

2021 AAPT

# Virtual Winter Meeting



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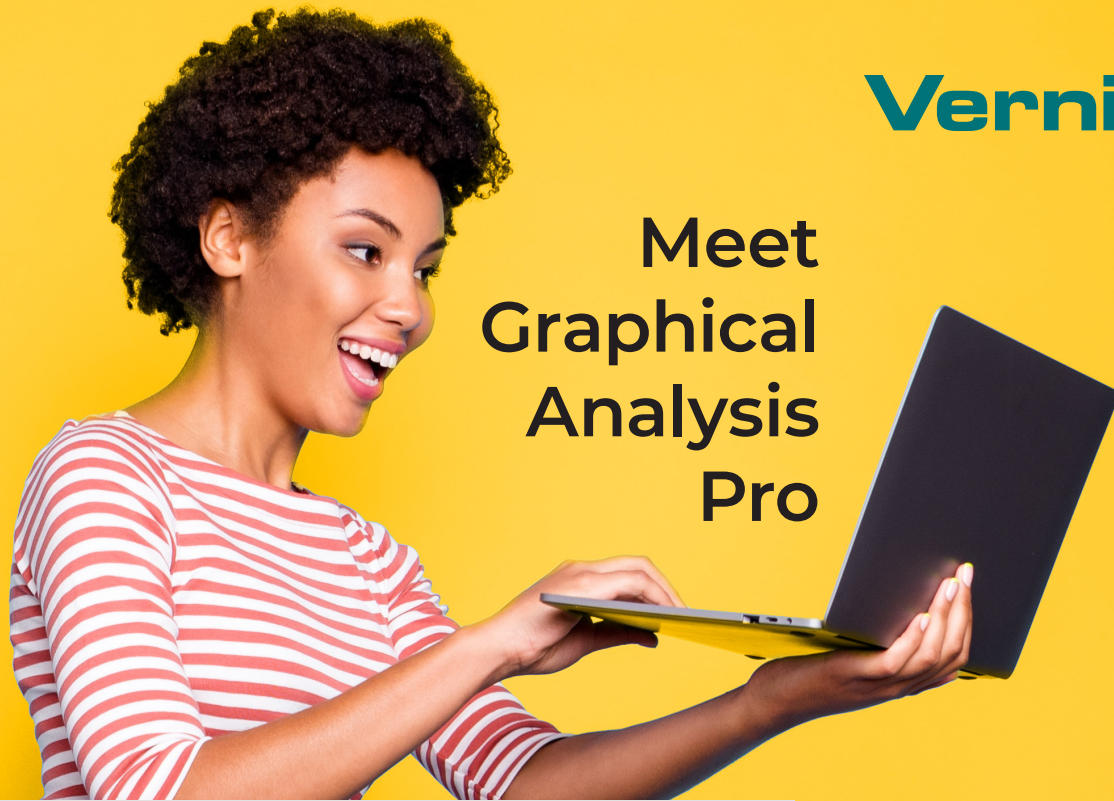


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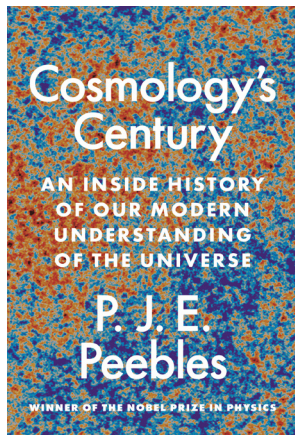
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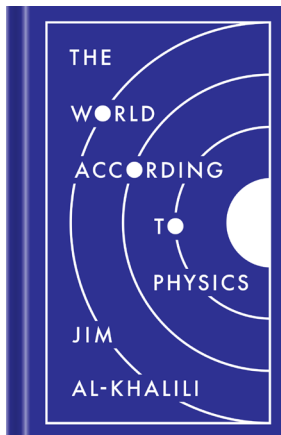
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## NEW FROM PRINCETON



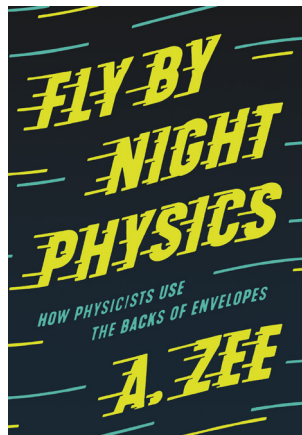
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## **2021 AAPT Winter Meeting Exhibitors**

### **American Association of Physics Teachers**

The American Association of Physics Teachers is the premier national organization and authority on physics and physical science education with members worldwide. Our mission is to advance the greater good through physics education. We provide our members with many opportunities for professional development, communication, and student enrichment. We serve the larger community through a variety of programs and publications. AAPT was founded in 1930 and is headquartered in the American Center for Physics in College Park, Maryland.

#### **AAPT Booth Hours:**

##### **Saturday, January 9 through Monday, January 11**

- Staff Available: 10 am - Noon
- Lunch Break: Noon - 1 pm
- Staff Available: 1 - 3 pm

##### **Tuesday, January 12**

- Staff Available: 10 - 11 am

### **Silver Sponsor**

#### **The American Institute of Physics**

The American Institute of Physics (AIP) is a federation of physical science societies, including AAPT, that advances, promotes and serves the physical sciences for the benefit of humanity. AIP offers authoritative information, services, and expertise in physics education and student programs, science communication, government relations, career services for science and engineering professionals, statistical research in physics employment and education, industrial outreach, and the history of physics and allied fields. AIP also publishes the flagship magazine

Physics Today and is home to the Society of Physics Students and the Niels Bohr Library and Archives.

AIP also acts as an independent institute where research in social science, policy, and history advances the discipline of the physical sciences. AIP publishes authoritative reports on the issues facing the scientific community, including the effects of the COVID-19 pandemic on the physical sciences enterprise as well as the importance of Diversity, Equity, and Inclusion in scientific disciplines.

**Bronze Sponsor**  
**Digitalis Education**

Digitalis Education Solutions, Inc. is the leading provider of digital planetarium systems worldwide. We offer Digitalarium digital planetarium systems for portable or fixed domes, Digitalis Inflatable Domes (designed and built in the USA), and the new SkyBox, a planetarium control computer designed to complement or substitute for a physical fulldome planetarium. Our staff are science education experts and technologists. We develop our own simulation and interface software and even most of our projection lenses. All of our sales and education staff have taught in planetariums. We understand your needs as a science educator, and we use our own products to present programs. Contact us at [info@DigitalisEducation.com](mailto:info@DigitalisEducation.com) to schedule a live, interactive demonstration over Zoom.



### **Bronze Sponsor**

#### **Macmillan Learning**

Macmillan Learning is an educational publishing company committed to supporting students at every point of their academic careers. Macmillan's Physics course solutions support the active classroom space, homework and textbooks, and lab activities. We seek to support educators and students now more than ever, with easy-to-use affordable online resources to facilitate virtual learning.

### **Bronze Sponsor**

#### **Pasco Scientific**

PASCO has 57 years of experience designing and manufacturing the highest quality physics equipment for teaching physics. Whether you are starting a new lab, renovating your existing one, or adding a single experiment, physics instructors around the globe rely on PASCO. With our state of the art equipment, students can now perform classic physics experiments using the latest measuring technology.

### **Bronze Sponsor**

#### **Princeton University Press**

Princeton University Press publishes major trade, textbook, and professional titles in physics and astronomy on topics ranging from the quantum to the cosmic. We invite you to peruse materials at our virtual booth and on our website. Books are available in both print and e-book, with select titles on Princeton Audio. Place your order at [press.princeton.edu](https://press.princeton.edu) and receive 30% off through March 15, 2021 with coupon code APT21. (Discount applies to print only.)

[Kip Thorne and Roger Blandford's monumental Modern Classical Physics](#) will be available April 2021 in five stand-alone volumes that make ideal textbooks for individual graduate or advanced undergraduate courses on statistical physics; optics; elasticity and fluid dynamics; plasma physics; and relativity and cosmology. Each volume teaches the fundamental concepts, emphasizes modern, real-world applications, and gives students a physical and intuitive

understanding of the subject. Instructors: To request exam copies of Princeton textbooks visit <https://press.princeton.edu/exam-desk-copies>.

### **Bronze Sponsor**

#### **Society of Physics Students**

The Society of Physics Students (SPS) and Sigma Pi Sigma are chapter-based organizations that serve all undergraduate physics students and mentors in nearly every physics program in the country and internationally. We support scholarships, internships, outreach, research and more.

#### **SPS Events**

- AIP Gemant Award Talk: Geraldine Cox - January 9: 10:30 - 11:30 AM EST
- SPS Student Oral Sessions: Brad Conrad - January 9: 3:00 - 4:00 PM EST
- Contributed Talks: Brad Conrad - January 10: 2:30-3:45 PM EST

#### **Driving Departmental Change from within: Diversity, Equity, and Inclusion**

- Mikayla Cleaver – January 10, 1:00-2:15 PM EST

#### **Community Building with SPS – Virtually**

### **Bronze Sponsor**

#### **Vernier Software & Technology**

Vernier Software & Technology is the leading worldwide innovator of real-time data-collection, graphing, and analysis tools for science education. We know educators are scrambling to find remote learning solutions as they transition from the classroom to an online format. Join us for our live workshops to learn more about how Vernier Video Analysis™ and Pivot Interactives can help students stay engaged as they learn from home. The Vernier Video Analysis app is the perfect tool for students learning remotely because they are able to use their own videos to

study motion. Pivot Interactives is a customizable online-video environment that is a superb complement to hands-on experiments with Vernier sensors. Students are quickly engaged by these high-production-quality videos of hard-to-implement phenomena. Explore the possibilities with us!

<https://www.vernier.com/product/video-analysis/>

## Commercial Workshops

### **Using Pivot Interactives for Remote Instruction**

1/9/2021 | 11:30 AM to 12:30 PM

**Moderator:** *Peter Bohachek*

Pivot Interactives is a powerful and comprehensive online platform for interactive science learning. Pivot Interactives uses interactive video that allows students to create and conduct authentic investigations in an online environment. Combined with data analysis tools, interactive instructions with automatic feedback, collaboration tools, Pivot Interactives supports a broad range of education tasks. With hundreds of prewritten activities, and a community library with thousands of instructor created labs, you are always minutes away from active learning. Pivot Interactives continually introduces new features, such as support for Phet simulations, lab groups, enhanced randomization and automatic grading, and the promise of much more to come. Come learn how Pivot Interactives can enhance all aspects of your curriculum.

### **Vernier Video Analysis on Chromebooks, Computers, and Tablets**

1/10/2021 | 12:30 PM to 1:30 PM

**Moderator:** *Fran Poodry / Co-Organizer: John Gastineau*

Quickly and easily analyze videos in our Vernier Video Analysis app for ChromeOS, macOS, Windows, iOS and Android. We'll demonstrate how to analyze motion with this feature-laden app, apply vectors to motion trails, convert data to polar coordinates, and add center of mass data to collision videos and graphs. A limited-time free-access code will be provided to attendees.

### **Introducing Graphical Analysis Pro (Vernier Software and Technology)**

1/11/2021 | 1:00 PM to 2:00 PM

**Moderator:** *Fran Poodry / Co-Organizer: John Gastineau*

Have you seen Graphical Analysis Pro? This extended version of Graphical Analysis includes features useful for remote instruction, such as live data sharing over the internet, and a library of experiment data, many with synchronized videos, for use when students just can't be in the lab. Graphical Analysis Pro also will also include advanced analysis tools. See a preview of a soon-to-be released feature of user-defined curve fits. A limited-time free-access code will be provided to attendees.

### **AIP Resources for Data and Diversity in Physics, and the TEAM-UP Project**

1/11/2021 | 2:45 PM to 3:45 PM

**Moderator:** *Susan White / Co-Organizer: Arlene Modeste Knowles*

The American Institute of Physics (AIP) is a resource for AAPT members looking for data about education and employment in physics, astronomy, and the physical sciences. AIP also has new programs to support efforts to improve diversity, equity, inclusion and belonging in physical science workplaces. In this workshop, come learn about data that are available to you— everything from data on high school physics to the variety of careers where physical scientists work. We are pleased to highlight some pre-publication data from our 2018-2019 Survey of High School Physics. In addition, we're pleased to present AIP's latest diversity efforts and how they relate to physical science. Learn about our efforts to support AAPT diversity initiatives and our efforts to increase the representation of Black students earning physics and astronomy degrees. We will have an update on the TEAM-UP report, *The Time is Now: Systemic Changes to Increase African Americans with Bachelor's Degrees in Physics & Astronomy*, which was released in early 2020.