

## Fall 2021 TSAAPT WORKSHOPS

University of Houston Clear Lake – Some In-Person and Some Online

October 22 - 23, 2021

### **FRIDAY AM**

**W1 “Circuits Using Arduino”**, presented by Regina Barrera, Lee College, Baytown, TX.

In this workshop, you will do DC electrical circuits using Arduino as the interface. The activities will require that you have a laptop, either PC or Mac, that has a USB interface. The activities will use equipment from a circuits kit. If you want the circuit kit and Arduino, there will be an additional cost of \$30.00. **This is an In-Person workshop.**

**Limited to 20 participants – 2.0 hours – Cost: \$2.00**

**W2 “Texas PhysTEC Regional Network”**, presented by William Newton and Robynne Lock, Texas A&M University Commerce, Commerce, TX.

Join the Texas PhysTEC Regional network in a discussion of issues facing Texas teachers and Texas teacher preparation programs. We will discuss recruiting future teachers, supporting current teachers, and advocating for our communities at the local, regional, and state levels. Specific topics include creating a centralized recruiting website for university-based physics teacher preparation programs in Texas, communicating with administrators, and improving collaboration between high schools, community colleges, and 4-year universities. **This is an In-Person workshop.**

**Limited to 40 participants – 1.0 hours – Cost: \$0.00**

### **SATURDAY AM**

**W3 “ALPhA Advanced Lab Workshop (the Texas Section ‘Mini BFY’”**, presented by Toni Sauncy, Texas Lutheran University and ALPhA Regional Director & Others

Many lab instructors are familiar with the 3-day national level Beyond the First Year (BFY) Conferences organized by ALPhA (Advanced Lab Physics Association) which bring together laboratory instructors and commercial equipment vendors to share effective lab curricula, teaching methods, and experiments. These conferences are typically on a 4-year rotation cycle. To better serve the needs of physics faculty around the country, ALPhA has organized several regions ([see map here](#)), so that regional directors can engage more frequently at the regional level. This first ever Texas, Oklahoma, Arkansas regional workshop, in conjunction with the Spring 2021 TSAAPT/APS/Zone 13 SPS meeting is for anyone who is interested in improving advanced lab teaching skills and offerings. All faculty/staff in charge of or interested in improvement of the “Advanced Lab” (referring to all those labs “BEYOND THE FIRST YEAR”) including “intermediate lab”, “modern physics lab”, etc. as well as the traditional “junior-senior” or “advanced” lab courses should join us.

#### **Highlights**

- Learn about the latest trends in Advanced Lab Instruction
- Participate in the First Ever ALPhA Texas LABS Speed SLAM
- Get your hands on some cool labs that others in the region are doing
- Take home some great ideas for improving your advanced labs

**This is an In-Person workshop.**

**Limited to 24 participants – 2.0 hours – Cost \$0.00**

**W4 “Some TIP-erS for your class’s COVID Recovery”,** presented by Trina Cannon, Dallas College, Dallas, TX and Tom O’Kuma, Lee College, Baytown, TX.

How many times have you been told to increase the abstract reasoning, allow creative thinking, improve conceptual understanding, and ignite the curiosity in your students? With the return of warm bodies in the classroom, like it or not, we will have to step up our game or remember how to play! In this workshop we are going to visit the TIPERs book and look at 9 different strategies to attempt these directions. You will **receive a book** and you will be given **at least seven ways** to use them. Join us!

**This is an In-Person workshop.**

**Limited to 24 participants – 2.0 hours – Cost \$3.00**

**W5 “Inquiry Laboratory Investigations in Physics”,** presented by Janie Head, Lamar Consolidated ISD, Richmond, TX.

Teachers will conduct inquiry investigations covering the following topics:

- 2-D motion
- Comparing linear and circular motion
- Momentum
- Construct the tallest tower which will support a 250-gram object.

**This is an In-Person workshop.**

**Limited to 24 participants – 2.0 hours – Cost \$0.00**

### **SATURDAY PM**

**W6 “STEP UP Physics Together Workshop”** presented by Meghan DiBacco, Cinco Ranch High School, Katy, TX.

Participants will be introduced to evidence-based teaching resources encouraging women to pursue degrees and careers in physics. Participants will be introduced to the Everyday Actions and engage in two lessons to be used during classroom instruction. STEP UP - is a national community of physics teachers, researchers, and professional societies. STEP UP designs high school physics lessons to empower teachers, create cultural change, and inspire young women to pursue physics in college.

**This is an Online workshop.**

**Limited to 24 participants – 2.0 hours – Cost \$0.00**