

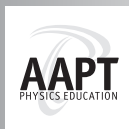


workshop for
**new physics and
astronomy faculty**

JUNE 20-23, 2016

AMERICAN CENTER FOR PHYSICS
COLLEGE PARK, MD

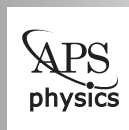
THE WORKSHOP FOR
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BREAKOUT II

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BREAKOUT II

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BREAKOUT III

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BREAKOUT I

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BREAKOUT II

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BREAKOUT III

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BREAKOUT I

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BREAKOUT II

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BREAKOUT III

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BREAKOUT II

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BREAKOUT III

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BREAKOUT I

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BREAKOUT II

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BREAKOUT III

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BREAKOUT I

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BREAKOUT II

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BREAKOUT III

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BREAKOUT I

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BREAKOUT II

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BREAKOUT III

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BREAKOUT I

Yoshihiro Sato
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BREAKOUT II

Maxine Shao
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BREAKOUT III

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BREAKOUT II

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BREAKOUT I

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BREAKOUT II

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BREAKOUT III

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BREAKOUT I

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County

BREAKOUT II

Peifen Zhu
The University of Tulsa

BREAKOUT III



AAPT **2016** **SUMMER MEETING**
PHYSICS EDUCATION JULY 16-20 SACRAMENTO, CA



MONDAY, JUNE 20

11:00 A.M.–5:00 P.M.	WORKSHOP REGISTRATION Holiday Inn - College Park, MD, 10000 Baltimore Ave.	GRAND BALLROOM FOYER
1:30–3:00 P.M.	WORKSHOP Effective Grant Proposal Writing and Grant Opportunities with Research Corporation Richard Wiener, Program Director, Research Corporation for Science Advancement, rwiener@rescorp.org	GRAND BALLROOM AB
3:00–4:30 P.M.	WORKSHOP Grant Opportunities at the National Science Foundation Corby Hovis, Division of Undergraduate Education, chovis@nsf.gov Kevin Lee, Division of Undergraduate Education, klee@nsf.gov Kathleen McCloud, Division of Physics, kmcloud@nsf.gov Joe Pesce, Division of Astronomical Sciences, jpesce@nsf.gov Guebre Tessema, Division of Materials Research, gtessema@nsf.gov	GRAND BALLROOM AB
4:30–5:00 P.M.	BREAK	GRAND BALLROOM FOYER
5:00–5:15 P.M.	OPENING REMARKS Welcome and Introductions Robert Hilborn, Associate Executive Officer, AAPT, Chair, Physics and Astronomy New Faculty Workshop Beth Cunningham, Executive Officer, AAPT Robert G.W. Brown, Executive Director and CEO, AIP Kate Kirby, Chief Executive Officer, APS Kevin Marvel, Executive Officer, AAS	GRAND BALLROOM AB
5:15–6:15 P.M.	LARGE GROUP SESSION Peer Instruction Eric Mazur, Harvard University	GRAND BALLROOM AB
6:15–7:15 P.M.	DINNER	GRAND BALLROOM CD
7:15–8:15 P.M.	LARGE GROUP SESSION Interactive Engagement and PER: The Big Picture Steven Pollock, University of Colorado - Boulder	GRAND BALLROOM AB

TUESDAY, JUNE 21

6:30–7:30 A.M.	BREAKFAST - Holiday Inn - College Park	MOOSE CREEK STEAK HOUSE
7:45 A.M.	SHUTTLE BUS LEAVES (ON TIME) FOR AMERICAN CENTER FOR PHYSICS	
8:20 A.M.	INTRODUCTIONS AND MARCHING ORDERS	Robert Hilborn, AAPT
8:30–9:30 A.M.	LARGE GROUP SESSION Interactive Engagement in Large Classes Ed Prather, University of Arizona	CONFERENCE ROOM A

TUESDAY, JUNE 21 (CONT.)

9:30–10:45 A.M.	LARGE GROUP SESSION Research in Physics Education: A Resource for Improving Student Learning Lillian C. McDermott and Peter Shaffer, University of Washington	CONFERENCE ROOM A
10:45–11:15 A.M.	BREAK	ACP ROTUNDA
11:15 A.M.–12:00 P.M.	SMALL GROUP SESSIONS PhD Granting Institutions Primarily Undergraduate Institutions	CONFERENCE ROOM A CONFERENCE ROOM C
12:00–1:00 P.M.	GROUP PHOTO AND LUNCH	ACP CAFETERIA
1:00–2:00 P.M.	SMALL GROUP SESSIONS Topics from Pre-Workshop Survey	CONFERENCE ROOMS A, B, C
2:00–3:15 P.M.	SMALL GROUP WORK Preparing Think-Pair-Share (Peer Instruction) Materials	CONFERENCE ROOMS A, B, C
3:15–3:45 P.M.	BREAK	ACP ROTUNDA
3:45–4:45 P.M.	LARGE GROUP SESSION Just-in-Time Teaching: How to Get Your Students to Prepare for Every Class Andrew Gavrin, Indiana University-Purdue University-Indianapolis	CONFERENCE ROOM A
4:45–5:45 P.M.	LARGE GROUP SESSION Problem Solving Ken Heller, University of Minnesota	CONFERENCE ROOM A
5:45 P.M.	SHUTTLE BUS LEAVES FOR HOLIDAY INN - COLLEGE PARK	
6:30–7:30 P.M.	DINNER - HOLIDAY INN - COLLEGE PARK	GRAND BALLROOM CD
7:30–8:30 P.M.	GROUP MEETING Faculty Online Learning Community Group Andy Rundquist, Hamline University and Jeremy Bailin, University of Alabama	GRAND BALLROOM AB

WEDNESDAY, JUNE 22

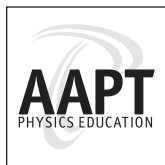
6:30–7:30 A.M.	BREAKFAST - Holiday Inn - College Park	MOOSE CREEK STEAK HOUSE
7:45 A.M.	SHUTTLE BUS LEAVES (ON TIME) FOR AMERICAN CENTER FOR PHYSICS	
8:20–10:00 A.M.	LARGE GROUP SESSION	CONFERENCE ROOM A
	Interactive Engagement in Upper-Level Courses Corinne Manogue, Oregon State University	
10:00–10:30 A.M.	BREAK	ACP ROTUNDA
10:30–11:15 A.M.	SMALL GROUP SESSIONS	
	Digital Libraries (I) Bruce Mason, University of Oklahoma, Sam McKagan, Seattle Pacific University	CONFERENCE ROOM A
	Physlets, Open Source Physics, and Easy-Java Scripts (II) Mario Belloni, Davidson College	CONFERENCE ROOM B
	Problem Solving (III) Ken Heller, University of Minnesota	CONFERENCE ROOM C
11:15 A.M. –12:00 P.M.	SMALL GROUP SESSIONS	
	DIGITAL LIBRARIES (II) Bruce Mason, University of Oklahoma Sam McKagan, Seattle Pacific University	CONFERENCE ROOM A
	Physlets, Open Source Physics, and Easy-Java Scripts (III) Mario Belloni, Davidson College	CONFERENCE ROOM B
	Problem Solving (I) Ken Heller, University of Minnesota	CONFERENCE ROOM C
12:00–1:00 P.M.	LUNCH	ACP CAFETERIA
1:00–1:45 P.M.	SMALL GROUP SESSIONS	
	DIGITAL LIBRARIES (III) Bruce Mason, University of Oklahoma, Sam McKagan, Seattle Pacific University	CONFERENCE ROOM A
	Physlets, Open Source Physics, and Easy-Java Scripts (I) Mario Belloni, Davidson College	CONFERENCE ROOM B
	Problem Solving (II) Ken Heller, University of Minnesota	CONFERENCE ROOM C
1:45–2:45 P.M.	LARGE GROUP SESSION	CONFERENCE ROOM A
	Teaching for Retention and Diversity James H. Stith, American Institute of Physics (retired)	
2:45–3:30 P.M.	SMALL GROUP SESSIONS (PARTICIPANTS SIGN UP FOR THREE)	
	PhET Simulations Sarah ("Sam") McKagan, Seattle Pacific University	CONFERENCE ROOM B
	Tenure Matters Steve Turley, Brigham Young University	5TH FL. CONFERENCE ROOM
	Lecture-Tutorials Ed Prather and Gina Brissenden, University of Arizona	CONFERENCE ROOM A
	Building Your Success Team: Practical Support for New Faculty Kathryne S. Woodle and Arlene Modeste Knowles, American Physical Society	CONFERENCE ROOM C

WEDNESDAY, JUNE 22 (CONT.)

3:30–3:45 P.M.	BREAK	ACP ROTUNDA
3:45–4:30 P.M.	SMALL GROUP SESSIONS	
	PhET Simulations	CONFERENCE ROOM B
	Tenure Matters	5TH FLOOR CONFERENCE ROOM
	Lecture-Tutorials	CONFERENCE ROOM A
	Building Your Success Team: Practical Support for New Faculty	CONFERENCE ROOM C
4:30–5:15 P.M.	SMALL GROUP SESSIONS	
	PhET Simulations	CONFERENCE ROOM B
	Tenure Matters	5TH FLOOR CONFERENCE ROOM
	Lecture-Tutorials	CONFERENCE ROOM A
	Building Your Success Team: Practical Support for New Faculty	CONFERENCE ROOM C
5:15–6:30 P.M.	SMALL GROUP SESSIONS	CONFERENCE ROOMS A, B, C
	Presentations of Think-Pair-Share (Peer Instruction) Materials	
6:30 P.M.	SHUTTLE BUS LEAVES FOR HOLIDAY INN - COLLEGE PARK	
6:45–7:30 P.M.	DINNER - HOLIDAY INN - COLLEGE PARK	GRAND BALLROOM CD

THURSDAY, JUNE 23

7:00–8:00 A.M.	BREAKFAST - Holiday Inn - College Park Hotel Checkout - before 12:00 noon	MOOSE CREEK STEAK HOUSE
8:30–9:30 A.M.	LARGE GROUP SESSION What Have We Learned and What Questions Do We Have? Corinne Manogue, Oregon State University	GRAND BALLROOM AB
9:30–10:00 A.M.	BREAK	GRAND BALLROOM FOYER
10:00–11:00 A.M.	LARGE GROUP SESSION What Will I Do When I Get Back to the Office? Bob Hilborn, AAPT	GRAND BALLROOM AB
11:00 – 11:30 A.M.	LARGE GROUP SESSION Final Words, Evaluation Procedures, and Adjourn Robert Hilborn, AAPT	GRAND BALLROOM AB



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EXECUTIVE OFFICER

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WWW.AAPT.ORG

AMERICAN ASSOCIATION OF PHYSICS TEACHERS

Founded in 1930, AAPT is the premier professional society established to advance the greater good through physics education. With the support of our members worldwide, AAPT is an action oriented organization designed to develop, improve, and promote best practices for physics education as part of the global need for qualified Science, Technology, Engineering, and Mathematics teachers who will inspire tomorrow's leaders and decision makers.

We serve our members through networking, publications, and programs, but also reach out to the larger community of physics and science teachers—current and future—and we look after issues of significance in science education. Our national office works closely with our dedicated volunteers around the world to promote a better understanding of physics at all levels.

AAPT provides networking opportunities through online discussion lists, social media, the Workshops for New Physics and Astronomy Faculty (with APS and AAS); Physics Department Chairs Conference (with APS), and our two national annual meetings. The association supports physics educators through our publications, the *American Journal of Physics* and *The Physics Teacher*; *Physical Review Special topics – Physics Education Research* (with APS and the APS Forum on Education) and the *eNNOUNCER*; NSF-funded programs including the PER User's Guide, the Physics Teacher Education Coalition, PhysTEC (with APS); Physics Teaching Resource Agents institutes; the digital physics library, ComPADRE (with APS and AIP); Physics Program Reviews, and the student programs and scholarships that we administer, including the Lotze Scholarship for Future Teachers.



KEVIN MARVEL
EXECUTIVE OFFICER

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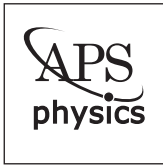
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20009-1231

202-328-2010

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AMERICAN ASTRONOMICAL SOCIETY

The American Astronomical Society promotes the advancement of astronomy and closely related branches of science. It was founded in 1899. AAS members include professional researchers in the astronomical sciences, and also educators, students, and others interested in the advancement of astronomical research. The Society operates in five major areas: Publications, Meetings, Education, Public Policy and Employment in order to ensure that astronomy remains healthy and vital for the benefit of our profession and society at large. AAS publishes *The Astrophysical Journal* and *The Astronomical Journal*, which are among the most important scholarly journals in the field. The *Bulletin of the American Astronomical Society* reports the latest institutional developments and documents the content of AAS and its divisions' annual meetings. More information about the Society's activities and membership are available on the AAS website, www.aas.org.



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AMERICAN PHYSICAL SOCIETY

With 50,000 members worldwide, the American Physical Society works to advance and disseminate the knowledge of physics. Since its formation in 1899, it has been dedicated to providing its members and the international physics community with the latest research results through meetings and the most highly respected international journals in physics. These journals include *Physical Review Letters*, the *Physical Review* (with a Special Topics series including a journal on Physics Education Research), *Reviews of Modern Physics*, and its two newest journals, *Physical Review Applied* and *PRX*. The APS conducts more than 20 meetings per year, to connect physicists and disseminate physics knowledge and information relevant to the community. In addition, APS vigorously lobbies for funding for physics research and education, provides the physics community with timely information about government affairs, carries out studies of physics-based topics of importance to the country, and promotes the interests of the physics community through extensive public information efforts such as www.PhysicsCentral.com, a website for the public.

APS is actively involved in programs to improve undergraduate and graduate education and to improve the preparation of future physics and physical science teachers through its leadership in the Physics Teacher Education Coalition (www.PhysTEC.org). APS partners with AAPT in PhysTEC and on numerous other education programs, including the New Faculty Workshop, and conferences and workshops on education at various levels. For many years APS has worked to increase diversity in the physics community, and in 2012 launched the APS Bridge Program (www.apsbridgeprogram.org), a national effort to increase the number of underrepresented minorities that receive a PhD in Physics. In addition, APS recently began sponsorship of the Conferences for Undergraduate Women in Physics – regional conferences to encourage participation of women in the discipline.



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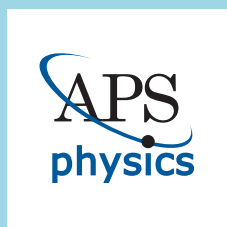
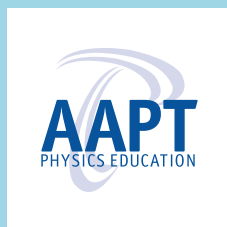
AIP's mission is to advance, promote and serve the physical sciences for the benefit of humanity.

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 Member Societies cover a broad range of fields in the physical sciences and collectively represent more than 120,000 scientists, engineers, educators and students in the global physical sciences community.



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