



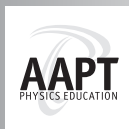
workshop for  
**new physics and  
astronomy faculty**

NOVEMBER 2-5, 2017

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AMERICAN CENTER FOR PHYSICS  
COLLEGE PARK, MD

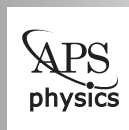
THE WORKSHOP FOR  
NEW PHYSICS AND  
ASTRONOMY FACULTY  
IS SPONSORED BY



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AMERICAN ASTRONOMICAL SOCIETY



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## THURSDAY, NOVEMBER 2

11 A.M.–5:00 P.M.	WORKSHOP REGISTRATION Holiday Inn - College Park, 10000 Baltimore Ave., College Park, MD	GRAND BALLROOM FOYER
1:30–3:00 P.M.	WORKSHOP <b>Grant Opportunities at the National Science Foundation</b> Corby Hovis, Division of Undergraduate Education, <a href="mailto:chovis@nsf.gov">chovis@nsf.gov</a> Keith Dienes, Division of Physics, <a href="mailto:kdienes@nsf.gov">kdienes@nsf.gov</a> Joe Pesce, Division of Astronomical Sciences, <a href="mailto:jpesce@nsf.gov">jpesce@nsf.gov</a> Guebre Tessema, Division of Materials Research, <a href="mailto:gtessema@nsf.gov">gtessema@nsf.gov</a>	GRAND BALLROOM AB
3:00–4:30 P.M.	WORKSHOP <b>National Science Foundation CAREER Awards</b> Kathleen McCloud, Division of Physics, <a href="mailto:kmcloud@nsf.gov">kmcloud@nsf.gov</a>	GRAND BALLROOM AB
4:30–4:45 P.M.	BREAK	GRAND BALLROOM FOYER
4:45–5:15 P.M.	OPENING REMARKS <b>Welcome and Introductions</b> Robert Hilborn, Associate Executive Officer, AAPT, Chair, Physics and Astronomy New Faculty Workshop Beth Cunningham, Executive Officer, AAPT Cathy O’Riordan, Interim Co-Chief Executive Officer, AIP Kate Kirby, Executive Officer, APS Kevin Marvel, Executive Officer, AAS	GRAND BALLROOM AB
5:15–6:30 P.M.	LARGE GROUP SESSION <b>Highlighting PER – The Journey from Traditional Instruction to Active Learning</b> Laurie McNeil, University of North Carolina-Chapel Hill	GRAND BALLROOM AB
6:30–7:30 P.M.	DINNER	GRAND BALLROOM CD
7:30–8:30 P.M.	LARGE GROUP SESSION <b>Change and Adoption: Scaffolding Your New Faculty Workshop Experience</b> Cassandra Horij, California Institute of Technology	GRAND BALLROOM AB

## FRIDAY, NOVEMBER 3

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	
8:20–8:30 A.M.	LARGE GROUP SESSION <b>Introductions and FOLC Announcement</b> Robert Hilborn, AAPT; Andy Rundquist, Hamline University; Jessica Bickel, Cleveland State University; and Mary Bridget Kustusich, DePaul University	CONFERENCE ROOM A
8:30–9:45 A.M.	LARGE GROUP SESSION <b>Learner Centered Teaching in Physics and Astronomy</b> Ed Prather, University of Arizona	CONFERENCE ROOM A
9:45–10:00 A.M.	BREAK	ACP ROTUNDA

# FRIDAY, NOVEMBER 3 (CONT.)

10:00–11:00 A.M.	SMALL GROUP SESSIONS (PARTICIPANTS CHOOSE THREE OF THE FOUR SESSIONS)
	<p><b>Interactive Lecture Demonstrations</b> CONFERENCE ROOM A David Sokoloff, University of Oregon and Ronald Thornton, Tufts University</p> <p><b>Tutorials in Physics</b> CONFERENCE ROOM B Lillian C. McDermott and Peter Shaffer, University of Washington</p> <p><b>Just-in-Time Teaching</b> CONFERENCE ROOM C Andy Gavrin, Indiana University-Purdue University-Indianapolis</p> <p><b>Rethinking Labs</b> FIFTH FLOOR CONFERENCE ROOM Natasha Holmes, Cornell University</p>
11:00 A.M.–12:00 P.M.	SMALL GROUP SESSIONS (repeat from 10:00–11:00 a.m.)
12:00–1:00 P.M.	GROUP PHOTO AND LUNCH ACP CAFETERIA
1:00–2:00 P.M.	SMALL GROUP SESSIONS (repeat from 10:00–11:00 a.m.)
2:00–2:45 P.M.	SMALL GROUP SESSIONS (PARTICIPANTS CHOOSE THREE OF THE FOUR SESSIONS)
	<p><b>PhET</b> CONFERENCE ROOM A Michael Dubson, University of Colorado-Boulder</p> <p><b>Using and Adapting Open Source Physics Simulations for Teaching</b> CONFERENCE ROOM B Wolfgang Christian, Davidson College</p> <p><b>Lecture-Tutorials</b> CONFERENCE ROOM C Ed Prather and Gina Brissenden, University of Arizona</p> <p><b>PhysPort/ComPADRE</b> FIFTH FLOOR CONFERENCE ROOM Eleanor Sayre, Kansas State University</p>
2:45–3:00 P.M.	BREAK ACP ROTUNDA
3:00–3:45 P.M.	SMALL GROUP SESSIONS (repeat from 2:00–2:45 p.m.)
3:45–4:30 P.M.	SMALL GROUP SESSIONS (repeat from 2:00–2:45 p.m.)
4:30–5:45 P.M.	LARGE GROUP SESSION CONFERENCE ROOM A <b>Designing Think-Pair-Share (Peer Instruction) Questions</b> Ed Prather and Gina Brissenden, University of Arizona
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.	GRAND BALLROOM AB <b>Faculty Online Learning Community group meeting</b> Andy Rundquist, Hamline University; Jessica Bickel, Cleveland State University; Mary Bridget Kustusich, DePaul University

# SATURDAY, NOVEMBER 4

# WORKSHOP SCHEDULE

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	
8:20–9:30 A.M.	SMALL GROUP SESSIONS	CONFERENCE ROOMS A, B, C
	<b>Group Implementations of TPS (Peer Instruction) Questions</b> Gina Brissenden and Ed Prather, University of Arizona	
9:30–10:45 A.M.	LARGE GROUP SESSION	CONFERENCE ROOM A
	<b>Interactive Engagement in Upper-Level Courses</b> Corinne Manogue, Oregon State University	
10:45–11:00 A.M.	BREAK	ACP ROTUNDA
11:00–11:45 A.M.	SMALL GROUP SESSIONS (PARTICIPANTS CHOOSE TWO OF THE THREE SESSIONS)	
	Problem Solving in Upper-Level Courses	CONFERENCE ROOM A
	Corinne Manogue, Oregon State University	
	Problem Solving in Introductory Physics	CONFERENCE ROOM B
	Andy Rundquist, Hamline University	
	Problem Solving Using TPS (Peer Instruction)	CONFERENCE ROOM C
	Ed Prather, University of Arizona	
11:45 A.M.–12:30 P.M.	SMALL GROUP SESSIONS (repeat 11:00–11:45 a.m.)	
12:30–1:30 P.M.	LUNCH	ACP CAFETERIA
1:30–2:45 P.M.	LARGE GROUP SESSION	CONFERENCE ROOM A
	<b>Thinking about Changing Instruction</b> Natasha Holmes, Cornell University Edward Price, California State University-San Marcos	
2:45–4:00 P.M.	LARGE GROUP SESSION	CONFERENCE ROOM A
	<b>The Importance of Diversity in Astronomy and Physics</b> Chandra Turpen, University of Maryland-College Park Vashti Sawtelle, Michigan State University	
4:00–4:15 P.M.	BREAK	ACP ROTUNDA
4:15–5:00 P.M.	BREAKOUT SESSIONS	
	Primarily Undergrad Institutions	CONFERENCE ROOM A
	Robert Hilborn, AAPT and Andy Rundquist, Hamline University	
	PhD Granting Institutions	CONFERENCE ROOM B AND C
	Steve Turley, Brigham Young University	
5:00–6:00 P.M.	TENURE MATTERS	
	PhD Granting Institutions	CONFERENCE ROOM A
	Steve Turley, Brigham Young University	
	Primarily Undergrad Institutions	CONFERENCE ROOM B AND C
	Robert Hilborn, AAPT; Andy Rundquist, Hamline University	
6:10 P.M.	SHUTTLE BUS LEAVES FOR HOLIDAY INN - COLLEGE PARK	
6:30–7:30 P.M.	DINNER	GRAND BALLROOM CD



# SUNDAY, NOVEMBER 5

7:00–8:00 A.M.	BREAKFAST - Holiday Inn - College Park Hotel Checkout – before 12:00 noon	MOOSE CREEK STEAK HOUSE
8:30–9:45 A.M.	LARGE GROUP SESSION <b>Departmental Ecosystems: Recruitment, Retention, Mentoring, Diversity, Leadership, and More</b> Ted Hodapp, American Physical Society	GRAND BALLROOM AB
9:45–10:00 A.M.	BREAK	GRAND BALLROOM FOYER
10:00–11:15 A.M.	LARGE GROUP SESSION <b>What Will I Do When I Get Back to the Office?</b> Robert Hilborn, AAPT	GRAND BALLROOM AB
11:15 –11:30 A.M.	LARGE GROUP SESSION <b>Final Words, Evaluation Procedures, and Adjourn</b> Robert Hilborn, AAPT	GRAND BALLROOM AB



Join your colleagues at the 2018 AAPT Winter Meeting in San Diego, California. Surround yourself with physics educators from around the globe, while attending sessions and workshops as well as participating in special activities designed with you in mind. Don't miss your opportunity to learn from and network with leaders in the field.



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WORKSHOP SCHEDULE



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## 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 Physics and Astronomy New 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.



American Astronomical Society

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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](http://www.aas.org).

## AMERICAN PHYSICAL SOCIETY

With 54,000 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 journal on Physics Education Research), *Reviews of Modern Physics*, and its newest journals, *Physical Review Applied*, *PRX*, and *Physical Review Fluids*. 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](http://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](http://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](http://www.apsbridgeprogram.org)), a national effort to increase the number of underrepresented minorities that receive a PhD in Physics. In addition, APS sponsors the national Conferences for Undergraduate Women in Physics ([www.aps.org/cuwip](http://www.aps.org/cuwip))—a set of regional conferences to encourage participation of women in the discipline.

## AMERICAN INSTITUTE OF PHYSICS

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

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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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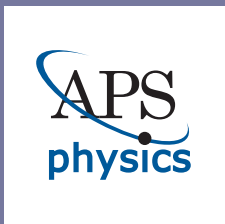
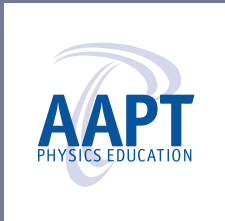
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