



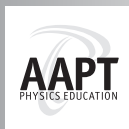
workshop for  
**new physics and  
astronomy faculty**

JUNE 23-26, 2014

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AMERICAN CENTER FOR PHYSICS  
COLLEGE PARK, MD

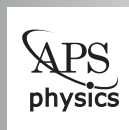
THE WORKSHOP FOR  
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**Edward Prather**

American Astronomical Society

**Timothy Slater**

University of Wyoming

**Steven Turley**

Brigham Young University

# WORKSHOP LEADERS

---

**Richard Berg**

University of Maryland  
College Park, MD  
reberg@physics.umd.edu

---

**Gina Brissenden**

University of Arizona  
Tucson, AZ  
gbrissenden@as.arizona.edu

---

**Stephanie Chasteen**

University of Colorado-Boulder  
Boulder, CO  
stephanie@sciencegeekgirl.com

---

**Wolfgang Christian**

Davidson College  
Davidson, NC  
wochristian@davidson.edu

---

**Michael Dubson**

University of Colorado-Boulder  
Boulder, CO  
michael.dubson@colorado.edu

---

**Andrew Gavrin**

Indiana University-Purdue University-  
Indianapolis  
Indianapolis, IN  
agavrin@iupui.edu

---

**Kenneth Heller**

University of Minnesota  
Minneapolis, MN  
heller@physics.umn.edu

---

**Robert Hilborn, Workshop Chair**

American Association of  
Physics Teachers  
College Park, MD  
rhilborn@aapt.org

---

**Corinne Manogue**

Oregon State University  
Corvallis, OR  
corinne@physics.oregonstate.edu

---

**Bruce Mason**

University of Oklahoma  
Norman, OK  
bmason@ou.edu

---

**Eric Mazur**

Harvard University  
Cambridge, MA  
mazur@seas.harvard.edu

---

**Lillian C. McDermott**

University of Washington  
Seattle, WA  
lcmcd@phys.washington.edu

---

**Edward Prather**

University of Arizona  
Tucson, AZ  
eprather@as.arizona.edu

---

**Peter Shaffer**

University of Washington  
Seattle, WA  
shaffer@phys.washington.edu

---

**Tim Slater**

University of Wyoming  
Laramie, WY  
timslaterwyo@gmail.com

---

**David Sokoloff**

University of Oregon  
Eugene, OR  
sokoloff@uoregon.edu

---

**James Stith**

American Institute of Physics  
College Park, MD  
jstith@aip.org

---

**Ron Thornton**

Tufts University-CSMT  
Medford, MA  
ronald.thornton@tufts.edu

---

**R. Steven Turley**

Brigham Young University  
Provo, UT  
turley@byu.edu

---

# WORKSHOP PARTICIPANTS

Nicole Ackerman  
Agnes Scott College

BREAKOUT I

William Ashmanskas  
University of Pennsylvania

BREAKOUT II

Daniel Bardayan  
University of Notre Dame

BREAKOUT III

Francisco Becerra Chavez  
University of New Mexico

BREAKOUT I

Maxime Brodeur  
University of Notre Dame

BREAKOUT II

Ginger Bryngelson  
Francis Marion University

BREAKOUT III

Justin Burton  
Emory University

BREAKOUT I

Maxim Bychkov  
University of Virginia

BREAKOUT II

Jerry Carr  
Texas Lutheran University

BREAKOUT III

Larry Cook  
Washington and Lee University

BREAKOUT I

Kathy Cooksey  
University of Hawaii at Hilo

BREAKOUT II

Heather Crawford  
Ohio University

BREAKOUT III

Ryan Cress  
United States Air Force Academy

BREAKOUT I

Richard Datwyler  
Brigham Young Univ. - Idaho

BREAKOUT II

James Dent  
University of Louisiana at  
Lafayette

BREAKOUT III

Eugenii Donev  
University of The South

BREAKOUT I

David Ennis  
Auburn University

BREAKOUT II

Edwin Fohntung  
New Mexico State University

BREAKOUT III

Michael Forbes  
Washington State University

BREAKOUT I

Adam Gibson-Even  
Valparaiso University

BREAKOUT II

Kenjiro Gomes  
University of Notre Dame

BREAKOUT III

Joseph Haley  
Oklahoma State University

BREAKOUT I

Gregory Harry  
American University

BREAKOUT II

Ruihua He  
Boston College

BREAKOUT III

Christine Helms  
University of Richmond

BREAKOUT I

John Hewitt  
Abilene Christian University

BREAKOUT II

Benjamin Holder  
Grand Valley State University

BREAKOUT III

Xiaosheng Huang  
University of San Francisco

BREAKOUT I

Meredith Hughes  
Wesleyan University

BREAKOUT II

Brennan Hughey  
Embry-Riddle Aeronautical Univ.  
- Prescott Campus

BREAKOUT III

Mahmud Khan  
Miami University - Oxford

BREAKOUT I

William Koch  
United States Military Academy

BREAKOUT II

Alexey Kovalev  
University of Nebraska - Lincoln

BREAKOUT III

Ratnappuli Kulasiri  
Southern Polytechnic State  
University

BREAKOUT I

Marcelo Kuroda  
Auburn University

BREAKOUT II

Kaijun Liu  
Auburn University

BREAKOUT III

Richard Longland  
North Carolina State University

BREAKOUT I

Melanie Lott  
Denison University

BREAKOUT II

Tyler Luchko  
California State University -  
Northridge

BREAKOUT III

Kevin Marshall  
Widener University

BREAKOUT I

Adam Martin  
University of Notre Dame

BREAKOUT II

Elizabeth McGrath  
Colby College

BREAKOUT III

David McKee  
Missouri Southern State  
University

BREAKOUT I

David Mertens  
Dickinson College

BREAKOUT II

Christopher Nakamura  
Saginaw Valley State University

BREAKOUT III

George Paily  
Allegheny College

BREAKOUT I

Javier Perez-Moreno  
Skidmore College

BREAKOUT II

# WORKSHOP PARTICIPANTS

Jose Perillan  
Vassar College

BREAKOUT III

Steve Presse  
Indiana University - Purdue  
University - Indianapolis

BREAKOUT I

Andrew Puckett  
University of Connecticut

BREAKOUT II

James Puckett  
Gettysburg College

BREAKOUT III

William Roach  
Lynchburg College

BREAKOUT I

Artem Rudenko  
Kansas State University

BREAKOUT II

Paul Rulis  
University of Missouri-Kansas City

BREAKOUT III

Clayton Simien  
University of Alabama -  
Birmingham

BREAKOUT I

Deepak Singh  
University of Missouri - Columbia

BREAKOUT II

Tristan Smith  
Swarthmore College

BREAKOUT III

Samantha Snelling  
Andrews University

BREAKOUT I

Chaoming Song  
University of Miami

BREAKOUT II

Alexandre Sousa  
University of Cincinnati

BREAKOUT III

Julie Spangler  
Colorado State University -  
Pueblo

BREAKOUT I

Christopher Varney  
University of West Florida

BREAKOUT II

Christopher Vineski  
US Air Force Academy

BREAKOUT III

Xiaorong Wang  
New Mexico State University

BREAKOUT I

Jeff Wereszczynski  
Illinois Institute of Technology

BREAKOUT II

Matthew Wiebold  
Saint Olaf College

BREAKOUT III

Xiaoshan Xu  
University of Nebraska - Lincoln

BREAKOUT I

Mohammad Yousef  
Southern Illinois University -  
Edwardsville

BREAKOUT II

Benjamin Zwickl  
Rochester Institute of Technology

BREAKOUT III

## MONDAY, JUNE 23

11:00 A.M.–6:00 P.M.	WORKSHOP REGISTRATION Holiday Inn - College Park, MD	GRAND BALLROOM FOYER
NOON–1:30 P.M.	BUFFET LUNCH	GRAND BALLROOM FOYER
1:30–3:00 P.M.	WORKSHOP <b>Grant Opportunities with Research Corporation</b> Richard Wiener, Program Officer, rwiener@rescorp.org	GRAND BALLROOM AB
3:00–4:30 P.M.	WORKSHOP <b>Grant Opportunities with NSF Program Directors</b> Joyce Evans, Division of Undergraduate Education, jevans@nsf.gov Kathleen McCloud, Division of Physics, kmcloud@nsf.gov Paul Sokol, Division of Materials Research, psokol@nsf.gov Dan Evans, Division of Astronomical Sciences, devans@nsf.gov	GRAND BALLROOM AB
4:30–5:00 P.M.	BREAK	GRAND BALLROOM FOYER
5:00–5:15 P.M.	OPENING REMARKS <b>Welcome and Introductions</b> Robert Hilborn, Associate Executive Officer, AAPT, Chair, New Physics and Astronomy Faculty Workshop Beth Cunningham, Executive Officer, AAPT Fred Dylla, Executive Director, AIP Kate Kirby, Executive Officer, APS Kevin Marvel, Executive Officer, AAS	GRAND BALLROOM AB
5:15–6:15 P.M.	LARGE GROUP SESSION <b>Introduction to Peer Instruction</b> Eric Mazur, Harvard University	GRAND BALLROOM AB
6:15–7:30 P.M.	DINNER	GRAND BALLROOM CD
7:30–8:30 P.M.	LARGE GROUP SESSION <b>Peer Instruction: Practical Details</b> Eric Mazur, Harvard University	GRAND BALLROOM AB

## TUESDAY, JUNE 24

6:30–7:30 A.M.	BREAKFAST - Holiday Inn - College Park	MOOSE CREEK STEAK HOUSE
8:00 A.M.	SHUTTLE BUS LEAVES (ON TIME) FOR AMERICAN CENTER FOR PHYSICS	
8:30–9:30 A.M.	LARGE GROUP SESSION <b>Learner-Centered Teaching in Physics and Astronomy</b> Edward Prather, University of Arizona	CONFERENCE ROOM A
9:30–10:30 A.M.	SMALL GROUP DISCUSSIONS – VARIOUS TOPICS BASED ON PRE-SURVEY	
10:30–11:00 A.M.	BREAK	ACP ROTUNDA
11:00–NOON	LARGE GROUP SESSION <b>Interactive Lecture Demonstrations</b> David Sokoloff, University of Oregon, and Ron Thornton, Tufts University	CONFERENCE ROOM A

## TUESDAY, JUNE 24 (CONT.)

12:00–1:00 P.M.	GROUP PHOTO AND LUNCH	ACP CAFETERIA
1:00–1:45 P.M.	SMALL GROUP SESSIONS	
	Real-Time Physics / ILD (I) David Sokoloff and Ron Thornton	CONFERENCE ROOM A
	Upper-Level Curriculum (II) Corinne Manogue	CONFERENCE ROOM B
	Lecture Tutorials (III) Edward Prather and Gina Brissenden	CONFERENCE ROOM C
1:45–2:30 P.M.	SMALL GROUP SESSIONS	
	Real-Time Physics / ILD (III)	CONFERENCE ROOM A
	Upper-Level Curriculum (I)	CONFERENCE ROOM B
	Lecture Tutorials (II)	CONFERENCE ROOM C
2:30–3:15 P.M.	SMALL GROUP SESSIONS	
	Real Time Physics / ILD (II)	CONFERENCE ROOM A
	Upper Level Curriculum (III)	CONFERENCE ROOM B
	Lecture Tutorials (I)	CONFERENCE ROOM C
3:15–3:45 P.M.	BREAK	ACP ROTUNDA
3:45–4:45 P.M.	LARGE GROUP SESSION	CONFERENCE ROOM A
	<b>Just-in-Time Teaching</b> Andrew Gavrin, Indiana University-Purdue University-Indianapolis	
4:45–5:45 P.M.	LARGE GROUP SESSION	CONFERENCE ROOM A
	<b>Problem Solving</b> Kenneth Heller, University of Minnesota	
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 AB
7:30–8:30 P.M.	LARGE GROUP SESSION	GRAND BALLROOM CD
	<b>The Physics IQ Test</b> Richard Berg, University of Maryland, College Park	

# WEDNESDAY, JUNE 25

6:30–7:30 A.M.	BREAKFAST - Holiday Inn - College Park	MOOSE CREEK STEAK HOUSE
7:45 A.M.	SHUTTLE BUS LEAVES FOR AMERICAN CENTER FOR PHYSICS	
8:30–10:00 A.M.	LARGE GROUP SESSION <b>Research in Physics Education: A Resource for Improving Student Learning</b> Lillian C. McDermott and Peter Shaffer, University of Washington	CONFERENCE ROOM A
10:00–10:30 A.M.	BREAK	ACP ROTUNDA
10:30–11:15 A.M.	SMALL GROUP DISCUSSIONS Interactive Engagement in Upper-Level Courses (I) Corinne Manogue, Oregon State University	CONFERENCE ROOM A
	PhET Simulations (II) Michael Dubson, University of Colorado, Boulder	CONFERENCE ROOM B
	Physlets/OSP/Ejs (III) Wolfgang Christian, Davidson College	CONFERENCE ROOM C
11:15– NOON	SMALL GROUP DISCUSSIONS Interactive Engagement in Upper-Level Courses (III) PhET Simulations (I) Physlets/OSP/Ejs (II)	CONFERENCE ROOM A CONFERENCE ROOM B CONFERENCE ROOM C
12:00–1:00 P.M.	LUNCH	ACP CAFETERIA
1:00–1:45 P.M.	SMALL GROUP DISCUSSIONS Interactive Engagement in Upper-Level Courses (II) PhET Simulations(III) Physlets/OSP/Ejs (I)	CONFERENCE ROOM A CONFERENCE ROOM B CONFERENCE ROOM C
1:45–2:45 P.M.	LARGE GROUP SESSION <b>Evaluation and Assessment</b> Stephanie Chasteen, University of Colorado, Boulder	CONFERENCE ROOM A
2:45–3:30 P.M.	SMALL GROUP DISCUSSIONS Primarily Undergraduate Institutions Bob Hilborn, AAPT	CONFERENCE ROOM B
	PhD Institutions Steven Turley, Brigham Young University	CONFERENCE ROOM A
3:30–4:00 P.M.	BREAK	ACP ROTUNDA
4:00–4:45 P.M.	SMALL GROUP DISCUSSIONS Digital Libraries (I) Bruce Mason, University of Oklahoma	CONFERENCE ROOM A
	Tenure Matters (II) Bob Hilborn and Steven Turley	CONFERENCE ROOM B
	Problem Solving (III) Ken Heller, University of Minnesota	CONFERENCE ROOM C
4:45–5:30 P.M.	SMALL GROUP DISCUSSIONS Digital Libraries (III) Tenure Matters (I) Problem Solving (II)	CONFERENCE ROOM A CONFERENCE ROOM B CONFERENCE ROOM C

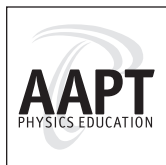


## WEDNESDAY, JUNE 25 (CONT.)

5:30–6:15 P.M.	SMALL GROUP DISCUSSIONS	
	Digital Libraries (II)	CONFERENCE ROOM A
	Tenure Matters (III)	CONFERENCE ROOM B
	Problem Solving (I)	CONFERENCE ROOM C
6:15 P.M.	SHUTTLE BUS LEAVES FOR HOLIDAY INN - COLLEGE PARK	
6:30–8:00 P.M.	RECEPTION & DINNER	GRAND BALLROOM CD

## THURSDAY, JUNE 26

7:00–8:00 A.M.	BREAKFAST - Holiday Inn - College Park Hotel Check-Out - noon	MOOSE CREEK STEAK HOUSE
8:15–9:00 A.M.	LARGE GROUP SESSION <b>Case Studies Discussion of Student Behavior</b> Tim Slater, University of Wyoming	GRAND BALLROOM AB
9:00–10:15 A.M.	LARGE GROUP SESSION <b>Teaching for Retention and Diversity</b> James Stith, American Institute of Physics (Retired)	GRAND BALLROOM
10:15–10:30 A.M.	BREAK	GRAND BALLROOM FOYER
10:30–11:15 A.M.	LARGE GROUP SESSION <b>Time Management</b> Tim Slater	GRAND BALLROOM AB
11:15 –11:30 A.M.	EVALUATION PROCEDURES AND ADJOURNMENT <b>Final Words</b>	GRAND BALLROOM AB



BETH CUNNINGHAM  
EXECUTIVE OFFICER

AMERICAN  
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20740-0845

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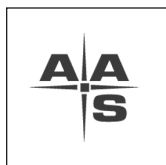
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## AMERICAN ASSOCIATION OF PHYSICS TEACHERS

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 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

AMERICAN  
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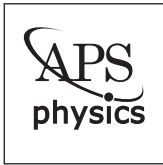
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WASHINGTON, DC  
20009-1231

202-328-2010

WWW.AAS.ORG

## 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 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](http://www.PhysicsCentral.com), a website for the public.

KATE KIRBY  
EXECUTIVE OFFICER

THEODORE HODAPP  
DIRECTOR OF  
EDUCATION AND  
DIVERSITY

AMERICAN  
PHYSICAL SOCIETY

ONE PHYSICS ELLIPSE  
COLLEGE PARK, MD  
20740-3844

301-209-3200

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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 recently began sponsorship of the Conferences for Undergraduate Women in Physics – 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.

FRED DYLLA  
EXECUTIVE DIRECTOR

AMERICAN  
INSTITUTE OF PHYSICS

ONE PHYSICS ELLIPSE  
COLLEGE PARK, MD  
20740-0845

301-209-3100

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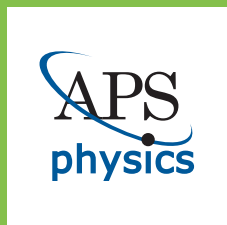
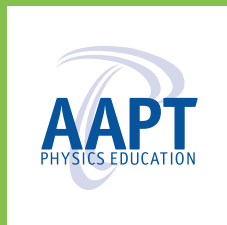
AIP offers authoritative information, services, and expertise in physics education and student programs, science communication, government relations, career services for science and engineering professionals, statistical research in physics employment and education, industrial outreach, and the history 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.



THIS PROJECT IS SUPPORTED IN PART BY THE NATIONAL SCIENCE FOUNDATION.

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