Sport Research Lab (NSRL) for NIKE, Inc. Nurse leads a multi-disciplinary team of researchers, scientists, and innovators focusing on biomechanics, human physiology, sensory perception and data science. The mission of the NSRL is to lead with science to make athletes better. The NSRL provides the knowledge and expertise to drive product and service innovations that improve performance, protection, and perception. Working with the broader teams in NXT Footwear and Apparel Innovation, the NSRL helps bring disruptive products, platforms, and capabilities to market. Nurse has been at Nike with the Research and Innovation team for over 13 years. In that time, he has previously worked as a Senior Researcher for the Basketball, Golf, and Equipment categories. He has also worked on numerous advanced product concepts that have led to more than a dozen patents related to footwear, apparel, and digital product applications. Nurse earned his PhD in Biomechanics & Medical Science while working in the Human Performance Lab at the University of Calgary, Canada. His prior work focused on topics ranging from the role of afferent feedback on the control of locomotion, to researching the effects of footwear and shoe inserts on performance and mobility.



**June Ahn** is an Associate Professor who will be joining the UCI School of Education in summer 2018. He conducts research on the design, implementation, and evaluation of learning technologies. He is interested in designing and understanding sociotechnical systems - or how social, cultural, and institutional factors intersect with the affordances of new technologies - to create enhanced and equitable learning opportunities for all learners. His current research includes designing social media and public displays to facilitate the noticing of science learning across neighborhood settings; designing and studying the efficacy of alternate reality games for playful learning; and researcher-practitioner partnerships with school districts to use data and analytics to understand the impact of educational software and blended learning. His work has been supported by grants from the National Science Foundation, Institute of Education Sciences, Susan Crown Exchange, and James and Judith K. Dimon Foundation.



**Megan Bang** (Ojibwe and Italian descent) is an associate professor of the Learning Sciences and Human Development in Educational Psychology at the University of Washington. She teaches in the Teacher Education Programs and is affiliated faculty in American Indian Studies. Bang's research is on understanding culture, learning, and development with specific focus on the complexities of navigating multiple meaning systems in creating and implementing more effective learning environments. Her work seeks to re-mediate the historically powered dynamics of developing and implementing learning environments in order to develop forms of education that can cultivate just, culturally vibrant, socio-ecological futures. She works in both school and informal settings to create education that contributes to Indigenous resurgence. She is the Director of Native Education Certificate Program, which seeks to decolonize and Indigenize in-service, pre-service and informal educators practices who are working in and with Indigenous communities. Bang serves on multiple national boards and advisory committees and serves on several editorial boards including Curriculum & Instruction, Journal of the Learning Sciences, Mind, Culture, and Activity, the Journal of American Indian Education and Curriculum Inquiry. She serves on the board of Directors for Grassroots Indigenous Multimedia, an organization focused on Ojibwe language revitalization, and Na'ah Illahee Fund, an organization focused on empowering Indigenous women and girls. Bang is the birth mother of three and has raised many of her nieces and nephews.



**Ingrid Hu Dahl** is the Director of Learning Experiences for the design organization at Capital One, activating a culture of persistent learning and engagement. Dahl was previously the Managing Director of KQED's Learning initiative where she oversaw the development of products, platforms and content. Dahl has partnered with multiple stakeholders to orchestrate opportunities and solutions. She built the vision for The Mix, a creative media lab for teens featured at the San Francisco Public Library, developed an all-girl game design program in partnership with Zynga.org, created a remix game and coding program for teens supported by the National Endowment for the Arts, and designed and led a STEM media and tech leadership program for underrepresented emerging adults with support from two 30-year National Science Foundation Advanced Technical Education grants. A musician of 15 years, Dahl has toured the nation and plays synth, bass and guitar. She is a founding member of the Willie Mae Rock Camp for Girls (Brooklyn, NY) where she taught girls empowerment through music, identity workshops and collaboration and has published articles on the youth media field, tech and education, leadership and case study results. Dahl lectures nationally and internationally, has taught courses at Rutgers University on imagery and culture, designed and facilitated leadership workshops, and created a public speaking Riot Grrrl course at the Barnard Center for Research on Women. Dahl participates in the diversity and tech movement and is a TEDx speaker.



## STELAR Fellows

A primary goal of the STELAR Center is to build the capacity of future PIs and help diversify the ITEST portfolio and PI community. With this in mind, for the second year PIs of ITEST projects were given an opportunity to nominate a non-PI “fellow” (such as an educator, postdoc, graduate student, or a leader at an institution that serves diverse learners) who could jointly attend the Summit and enrich our deliberations.

Fellows attend the Summit as the guest of the nominating PI in order to learn about the ITEST program and consider submitting proposals in future solicitations. Fellows are encouraged to attend all Summit sessions and participate in discussions. The Fellows may have limited experience with NSF or other federal funding mechanisms, but are engaged in STEM work with youth or teachers. Interest in nominating a fellow was high, and selection was very competitive.

Please join us in welcoming both the 2018 Fellows and our returning 2017 Fellows!

### 2018 STELAR Fellows



**Kinnari Atit, University of California, Riverside**

Nominated by: David Uttal

Kinnari Atit is an Assistant Professor in the Graduate School of Education at the University of California, Riverside. Atit’s work focuses on understanding the role of spatial thinking skills in STEM domains, and also on identifying how to bolster and develop STEM-relevant skills in students.



**Michelle Cerrone, Education Development Center**

Nominated by: James Diamond

Michelle Cerrone’s work focuses on the role of educational technologies in supporting student learning and teacher professional development. Cerrone specializes in research methods, survey development, and statistical analysis, which she applies across a range of evaluation and research projects. Her most recent work examines the design of effective tools for educators and learners to promote progressive teaching.



**Dionne Champion, TERC**

Nominated by: Eli Tucker-Raymond

An engineer, arts educator, and education researcher, Dionne Champion received her PhD in Learning Sciences from Northwestern and is currently a postdoctoral fellow at TERC. Champion’s research focuses on the design and ethnographic study of environments that blend STEM and creative embodied learning activities. She is interested in developing programs that engage children in authentic STEM experiences.



**Sherice Clarke, UC San Diego**

Nominated by: Victor Mincez

Sherice Clarke is an Assistant Professor of Education Studies at UC San Diego. Clarke's research focuses on teaching and learning through science argumentation. She examines student engagement in science. In addition, she examines the ways in which technologies can support teachers in using high leverage practices that support students in developing scientific habits of mind.



**Megan Ennes, North Carolina State University**

Nominated by: Gail Jones

Megan Ennes is a NSF Graduate Research Fellow at North Carolina State University. Ennes is a former science center educator and curriculum developer. Her current research focuses on science interest, self-efficacy, identity, and career aspirations. Megan is currently assisting with a study of family support of underrepresented youths' science interest and career aspirations in science museums.



**Jonathan Townes, Hinds Community College**

Nominated by: Noel Gardner

Jonathan Townes obtained a B.S. in Biology from Jackson State University and a Masters of Education in Biological sciences from Mississippi College, and is currently a PhD student in Computational Biology at Jackson State University. A former high school biology teacher, Townes now serves as the STEM Coordinator at Hinds Community College-Utica campus. Jonathan has a deep passion for science education.

---

## 2017 STELAR Fellows



**Ram Alagan\*, Alabama State University**

Nominated by: Marcia Rossi

Ram Alagan is an Associate Professor of Geography in the Department of Criminal Justice and Social Sciences at Alabama State University. Alagan's research interests focus on GIScience, Participatory GIS, Civil Rights GIS, Alabama Black Belt, Geo-visualization, and Participatory GIS approaches to Environmental Impact Assessment. He has co-edited the 25th volume of Research in Political Sociology on "Environment, Politics, and Society" (May, 2018).



**Natalie S. King\*, Georgia State University**

Nominated by: Brendan Calandra

Natalie S. King is an assistant professor of science education in the Department of Middle and Secondary Education at Georgia State University's College of Education and Human Development. King's scholarly work focuses on K-12 science education with an emphasis on middle grades science experiences, advancing Black girls in STEM education, community-based informal STEM programs, and the role of curriculum in fostering equity in science teaching and learning.



**Sheron Mark\***, University of Louisville

Nominated by: Mike Barnett

Sheron Mark is an Assistant Professor of Science Education in the Department of Middle and Secondary Education at the University of Louisville's College of Education and Human Development. Mark was previously a Post-Doctoral Fellow and Keck Foundation Teaching Fellow 2012 – 2015 at Loyola Marymount University's Center for Urban Resilience (CUREs), Seaver College of Science and Engineering, and the Bellarmine College of Liberal Arts.



**Ashok Basawapatna**, SUNY Old Westbury

Nominated by: Alexander Repenning

Ashok Basawapatna is an Assistant Professor of Mathematics, Computer & Information Science at the State University of New York (SUNY) Old Westbury. Basawapatna's research interests are in broadening participation in computer science through game and STEM simulation, abstract Computational Thinking Patterns (CTPs), and lowering barriers of entry to STEM simulation programming.



**Ricarose Roque**, University of Colorado Boulder

Nominated by: Tom Yeh

Ricarose Roque is an Assistant Professor in the Information Science department at CU Boulder with a courtesy appointment in Computer Science and Education. Roque lead the Family Creative Learning project, and was previously a member of the Lifelong Kindergarten research group at the MIT Media Lab, a member of the MIT Scratch Team, and faculty associate at the Berkman Klein Center for Internet and Society at Harvard University.

*\* Program Committee Members and 2018 Session Leads*

## Recommended Restaurants

### Restaurant choices within walking distance of the hotel

Distance	Restaurant	Address	Cuisine	Website	Phone
In hotel	Trademark	(Hotel)	American	<a href="http://www.trademarkdrinkandeat.com">www.trademarkdrinkandeat.com</a>	703-253-8640
0.1 mi	Pasara Thai	2051 Jamieson Ave	Thai	<a href="http://www.pasarathairestaurant.com">www.pasarathairestaurant.com</a>	703-299-8747
0.2 mi	Sweet Fire Donna's	510 John Carlyle St	Barbeque	<a href="http://www.sweetfiredonnas.com">www.sweetfiredonnas.com</a>	571-312-7960
0.3 mi	Sumo Japanese Restaurant	2016 Eisenhower Ave	Japanese, Sushi	<a href="http://www.sumo-japanese.com">www.sumo-japanese.com</a>	703-739-6699
0.4 mi	Quattro Formaggi	1725 B Duke St	Italian	<a href="http://www.4maggi.com">www.4maggi.com</a>	703-548-8111
0.4 mi	San Antonio Bar & Grill	200 Swamp Fox Rd	Tex-Mex	<a href="http://www.sabarandgrill.com">www.sabarandgrill.com</a>	703-329-6400
0.4 mi	Table Talk Restaurant	1623 Duke St	Diner	<a href="http://www.yatestabletalk.com">www.yatestabletalk.com</a>	703-548-3989
0.5 mi	Joe Theismann's Restaurant	1800 Diagonal Rd	American	<a href="http://www.theismanns.com">www.theismanns.com</a>	703-739-0777
0.5 mi	Delia's Grill & Brickoven Pizza	209 Swamp Fox Rd	Mediterranean	<a href="http://www.deliasbrickovenpizza.com">www.deliasbrickovenpizza.com</a>	703-329-0006
0.5 mi	Yves Bistro	235 Swamp Fox Rd	French	<a href="http://www.yvesbistrova.com">www.yvesbistrova.com</a>	703-329-1010
0.5 mi	Ted's Montana Grill	2451 Eisenhower Ave	American	<a href="http://www.tedsmontanagrill.com">www.tedsmontanagrill.com</a>	703-960-0500

**Restaurant choices in Old Town Alexandria:** *Take the free trolley from the King St. Metro Station to historic Old Town Alexandria—just a short ride away! For more information: <https://www.visitalexandriava.com/plan/maps-and-transportation/king-street-trolley/>*

Distance	Restaurant	Address	Cuisine	Website	Phone
1.0 mi	Hank's Oyster Bar	1026 King St	Seafood	<a href="http://www.hanksoysterbar.com">www.hanksoysterbar.com</a>	703-739-4265
1.1 mi	Taverna Cretkou	818 King St	Greek	<a href="http://www.tavernacretkou.com">www.tavernacretkou.com</a>	703-548-8688
1.2 mi	Don Taco	808 King St	Mexican	<a href="http://www.dontacova.com">www.dontacova.com</a>	703-518-8800
1.2 mi	Magnolia's on King	703 King St	American (Southern)	<a href="http://www.magnoliasonking.com">www.magnoliasonking.com</a>	703-838-9090
1.2 mi	Eamonn's: A Dublin Chipper	728 King St	Irish	<a href="http://www.eamonnsdublinchipper.com">www.eamonnsdublinchipper.com</a>	703-299-8384
1.3 mi	Columbia Firehouse	109 S St Asaph St	American	<a href="http://www.columbiafirehouse.com">www.columbiafirehouse.com</a>	703-683-1776
1.5 mi	Caphe Banh Mi	407 Duke St	Vietnamese	<a href="http://www.caphebanhmi.com">www.caphebanhmi.com</a>	703-549-0800
1.6 mi	Vola's Dockside Grill & High-Tide Lounge	101 N Union St	Seafood	<a href="http://www.volasdockside.com">www.volasdockside.com</a>	703-935-8890
1.6 mi	Fish Market Restaurant	105 King St	Seafood	<a href="http://www.fishmarket.va">www.fishmarket.va</a>	703-836-5676
1.6 mi	Virtue Feed & Grain	106 S Union St	American	<a href="http://www.virtuefeedgrain.com">www.virtuefeedgrain.com</a>	571-970-3559
1.6 mi	Chadwick's	203 Strand St	American	<a href="http://www.chadwicksrestaurants.com">www.chadwicksrestaurants.com</a>	703-836-4442
1.7 mi	Momo Sushi & Cafe	212 Queen St	Japanese	<a href="http://www.mymomosushi.com">www.mymomosushi.com</a>	703-299-9092
2.0 mi	Haute Dogs and Fries	610 Montgomery St	American	<a href="http://www.hautedogsandfries.com">www.hautedogsandfries.com</a>	703-548-3891

NEXT PAGE IS BACK COVER

The back of the back cover is blank

# STELAR ITEST PI & Evaluator Summit: *Equity and Access at the Human-Technology Frontier*

## Monday, May 14

7:00 AM	Registration and Breakfast
8:30 AM	Welcome and Opening Remarks
9:45 AM	Keynote Presentation
11:00 AM	Networking Break
11:30 AM	Plenary Flash Talks
12:30 PM	Lunch: STELAR Fellows Program
2:00 PM	Breakout Session 1
3:30 PM	Networking Break
4:00 PM	Expertise Roundtables
5:00 PM	Networking Break and ITEST Project Expo Setup
5:30 PM	Reception and ITEST Project Expo

## Tuesday, May 15

7:30 AM	Breakfast and Networking
8:30 AM	Day 1 Reflections and Day 2 Orientation
8:45 AM	National Science Foundation Remarks
9:00 AM	Three Perspectives from the Field
10:00 AM	Break
10:15 AM	Breakout Session 2
11:45 AM	Lunch: Legislative Visit Overview
12:45 PM	Breakout Session 3
2:00 PM	Break
2:15 PM	Closing Reflections and NSF Town Hall
3:00 PM	Meetings with NSF Program Officers

## Wednesday, May 16

Legislative Visits

#ITEST2018 • @STELAR\_CTR • #STELAR2018

