



## UTeach in the Real World

Thursday, July 14  
12:30 – 7 p.m.

### Commons Learning Center

J.J. Pickle Research Campus, 10100 Burnet Road, Austin, TX 78758

12:30 – 1 p.m.

Registration/Check-In

Atrium

1:30 – 2:30 p.m.

Opening General Session

Lil' Tex Auditorium

#### Keynote Speaker: Mariam Manuel

Keynote speaker **Mariam Manuel** will share her UTeach journey from classroom teaching into leadership roles that ultimately took her back to her stomping grounds at *teachHOUSTON*. She will discuss the challenges and obstacles she's faced, offering UTeach alumni inspiration as well as practical insights about navigating the education system and taking on leadership in a range of settings.

#### About Mariam Manuel

Mariam's experience with the UTeach program is rich and varied. She is an alumna of *teachHOUSTON* at the University of Houston. She later graduated from the UTeach Engineering STEM Master's program at the University of Texas at Austin, and in Fall 2015, Mariam joined the *teachHOUSTON* team as a Science Master Teacher. She also serves as the alumni member on the board of the UTeach STEM Educator's Association, which has inquiry-based education for students at the heart of its mission.

Mariam has experience in K–12 education as both a high school classroom teacher and in a district leadership role. She worked in Katy Independent School District as a physics teacher and was promoted to instructional specialist for the Robert Shaw Center for STEAM where she worked to increase student engagement with STEM topics and content. Her approach included hosting unique and innovative projects, events, and field trips in collaboration with community groups and universities in the area such as Rice University, University of Houston, and the University of Texas at Austin. Before taking on the role of Master Teacher, Mariam served as adjunct professor for physics education at the University of Houston. She is currently pursuing a Ph.D. in Global STEM education through Texas Tech University.

After graduating from *teachHOUSTON*, Mariam returned each summer to work with the UTeach pre-service teachers to help them prepare for their apprentice teaching assignments. She developed a database of resources for new teachers and worked with a Master Teacher at *teachHOUSTON* to create the *teachHOUSTON* alumni advisory board. She is also strong supporter of the efforts of the National UTeach Alumni Network.

In Fall 2015, Mariam was nominated by the National Math + Science Initiative for the Champions of Change honor in the Young Women Empowering Communities category. She has also collaborated with professors at the University of Houston to create the AP Physics 1 Massive Open Online Course designed to prepare nearly 5,000 students from 110 countries for the AP exam.

Discover some favorite tips or tricks for engaging students from fellow alumni. Learn about great classroom resources and visit our exhibitors while you have a snack break and mingle with UTeach Nation.

### **Building A Magic Folding Cube**

Learn about the folding cube! The cube is composed of eight smaller cubes that can fold to reveal multiple sides and can be built, tested, and designed with simple classroom supplies. It is a very engaging way to explore a system logically and systematically through inquiry.

*John McMahon, Math Instructor, School District of Lee County, Fort Meyers, FL*

### **Carolina Biological**

Six math and science kits have been donated! Stop by the table to be entered into a drawing and peruse the catalogs.

*www.carolina.com*

### **HHMI**

HHMI is a science philanthropy whose mission is to advance biomedical research and science education for the benefit of humanity. Their goal is to empower exceptional scientists and students to pursue fundamental questions about living systems

*www.hhmi.org*

### **MathHappens**

UTeach alumna Lauren Siegel, Director of MathHappens, will tell you about math field trip grants and how you can be involved in piloting this new program.

*www.mathhappens.org*

### **National Math + Science Initiative**

NMSI's mission is to improve student performance in the critical subjects of science, technology, engineering, and math (STEM). NMSI's programs strive to transform education in the United States.

*www.nms.org*

### **SparkFun Education**

The SparkFun Electronics Department of Education views electronics as more than just a fun hobby or a career path, but as a creative medium for changing the face of education. Their curriculum, resources, and products are designed specifically as hands-on learning tools to help today's students learn 21st century skills like critical thinking, collaboration, communication, and more.

*www.sparkfun.com*

### **Thinkery**

Thinkery is Austin's home for "why" and "how." A place where science and families play side by side. Where people connect with ideas by doing, making, and experiencing. It's a foundry for a new generation of innovators and creative problem solvers.

*www.thinkeryaustin.org*

## **TSAAPT**

Texas Section of the American Association of Physics Teachers (TSAAPT) is an organization dedicated to physics teaching at all levels. TSAAPT was established in 1930 with the fundamental goal of ensuring the “dissemination of knowledge of physics, particularly by way of teaching.”

*[www.texasaapt.com](http://www.texasaapt.com)*

## **UTeach Alumni Leadership Development Program**

Interested in taking on a leadership role on your campus or in your district? Find out more about the Alumni Leadership Development Program specifically for graduates of UTeach programs across the country.

## **UTeach Nation Virtual Network**

Learn about the soon-to-be launched online community specifically for UTeach alumni. Also, UTeach turns 20 next year and we’re celebrating! Sign up to plan an event at your program.

*[alumni.uteach.utexas.edu](http://alumni.uteach.utexas.edu)*

## **UTeach Professional Development**

UTeach Professional Development offers UTeach alumni a special opportunity to enhance your professional learning and your résumé. **The Academy of Innovative Teaching and Learning** is a series of online courses for K–12 teachers. UTeach alumni can earn a certificate of completion from the Academy by completing three courses and can then apply to become an instructor in future course sessions.

*[pd.uteach.utexas.edu](http://pd.uteach.utexas.edu)*

5 – 7 p.m.

Welcome Reception

### **Aloft Austin at The Domain**

**11601 Domain Drive • Austin, Texas, 78758  
512-491-0777**

Reconnect with your classmates and make new friends at the Welcome Reception. The event includes two free drink tickets and appetizers.

# UTeach in the Real World

Friday, July 15  
8:00 a.m. – 4:30 p.m.

8 – 9 a.m.

Breakfast and Registration/Check-In

Atrium

9 – 10 a.m.

Breakout Sessions I

## **Making Peace with Differentiated Instruction and Formative Assessment**

**I.130 Longhorn**

Everyone talks about differentiation and formative assessments but how many of us actually are able to say we can successfully do it? In this session we will explore ways to plan out formative assessments in a purposeful way that helps bring a differentiated review system and a bit of project-based learning into a unit for maximum student success.

*Presenter: Lisha Haughton, Teacher, Richardson ISD, Richardson, TX*

## **The Spin-off: Building Your Alumni Network**

**I.140 Bevo**

This session focuses on developing an alumni network at your current UTeach Network replication site. Members of *teachHOUSTON*'s Alumni Advisory Board will take you on their journey of developing their alumni network and having their first alumni event. Participants will leave with ideas for how to begin their own network and have support from *teachHOUSTON* to create and maintain their network.

*Presenter: Jacqueline Ekeoba, Instructional Coach, Katy ISD, Katy, TX; Mariam Manuel, Instructional Assistant Professor, University of Houston, Houston, TX; Anita Jafferli, Math Instructor, Houston ISD, Houston, TX*

## **Using Technology as a Generative Platform: An Introduction to Hardware, Software, and Data**

**I.138 Stadium**

This workshop will look at the basics of the processing language, programmable microcontrollers, and storing and retrieving data from a web-based "data channel." The participant will leave with an understanding of how to gather data with a basic microcontroller, send that data to a webpage, and then retrieve it for visualization and further analysis. These skills will be framed within the setting of classroom practice and targeted across a range of classrooms.

*Presenter: Jeff Branson, Educational Outreach Coordinator, SparkFun*

**Graphical Problem-Solving in Physics**

**I.130 Longhorn**

Graphical methods for problem-solving are elegant, connect to calculus, and support students who struggle with strict algebraic methods. In this session, we will see how to use diagrams as tools in kinematics, dynamics, and energy.

*Presenter: Amanda Powell, Teacher, Rouse High School, Leander, TX*

**Motion Detector Lab for Algebra I**

**I.140 Bevo**

This lesson can be used in Algebra 1 classes because of its connections to time vs. distance graphs, y-intercept, slope/rate of change, independent/dependent variables, collecting, interpreting and analyzing data, functions, and domain/range. It could also be used in pre-calculus and physics. This is an interactive 5-E lesson that students will remember. Students have enjoyed being participants in this lab and often ask if they can do it again!

*Presenter: Kailan Bell, Math Teacher, Carrollton-Farmers Branch ISD, Carrollton, TX*

**Chunking and Differentiating: What Do They Really Look Like in the Math Classroom?**

**I.138 Stadium**

Differentiated instruction has been a hot topic for years and at times can be viewed as a “catch phrase” or “buzz word,” but what does it really look like in an inquiry-based math classroom? How can one teacher effectively reach, engage, and teach all of the different personalities in one classroom? In this research- and practice-based session, attendees will witness strategies used to chunk material in digestible bites and differentiate content for all student learners.

*Presenters: Ariel Taylor, Math Specialist, Ft. Bend ISD, Sugar Land, TX and Mario Acosta, Principal, Round Rock ISD, Round Rock, TX*

**Human Evolution in Living Color**

**I.130 Longhorn**

Explore the evolution of human skin color through engaging resources that weave together key concepts in evolution and genetics with the practices of generating hypotheses, analyzing data, and creating evidence-based explanations.

*Presenter: Helen Snodgrass, AP Biology Teacher, HHMI Biointeractive*

**Building Interactive Demonstrations with Desmos**

**I.140 Bevo**

Imagine a technology that makes graphing as easy as writing an equation, easily consolidates and reports student work, and facilitates the creation of interactive mathematical investigations. Now stop imagining, and learn about Desmos! This session will focus on creating effective inquiry tasks with the help of the activity builder at [teacher.desmos.com](http://teacher.desmos.com) and using the teacher dashboard for these activities to monitor and assess student learning in real time for targeted remediation.

*Presenter: Andrew Knauft, Math Instructor, Livermore Valley Charter Prep, Livermore, CA*

**So You Think You Can Coach — One IC’s Guide to Becoming a Stellar Instructional Coach**

**I.138 Stadium**

This session is for educators interested in becoming an instructional coach or specialist. It will walk participants through the expectations of instructional coaching in Katy ISD. Participants will understand the coaching model and leave with resources used in Katy ISD as well as tools for working and managing time with a staff of teachers.

*Presenter: Jacqueline Ekeoba, Instructional Coach, Katy ISD, Katy, TX*

12:30 – 1:30 p.m.

Lunch

Atrium

1:40 – 2:40 p.m.

Breakout Sessions IV

**#CreateNotConsume: Strategies for Student Creation in a Time-Crunched Classroom**

**I.130 Longhorn**

This session will show strategies for setting up student creation stations in the science classroom. These stations allow students to take science content and bring it to life via creating with limited technology equipment and time. Types of student creations will include GIFs, comics, videos, and podcasts.

*Presenters: The Amoeba Sisters: Brianna Rapini, Instructional Specialist, Klein ISD, Klein, TX and Sarina Peterson, District Analyst, Dallas ISD, Dallas, TX*

**Pattern Hunting**

**I.140 Bevo**

Teachers will explore common geometric patterns and discuss how tools in algebra can be used to explore and describe these patterns.

*Presenter: John McMahon, Math Instructor, School District of Lee County, Fort Meyers, FL*

**Inquire to Learn, Practice to Know**

**I.138 Stadium**

Inquiry is a powerful learning tool and pairs with practice to produce durable knowledge. We'll model supporting both student learning AND the separate and distinct process of knowing.

*Presenters: Michael Ralph, Teacher, Olathe East High School, Olathe, KS*

**Embracing Ambiguity: Asking Real Questions****I.130 Longhorn**

Teachers are often trained to fear ambiguous questioning in the classroom. Yet, authentic inquiry often involves vagueness and uncertainty. In this session, learn how to utilize ambiguity in your own classroom questioning.

*Presenter: Mark Townsend, Precalculus Course Coordinator, OnRamps, Austin TX and Jesús Aguilar-Landaverde, Physics Teacher, NYOS Charter School, Austin TX*

**#TeachingSurvivors****I.140 Bevo**

First-year teaching in a project-based learning (PBL) school can feel like a blur of grading, project planning, parent contact, professional development, tutorials, and more grading. Luckily, problems faced in the first year teaching forces UTeach graduates to find solutions that result in a refined inquiry-based classroom with high student engagement. The goal for this session is to create a network of teachers who work towards creating a “teaching toolbox” for future PBL teachers. This will be accomplished by a model PBL project where teams collaborate to create a final product for first-year teachers.

*Presenter: Noah Ledbetter, Teacher, Manor New Technology High School, Manor, TX; Jazmine Castanon, Teacher, Manor New Technology High School, Manor, TX; Rikki Foster, Teacher, Manor New Technology High School, Manor, TX*

**Embracing Mistakes: Structuring the Classroom for Growth****I.138 Stadium**

Challenged with students having a fixed mindset on their abilities? For students to develop a growth mindset, the behavior must be modeled. In this session, teachers will explore strategies for developing a classroom environment geared towards a growth mindset applicable in STEM education. Embracing mistakes allows students (and teachers) to value the process of learning rather than “getting the right answer.”

*Presenter: Jacqueline Ekeoba, Instructional Coach, Katy ISD, Katy, TX*

**Thank you to our sponsors!**

**National Math + Science Initiative**

*Registration and Travel Grant Sponsor for Conference Attendees*



**Three Rivers Foundation**

*Travel grant sponsor*



**Tokyo Electron America**

*Travel grant sponsor*

