

# CSWP Gazette

The Newsletter of the Committee on the Status of Women in Physics of the American Physical Society

## INSIDE

Letter from the  
Guest Editor:  
*What You Can Do*  
1

Nineteen Women  
Named to APS  
Fellowship  
1

The MGM Award  
Turns Twenty  
3

M. Hildred Blewett  
Scholarship for  
Women Physicists  
3

NAS and NIH Host  
Convocation on  
Maximizing  
Women's Potential  
4

A Message from the  
CSWP Chair  
5

Physics Mentor  
5

Events at March and  
April Meetings  
6

Bunny Clark  
Retirement  
8

Thinking About  
Graduate Schools?  
10

Committee on the  
Status of Women in  
Physics  
10

Forms  
11-15

## Letter from the Guest Editor: What You Can Do A Guide to Creating A Level Playing Field In Physics

By Roxanne Springer, Duke University

If you are reading this Gazette, you are likely familiar with the frequent laments and statistics about the under-representation of women in physics, along with stories of harassment and discrimination some women in physics experience. Every few years a new “what you can do” guide appears on how to encourage more women to study physics as undergraduates, to get your dean to make sure women are being hired in fair proportions, and/or to improve the climate for women already in physics. This “what you can do” list of suggestions concentrates on the latter, because climate also affects the rate at which women enter and leave the field. Only when women are able to learn and work as comfortably in a physics community as men can we expect to see the number of women in physics increase. Below is a list of — sometimes tiny, sometimes dramatic — individual actions each of us can take to help make that happen.

Keep in mind that a climate respectful to women and minorities is one that is more respectful and inclusive to everyone, men and majorities as well. In this spirit, in the discussion below no assumption is made about the gender or race of the people involved.

*What You Can Do As A (Male, Female, Graduate, or Undergraduate) Student:*

Encourage an atmosphere of healthy competition. Challenge your peers and yourself to learn more and learn deeply; everyone does their best when expectations are high. Be respectful of everyone's contribution. If you like working with others, be collaborative not only in discussing problem sets but in seeing if there are research projects you can enter jointly with a peer.

If one of your classmates is shy, insecure, and/or frequently ignored or cut off by others in physics discussions, lead by example: involve that person and listen carefully — this is someone who may have much to contribute. Is one of your classmates a “physics bully” who is disrespectful to other students? Let him/her know that few students do well when belittled and that everyone does better when there is positive encouragement instead of added stress.

How do you deal with your own insecurities? Physics is hard and most people struggle with it. If you are confused you are likely not the only one, and your time

*continued on page 2*

## Nineteen Women Named to Fellowship in the APS

By Sue Otwell, APS Staff

Nineteen women are among the 202 new Fellows of the American Physical Society. Each new fellow is elected after careful and competitive review and recommendation by a fellowship committee on the unit level, additional review by the APS Fellowship Committee and final approval by the full APS Council. Only 1/2 of 1% of the total APS membership is selected for Fellowship in the Society each year.

The names of the new women fellows, their citations and the APS units which nominated them appear on page 7. A listing of all 2005 Fellows, as well as information on the Fellowship program and how to nominate an individual, may be found at [www.aps.org/fellowship/2005/index.cfm](http://www.aps.org/fellowship/2005/index.cfm). A listing of all women Fellows of the APS can be found at [www.aps.org/educ/cswp/women-fellows.cfm](http://www.aps.org/educ/cswp/women-fellows.cfm)

*continued on page 7*

*The Editor for this issue:*

**Roxanne Springer**  
Duke University

**Managing Editor**  
Sue Otwell, APS Staff

*Members of the  
Committee*

**Sherry Yennello**  
**Chair 2006**  
Texas A&M University

**Nora Berrah**  
Western Michigan  
University

**Kimberly Budil**  
LLNL

**Bernice Durand**  
University of Wisconsin

**Catherine Fiore**  
MIT

**Andrea Liu**  
University of  
Pennsylvania

**Peter Sheldon**  
Randolph-Macon  
Woman's College

**Marc Sher**  
College of  
William & Mary

**Roxanne Springer**  
Duke University

*APS Liaisons*

**Theodore Hodapp**  
Director, Education &  
Outreach

**Sue Otwell**  
Education Programs  
Administrator

**Leanne Poteet**  
Graphic Designer

#### **Publication Information**

The CSWP GAZETTE, a newsletter of the American Physical Society Committee on the Status of Women in Physics (CSWP), is mailed free of charge to all those listed on the "Roster of Women in Physics," all U.S. physics department chairs, and others upon request. Because editorial responsibility rotates among CSWP members, please address all correspondence to: CSWP Gazette, American Physical Society, One Physics Ellipse, College Park, MD 20740-3844 or email to: [otwell@aps.org](mailto:otwell@aps.org)

## What You Can Do, continued from page 1

as a student is the best time in your life to ask questions! Try not to turn your own feelings of anxiety into either self-doubt or aggressiveness toward others. It really will not make you feel better, and it certainly will make your classmates feel worse, if you attempt to denigrate them in hopes of increasing your own sense of self-worth.

If a classmate, teaching assistant, faculty member or staff member is behaving in a manner you think is harassing or discriminatory – tell someone! Act early and often. You have the responsibility to treat others with respect and to insist that you are treated with respect.

Take the following example. Suppose one of your professors pats you on the head. You may find this demeaning, and it may not be clear to you whether the act was meant to be an awkward show of approval or a demonstration of dominance. If you tell the professor that the pat makes you uncomfortable, hopefully that will be sufficient to stop the behavior. Most of us do not want to cause discomfort to others. If you think the professor would, for example, give you a lower grade or a poor letter of recommendation because you spoke up, that would make the professor a seriously disturbed person who cannot be left unchallenged. Either way, it is your responsibility to act — either in conversation with the professor or by bringing the matter to the attention of someone whose job it is to do something about it. Nobody can rise to their full potential in a climate of fear. If you are too uncomfortable to insist that you be treated with a minimum level of civility, then you are attempting to learn and work in a climate of fear. At this point, you can leave the field for greener pastures (but be aware that you will encounter people who behave inappropriately everywhere in life), you can try to muddle through and leave the problem for the next generation to fix, or you can ask for help so the problem can be solved. Few faculty wish to create or maintain an atmosphere where students do not feel valued.

#### *What You Can Do As A Faculty Member:*

Play the following game with yourself. The next time you are answering a physics question posed by a student, pretend for a moment that the student is of the opposite gender than he/she really is (or the opposite race, or the opposite in level of attractiveness, etc). See if this changes the way you see and/or react to this person. If it does, you may have some thinking to do. Remember that learning is best facilitated when everyone is treated as a valued member of the community. Differential treatment of one member of the group, especially in front of the group, will cause disturbances for all.

Here is another game. The next time a student or colleague speaks to you about a behavior of yours that may be perceived as inappropriate or unfair, pretend you have just been told that some students find your writing on the blackboard too small to be understood from anywhere but the front row of class. Hopefully your response is something along the lines of "Oh...I don't want to make learning any harder than it has to be .. I will fix this." Imagine if your response was, "That could not possibly have happened ... the students are being too sensitive. I am a good person and will not be unfairly accused. Who says I write too small? Can they prove it? Where are the witnesses?"

We need to have a finding of guilt before anyone can be asked to change their writing size." Hopefully you find

the former response reasonable and the latter ridiculous. Keep in mind that it is all about education. Just because you have inadvertently or unthinkingly offended someone is not a signal that you are a criminal, so there is no need to behave defensively. You want people to be comfortable enough around you so that you can be an effective teacher, advisor, and mentor. So act like one! Be responsible for your own behavior and consider how it might be affecting others.

While I am careful to list as a student responsibility the necessity of speaking up, the responsibility of the faculty member is much greater. Do not assume that your behavior is fine just because no one has brought it to your attention. As a faculty member you may be scarier than you think you are. You may be perceived as having a great deal more power, and capriciousness, than you believe you have. As the "dominant" figure in the relationship, it is up to you to carefully observe boundaries and to not make the student feel unnecessarily uncomfortable. By unnecessary I mean anything which does not forward the learning of physics.

Your colleagues who are least self-aware are likely not reading the CSWP Gazette. Your job, since you are already among those who would like to improve the situation for women in physics, is to share at least one idea to help them be part of that effort. You have the responsibility to make sure that your colleagues behave in a manner that makes you proud to be a member of your department. If you are not, you share part of the blame for any shortcomings your department may have.

#### *What You Can Do As An Administrator:*

Lead by example. Let your community know that it is a priority for you that students, faculty, staff, and administrators treat each other with respect. Obtain or create, and then publicize, a set of best practices. And then actually hold people to them! The point is to provide the best atmosphere for learning and working. You do not need proof of misbehavior before speaking to your employees about how to provide the most positive climate possible.

Create an office where students, faculty, and staff who feel they are being harassed or discriminated against can find help and advice. This is not the same as your equity compliance office (more about that below). Instead, this office is staffed with advocates for potential victims.

Anytime people work together, there will be misunderstandings and tensions. The more people you have at your university, the more likely it is that offensive behavior will occur from time to time. As a leader, it is up to you to see that this is dealt with appropriately. People sometimes behave in ways that are thoughtless and disrespectful. Some people are going to do whatever they are allowed to get away with doing. There are a few who will be sexual predators. This is just statistics. It may not be the university's fault that such people are in their midst, but it most certainly is the responsibility of its leaders to deal effectively with events as they occur. Trying to hide the problem will only exacerbate it. In today's political climate we are more aware than ever that sometimes the cover-up is worse than the crime. Acknowledge that you

*continued on page 9*

# The MGM Award Turns Twenty

By Sherry Yennello, Texas A&M University

*To recognize and enhance outstanding achievement by a woman physicist in the early years of her career, and to provide opportunities for her to present these achievements to others through public lectures in the spirit of Maria Goeppert-Mayer.*

Through the generosity of the General Electric Foundation the APS has been recognizing outstanding junior women in physics for twenty years with the MGM award. The award not only recognizes these outstanding women for their research achievements, but also enables them to share the excitement of their science with a broader community by providing support for four lectures given by the awardee at institutions of their choice.

This highlights successful young women and allows them and their science to be role models for other aspiring scientists – both women and men.

Many of these women have gone on to do great things. Among the many national awards that testify to the success of these women are the following:

- Sloan Research Fellowship
- Packard Fellowship
- MacArthur Fellowship
- Humbolt Fellowship
- NSF Young Investigator
- ONR Young Investigator
- DOE Outstanding Junior Investigator
- Presidential Early Career Award for Science and Engineering

International recognition for one has come in the form of the Gold Medal from the Royal Dutch Chemical Society and the Bourke Medal from the Royal Society of Chemistry in the UK. Many have also been elected to Fellowship in various professional societies, including the AAAS, American Vacuum Society, American Academy of Arts and Sciences, and the Optical Society of America. Eight have been named APS fellows, and two are now members of the National Academy of Science.

2005	Yuri Suzuki
2004	Suzanne T. Staggs
2003	Chung-Pei Michele Ma
2002	Deborah S. Jin
2001	Janet M. Conrad
2000	Sharon C. Glotzer
1999	Andrea M. Ghez
1998	Elizabeth J. Beise
1997	Margaret Mary Murnane
1996	Marjorie Ann Olmstead
1995	Jacqueline N. Hewitt
1994	Laura H. Greene
1993	Ewine van Dishoeck
1992	Barbara H. Cooper
1991	Alice E. White
1990	Ellen Williams
1989	Cherry A. Murray
1988	Bonny L. Schumaker
1987	Louise A. Dolan
1986	Judith S. Young

Betsy Beise, University of Maryland, commented, “The year that I received the MGM award happened to coincide with the APS Centennial meeting, so I had an exceptionally good opportunity to talk about my research in experimental nuclear physics. It also gave me an opportunity to discuss the achievements of other young women and point out APS’s commitment to highlighting them through this award.”

Margaret Murnane, JILA/University of Colorado, remarked that “the Maria Goeppert Mayer award has inspired me since 1997. At that time, I was still trying to establish myself as an associate professor in physics and engineering. Because I knew how long it took for Maria to get a faculty position for which she was actually paid, the award inspired me to keep pursuing my dreams, in particular when the going got tough. Since Maria inspired me, the MGM award also motivated me to become very active in helping to promote other women in physics through the APS Committee on the Status of Women in Physics. Finally, I was fortunate to be befriended by someone who knew Maria. He told me that she was strong and feisty, as I have been described sometimes. I wish I had had the opportunity to meet her.”

Unfortunately the sponsorship by GE will end after the 2007 award. The APS is grateful for the 20 years of support from GE. The CSWP has begun a fundraising campaign for an endowment that would fund the MGM award in perpetuity. Any individual or organization that would like to help continue the tradition of honoring these bright young women should contact Darlene Logan, APS Director of Development (301)209-3224 [logan@aps.org](mailto:logan@aps.org).

We hope that, through a successful fundraising campaign, these 20 women will be the first of many more to be so honored during the early stages of their career.



Maria Goeppert Mayer  
AMERICAN INSTITUTE OF PHYSICS

## M. Hildred Blewett Scholarship for Women Physicists

This scholarship has been established to enable women to return to physics research careers after having had to interrupt those careers for family reasons. The scholarship consists of an award of up to \$45,000. The applicant must currently be a legal resident or resident alien of the US or Canada. She must be currently in Canada or the US and must have an affiliation with a research-active educational institution or national lab. She must have completed work toward a PhD.

Applications are due by June 1, 2006. Selection will be made by a sub-committee of the APS Committee on the Status of Women in Physics. Announcement of the award is expected to be made by August 1, 2006.

Details and on-line application can be found at [www.aps.org/educ/cswp/blewett/index.cfm](http://www.aps.org/educ/cswp/blewett/index.cfm) Contact Sue Otwell in the APS office at [blewett@aps.org](mailto:blewett@aps.org)

---

Once both genders have been trained at whatever task showed a gender difference in performance, that performance difference disappears.

---

## NAS and NIH Host Convocation on Maximizing Women's Potential

By Roxanne Springer, Duke University

The National Academies and the National Institutes of Health Office of Research on Women's Health recently hosted a convocation on "Maximizing the Potential of Women in Academic Science and Engineering: Biological, Social, and Organizational Components of Success." The Committee on Maximizing the Potential of Women in Academic Science and Engineering is chaired by Donna Shalala, now President of the University of Miami but perhaps best known as Clinton's Secretary of Health and Human Services. The Committee is charged with discovering why, despite the fact that women represent "an increasing proportion of those earning undergraduate and graduate degrees in science and engineering fields, they have not been hired into academic positions commensurate with this increased representation." The Committee is expected to provide recommendations to faculty, Deans and Department Chairs, Academic Leadership, Funding Organizations, and the US Government, on how to effectively address this disparity. For information on this event, related events, and on-line talks and references from the convocation, see <http://www7.nationalacademies.org/womeninacademe/>.

There were four sessions in the day-long event on 9 December 2005 at the National Academy of Science Building in Washington, D.C. The first session was devoted to presentations and discussion of research on studies of gender differences in cognitive and biological stages of child development. Interesting points included: (a) by and large, once both genders have been trained at whatever task showed a gender difference in performance, that performance difference disappears; and (b) differences in child performance levels by country are highly correlated with the United Nations' measure of "gender equity" in that country. Basically, those countries where men and women have equal access to education are those countries with the smallest performance differences between men and women.

The second session focused on social structures and how social biases may affect individual performance outcomes. Experiments on the so-called "stereotype threat" show that context can change performance, sometimes dramatically for women and minorities. For instance, a simple change in test description from "math ability" to "problem solving" is the difference between men doing better than women on the test (former) and women doing better than men on the test (latter), apparently because any descriptor which plugs into stereotypes and/or reminds a woman or minority of their status in society lowers their performance. Recommendations to combat stereotype threat include creating a threat-free environment, emphasizing skill over ability, and emphasizing the external-ness of stereotypes so that mental resources which would otherwise be wasted on anxiety can be used for problem solving.

Surveys show that society tends to view women in positions of power with ambivalence. The more women are respected, the less they are liked, and vice-versa. Similarly, warmth and competence are seen as inversely

correlated in women leaders. The recommendation is that organizations should expand their criteria for measuring success in order to take this social bias into account.

One dramatic point made in this session was that people in positions of power are most vulnerable to their own internal biases (which everyone has to one extent or another) because they receive the least amount of honest feedback from others. The solution to this is more and better accountability.

The third session was devoted to organizational structures in science and engineering, for the most part concentrating on how they may directly or indirectly discourage women from having children. This in turn causes large numbers of women who want children to leave fields (such as science and engineering) where having children is least supported at the organizational level. Caregiver discrimination cases are on the rise, and enjoy a higher success rate than other civil rights cases. Suggestions for improving the situation include encouraging the use of EOWA free on-line software to do workplace analyses, and to reward those who supervise successful women.

The fourth session was on "Implementing Policies." Supportive leadership is critical to implementing policies designed to increase the representation of women and minorities in science and engineering faculty. Interestingly, freshman African American women show a higher interest in science and engineering than African American men. The "First Law of Diversity" was introduced in this session, which says that anytime something bad happens in any organization, it is worst for those who are in the minority. Recommended actions include: having zero tolerance for bullying behavior; confronting those who are abusive; understanding that tenure is not a license to kill; learning how to deal with conflict by taking a class, getting help, and seeking support; and supporting your local senior feminist (both male and female) colleagues.

The entire Committee then took questions from the audience. Since another item in its charge is, "...to examine how funding organizations ... can best maximize the potential of women in science and engineering" I asked the Committee to collect data on funding agency practices to measure any biases which may exist in the awarding of grants by these agencies. I pointed to the GAO's concerns expressed in their report, "Women's Participation in the Sciences Has Increased, but Agencies Need to Do More to Ensure Compliance with Title IX," along with the RAND Research Brief "Is There Gender Bias in Federal Grant Programs?" Both speak of difficulty in obtaining the necessary data from some agencies. Clearly the question of whether bias on the part of funding agencies exists cannot be answered without this data. Hopefully the funding agencies will respond positively to the Committee's requests for such data.

*RPS acknowledges the chair of the Duke Department of Physics, Daniel Gauthier, for funding her visit to this conference.*

## Calling all Friends: A Message from the CSWP Chair

By Sherry Yennello, Texas A&M University

Do you want to get more involved in creating opportunities for women in physics? Become a Friend. The CSWP is a committee of the APS and Friends of the CSWP is a larger group of women and men who work with the CSWP to improve the status for women in physics. If you are not yet a Friend consider becoming one. If you are a Friend consider getting more involved. Some of the current activities in which you might be interested are listed here. (This is — of course — an evolving list, so feel free to respond that you would like to help in other ways as well.) You are invited to participate in:

- The Maria Goeppert-Mayer Award selection committee
- The M. Hildred Blewett Scholarship committee
- CSWP site visits
- Programming at APS meetings

- Writing articles for the Gazette (In particular being the host for a new feature called “Ask the Physics Mentor”)
- The selection committee for CSWP workshops
- Writing articles for the CSWP web page that provide advice for women physicists
- The subcommittee on how to better involve the Friends in the activities of the CSWP.

If you are interested in participating in these or other ways please contact Sue Otwell (otwell@aps.org) or Sherry Yennello (yennello@comp.tamu.edu).

Best regards,  
Sherry Yennello, CSWP chair 2006  
Texas A&M University

---

Information on how to join the Friends of CSWP list serve can be found at [www.aps.org/educ/cswp.friends.cfm](http://www.aps.org/educ/cswp.friends.cfm)

---

### ASK THE PHYSICS MENTOR

*I've been offered my first real position at Somewhere University! What should I negotiate for as a beginning professor?*

— Mary Newlyhired

First of all, be sure you have a firm offer in hand. Make sure you have read and understand the terms of the offer.

The big five issues are salary, startup, space, teaching load and support staff. Depending on the type of institution, you may want to focus on some subset of these. For example, if your position is at a predominantly teaching institution, teaching load may be more important than space and startup funds for a research group, which are critical at a research institution. Research the salary offered; salaries are public record at state institutions. It's all right to ask for more than you expect to receive!

You may be able to negotiate for moving expenses, parental leave (if there is not a set policy), years of credit toward your tenure clock, starting date — even parking fees.

It is important to realize that many things can be negotiated. You need to identify the ones that are most important to you. Stay calm and focused but be flexible, too!

I would encourage anyone who is potentially going to enter a negotiation for a new position to read *Women Don't Ask: Negotiation and the Gender Divide* by Linda Babcock and Sara Laschever. ([www.womendontask.com/](http://www.womendontask.com/)).

Have you moved? Changed jobs? Changed fields?

Take a moment to update your name/address/qualifications on the Roster of Women in Physics.

This database also serves as the Gazette mailing list. See pages 14–15.



## Special Events Focusing on Women in Physics

---

### APS Annual Meeting • Baltimore, Maryland

#### Sunday, March 12, 2006

**8:00 am – 5:00 pm** ..... **Professional Skills Development Workshop for Women Physicists**  
(Marriott Hotel)  
Workshop for tenure-track and newly-tenured women faculty to develop communication, negotiation and leadership skills. Reception for participants to follow (participants must be pre-registered).

#### Tuesday, March 14, 2006

**7:30 am – 9:30 am** ..... **CSWP/FIAP Networking Breakfast**  
(Marriott Hotel)  
Speaker will be Amy Herhold, Program Leader, ExxonMobil. Enjoy a full breakfast and network with colleagues! Cost: \$20. All are welcome, both men and women. No charge for students, however please pre-register at <http://www.aps.org/meet/MAR06/social.cfm#cswp> (pdf file). Only limited walk-ins can be accepted.

**11:15 am – 2:15 pm** ..... **Invited Session : “What’s Changed for Women in Physics?”**  
(Convention Center)  
Co-sponsored by the Committee on the Status of Women in Physics, the Forum on Education, Forum on Graduate Student Affairs, and the Forum on Physics and Society.

#### Wednesday, March 15, 2006

**2:30 pm – 5:30 pm** ..... **Invited Session: “U.S. Women in Physics”**  
(Convention Center)

---

### APS Annual Meeting, Dallas, Texas

*(all events will be held in the Hyatt Regency Hotel)*

#### Friday, April 21, 2006

**8:00 am – 5:00 pm** ..... **Professional Skills Development Workshop for Women Physicists**  
Workshop for tenure-track and newly-tenured women faculty to develop communication, negotiation and leadership skills. Reception for participants to follow (participants must be pre-registered).

#### Sunday, April 23, 2006

**1:15 pm – 3:05 pm** ..... **Invited Session: “Pioneering Women Astronomers”**  
Co-sponsored with the Forum on the History of Physics

**3:15 pm – 5:03 pm** ..... **Invited Session: “Women in Science Policy”**  
Co-sponsored with the Forum on Physics and Society

#### Monday, April 24, 2006

**12:00 pm – 1:30 pm** ..... **CSWP/DPF Networking Luncheon**  
Enjoy a buffet luncheon, an informal talk, and an opportunity for networking with colleagues! Cost: \$20 (\$5 for students). All are welcome, both men and women, however pre-registration strongly advised as there will be only limited space for walk-ins. Register at <http://www.aps.org/meet/APR06/social.cfm#cswplunch> (pdf file).

**5:30 pm – 7:00 pm** ..... **CSWP/COM Reception**  
Hear about the work of these committees, network with colleagues, and enjoy light fare.

## Nineteen Women Named to Fellowship continued from page 1

### Wanda Andreoni

IBM Research Division, Zurich Research Lab  
For important contributions to the development and implementation of ab-initio computational methods, and for pioneering investigations that led to deep insights into the behavior of diverse condensed matter, chemical, and biomolecular systems. *Computational Physics*

### Nadine N. Aubry

New Jersey Institute of Technology  
For pioneering work on the derivation and analysis of reduced representations of turbulent and other complex fluid flows, as well as recent contributions to micro fluid dynamics. *Fluid Dynamics*

### Carrol Reid Bingham

University of Tennessee  
For significant contributions to the study of nuclei at the limits of stability. *Nuclear Physics*

### Olga Kocharovskaya

Texas A&M University  
For her pioneering works on lasing without inversion, electromagnetically induced transparency, and laser control of gamma-ray nuclear transitions. *Atomic, Molecular, Optical Physics*

### Nancy Ellen Levinger

Colorado State University  
For pioneering work on dynamics in the condensed phase, especially molecular assemblies, molecules at liquid interfaces and in confined environments by ultrafast spectroscopic techniques and neutron scattering. *Chemical Physics*

### Dongqi Li

Argonne National Laboratory  
For outstanding experimental contributions to understanding magnetic phenomena in confined geometries, including surfaces, thin films and nanostructures. *Topical Group on Magnetism & Its Applications*

### A. Marjatta Lyyra

Temple University  
For development of multi-resonance laser spectroscopic technique for facilitating large inter-nuclear distance molecular excitation with state selectivity and for probing coherence effects in molecular systems. *Laser Science*

### Elizabeth F. McCormack

Bryn Mawr College  
For contributions to the development of novel four-wave mixing techniques for the study of molecular Rydberg states, and for efforts to advance the state of undergraduate physics education. *Atomic, Molecular, Optical Physics*

### Elvira Moya De Guerra

CSIC  
For research on theoretical nuclear physics involving microscopic theories for nuclear collective currents, nuclear structure and momentum distributions from electron scattering, and beta-decay nuclear matrix elements. *Nuclear Physics*

### Cynthia Kieras Phillips

Princeton Plasma Physics Laboratory  
In recognition of her fundamental theoretical and experimental contributions to the understanding of radio frequency wave-particle interactions in fusion plasmas. *Plasma Physics*

### Laura Reina

Florida State University  
For contributions to calculations of Higgs production at hadron colliders and rare B decays. *Particles & Fields*

### Maria M. Santore

University of Massachusetts  
For elegant fundamental experiments elucidating polymer and protein dynamics at interfaces and their roles in colloidal and biomaterial adhesion. *Polymer Physics*

### Janine Shertzer

College of the Holy Cross  
For her ground-breaking introduction of novel finite-element techniques in calculations of bound state and scattering properties of atomic and molecular systems. *Few Body Systems Topical Group*

### Nancy L. Thompson

University of North Carolina  
Recognized for pioneering fundamental contributions to fluorescence spectroscopy; binding kinetics and transport processes on surfaces; and molecular interactions on and within biological membranes. *Biological Physics*

### Sandra Marina Troian

Princeton University  
For pioneering theoretical, experimental and molecular simulation studies of micro-hydrodynamic flows. *Fluid Dynamics*

### Renata Maria M. Wentzcovitch

University of Minnesota  
For computational tools for, and valuable predictions of structure and properties of earth minerals and exotic oxides, especially at high pressure and temperature. *Materials Physics*

### Sherry J. Yennello

Texas A&M University  
For her forefront experimental investigations of isospin equilibration in intermediate-energy nucleus-nucleus collisions and the dynamics and thermodynamics of highly excited nuclear matter. *Nuclear Physics*

### Clare C. Yu

University of California Irvine  
For important contributions to the understanding of materials with strong electro-phonon coupling and of glassy materials. *Condensed Matter Physics*

### Stephanie Zaleski

Université Pierre et Marie Curie  
For pioneering contributions to the development of Lattice Boltzmann methods and advanced methods for multiphase flows as well as studies of atomization and other multiphase flow problems. *Fluid Dynamics*

## Bunny Clark Retires

By Roxanne P. Springer, Duke University



*Bunny Clark*

THE OHIO STATE UNIVERSITY

Ohio State University Distinguished Professor Bunny Clark has been a source of inspiration and support for several generations of physicists. Her life is an example of a physics success story despite a nontraditional career trajectory and the presence of barriers placed before her.

Bunny was born in El Paso, Texas, at the height of the Depression. She remembers a warm and exciting childhood, including trips to the McDonald Observatory where she learned to love the night sky. Her father was an excellent athlete, who dove and swam, and supplemented the family income by boxing. Her mother took a keen interest in her only child's education, indulging Bunny in her passion for books.

During World War II, Bunny and her family moved near Dallas, TX. There Bunny was exposed to segregation and saw the effects of racial prejudice. It may have been these early experiences which made her so passionate about fighting injustice wherever she found it. When her father, having joined the Navy, was moved to Newfoundland for training, Bunny enjoyed an accelerated education by being in small classes with children older than herself. Her family finally settled in Kansas, where Bunny continued to be an excellent student — popular, social, and participating in team sports.

As a high school student Bunny sought out the Kansas State University science departments as a resource for school projects. There she met her future husband, Tom Clark. Bunny says that Tom first became interested in visits to her home after experiencing her mother's cooking. But we know that he saw in her a budding fellow scientist.

Bunny got her bachelor's degree at Kansas State while Tom finished his Ph.D. there. They then moved to Hanford where Tom worked as a postdoctoral fellow and Bunny got a crash course in computational physics. Her theoretical calculations were considered classified and therefore barred from general publication. Still, it was a rewarding time for her.

From Hanford the couple moved to Detroit, where Tom worked for General Electric and Bunny ... looked for a job. She was turned down at GE. But at General Motors Bunny found Bob Herman. He would be her supporter, mentor, and collaborator for many years. Despite Bunny's numerous publications, there was still the pesky matter of the Ph.D. needed to be a fully accepted member of the Physics community. That she accomplished by traveling back and forth to Wayne State, where she obtained her doctorate in 1973.

At Ohio State University (as at many universities), women in physics were not taken seriously in the early 1970's. Bunny had been associated with OSU as a research scientist and was publishing steadily, but it was not until 1981 that OSU Physics decided to hire another nuclear theorist and finally offered Bunny the position of Assistant Professor. In her ever-practical way, Bunny pointed out to the Physics faculty that she had been working and publishing at OSU for nine years, so it would not make much sense to delay tenure. She was promoted to Associate Professor in 1983, and earned Full Professorship in 1987, followed quickly by the Distinguished Uni-

versity Professor position two years later. Basically, while the community was at first slow to appreciate Bunny and recognize her talents, once they were willing to open their eyes to the possibility that women in general — and Bunny in particular — could make important contributions, Bunny's accolades came quickly.

According to her collaborator, Prof. Lanny Ray of UT Austin, "in the 1970's Bunny was a lone voice, patiently calling out to the theoretical nuclear physics community to move away from the non-relativistic Schrodinger equation based description of nuclear structure and reactions and move over to a Dirac equation-based description." Despite years of opposition from the established nuclear community to adopting this relativistic approach, Bunny persevered and prevailed, for the best reason possible — because the data showed that her theories were correct and the old theories were wrong. This story captures the essence of who Bunny is: when she knows something is correct, she works to bring that truth to light until it is accepted as truth.

One ramification of Bunny's work is articulated by her colleague Professor Dick Furnstahl of OSU, "...the study of relativistic effects in nuclear physics rapidly rose to the point where nearly every major nuclear physics group in the country dedicated some effort to this field." Bunny was elected a Fellow of the American Physical Society in 1984 for her major impact on the field of nuclear physics.

Bunny noticed as she progressed in her career that there were few women scientists. She decided to do what she could to change that. She provided support and mentorship to women, becoming a sounding board for them, and a safe place to ask for advice. Professor Laurie McNeil, now chair of the Physics Department at the University of North Carolina-Chapel Hill, thinks that one of the most important things Bunny offered women was the perspective to recognize and address the discrimination they faced, but to never lose sight of their ultimate goal — to do good physics. Bunny helped many women to acknowledge the barriers placed before them, and to address those problems they could change, but to above all remain positive and let nothing stand in their way. Bunny is in an excellent position to give such advice because this is how she lives her own life. As Professor Mildred Dresselhaus of MIT said, "If Bunny decides to do something, it gets done."

Bunny Clark, Mildred Dresselhaus, and Professor Judy Franz (currently the Executive Officer of the APS) spearheaded the NSF funded "Chilly Climate" project in the early 1990's. Their goal was to discover, by visiting and investigating individual physics departments, what forces were at work at each institution which might make it hard for women to succeed there. Based upon their visits, CSWP compiled a set of best practices for departments to follow if they want to be more welcoming to women. See <http://www.aps.org/educ/cswp/> for a link the best practices document (under "site visits"). Such site visits continue today; CSWP members are available to visit physics departments and make recommendations on what can be done to provide the best environment for all physicists and physics students to perform at the highest levels.



## Bunny Clark continued from page 8

Professor Laura Greene of U. Illinois met Bunny when Laura was a graduate student at OSU in 1975. She remembers Bunny doing all (and more) that a professor does, but without the recognition of that title. Laura found a role model and mentor in Bunny, as well as an inspirational teacher. Laura still uses Bunny as a model for enthusiasm, caring, and creativity in the classroom. Another important lesson came from Bunny's high ethical behavior. As she put it, "Never try to hide a mistake ... own up to what you have done and take your knocks."

Bunny's method of contributing to society mirrors her methods in nuclear theory: she slowly and inexorably fights for the most equitable and effective process in the education of non-scientists, the education of women and under-represented minorities, and the advancement of women and under-represented minorities in physics. Bunny has filled numerous leadership positions in the American Physical Society that reflect her efforts and priorities, including: Chair of the Division of Nuclear Physics (1997/98), Member of the Committee on Minorities (1998-2001), Chair of the Committee on the Status of Women in Physics (1991-1994), and Member of the Committee on Education (1995-1996). Her awards include the William Fowler Award for Excellence in Research (1999), election to Fellow of the American Association for the Advancement of Science (1996), the YWCA Woman of Achievement award (1993), and the University Distinguished Affirmative Action Award (1989).

One of Bunny's great gifts is her ability to provoke change, to reach otherwise recalcitrant faculty members, and to successfully lobby administrators to consider

women for faculty positions. She is relentless in a quiet, good-humored, and effective way.

Professor Jacqueline Jones Royster, Senior Vice Provost and Executive Dean of OSU says in her tribute to Bunny, "For the [President's] Council [on Women's Issues], she became our anchor, our conscience, and I believe, symbolically, she functioned as the conscience of the university. The bottom line for me was that her very presence on the council helped to make clearer for all of us what it really means to be a pioneer, what it really means to be innovative, what it really means to hold steadfastly to noble commitments and causes."

Bunny is extremely pleased to see that things have greatly improved for women in physics since she starting her own career. And we who follow in the path she blazed know that this is because of the efforts of Bunny and her co-conspirators. By doing excellent physics and insisting on fair play for all, these generous men and women opened the doors that allow each succeeding generation to flourish and in turn open doors for others. We honor Bunny on the occasion of her "retirement," and look forward to reading the nuclear theory papers she is currently writing, as well as continuing to depend upon her for advice and inspiration.

*Special thanks go to Bunny's friends and collaborators for sharing with me their experiences with Bunny: Professors Mildred Dresselhaus, Judy Franz, Dick Furnstahl, Laura Greene, Ruth Howes, Laurie McNeil, Lanny Ray, Jacqueline Royster, and Dirk Walecka.*

## What You Can Do, continued from page 2

are a university full of humans, and that humans will misbehave on occasion. Put policies in place and be sure these policies are adequate and adequately enacted. The goal is to protect the most vulnerable members of your community from those who would take advantage of them.

Speak directly with your employees. Tell them when they are behaving in ways you think are positive for your community, and tell them when they are behaving in ways you think are negative. Ask them if they are being treated with respect, and ask them what they have done lately to improve the climate for those around them. Provide an annual report for your employees. Included in this report might be the number of events (from misunderstandings all the way up to harassment) brought to your attention, the number that were resolved, improvements your community has made since the last annual report, etc. If you

are in charge of even a medium-sized community and you are not dealing with a substantial number of such "events" every year, find out why your employees are not talking to you.

*(This editorial will be continued in the Fall issue of the Gazette. The full text can be read at [www.phy.duke.edu/~rps/cswpS06.html](http://www.phy.duke.edu/~rps/cswpS06.html). Additional resources on this topic are available from the American Association of University Professors [www.aaup.org/Issues/WomeninHE/sexhar.htm](http://www.aaup.org/Issues/WomeninHE/sexhar.htm) and from the American Association of University Women [www.aauw.org](http://www.aauw.org) (see publication "Tenure Denied").*

*RPS acknowledges professors T.J. Allen, Naomi Quinn, and Ronen Plesser for helpful comments and suggestions.*

## What does the Committee on the Status of Women in Physics do? Here is an overview

More detailed information on these programs and activities may be found at [www.aps.org/educ/cswp/index.cfm](http://www.aps.org/educ/cswp/index.cfm) or by emailing [women@aps.org](mailto:women@aps.org).

CSWP Programs  
for Everyone:

CSWP Events  
at APS annual  
meetings

Colloquium  
Speakers List of  
Women in Physics

The Gazette

Friends of CSWP  
List serve

WIPHYS List serve

### For Students

*Female Friendly Physics Departments*, for those interested in assessing the climate for women at various graduate schools, the results of a survey of graduate programs in physics. All results are self-reported.

APS/IBM Research Internship Program for Undergraduate Women is a salaried summer research internship program for undergraduate women at one of IBM's U.S. research centers.

"Physics in Your Future" conveys the exciting possibilities of a career in physics to middle and high school girls. Copies of this four-color booklet are available at no charge to students and their parents, educators, guidance counselors, and groups who work with young women.

### For Department Chairs

Improving the Climate for Women in Physics Site Visits are made by teams of women physicists to college and university physics departments. Following the visit, recommendations are made to improve the climate for women undergraduates, graduate students and faculty.

"Best Practices for Recruiting and Retaining Women in Physics." Suggestions to assist departments in finding and keeping women physics faculty, postdocs, graduate and undergraduate students. Compiled by the Committee on the Status of Women in Physics and available at <http://www.aps.org/educ/cswp/women-links.cfm>

The Roster of Women and Minorities in Physics lists the names and qualifications of over 4000 women and minorities in physics. It serves as the mailing list for CSWP and the Committee on Minorities in Physics publications, and is also widely used by prospective employers to identify women and minority physicists for job openings.

### For Women Faculty

Professional Skills Development for Women Physicists. In 2006, CSWP will offer two one-day workshops prior to the March and April APS meetings for tenure track and newly-tenured women faculty who wish to improve their leadership skills. A future workshop will be offered for women at national labs and research facilities in 2007.

M. Hildred Blewett Scholarship for Women in Physics. The APS has been designated the primary beneficiary of a bequest from Hildred Blewett, a particle physicist. Eligible candidates are women who have had to give up doing research for a time due to family reasons and would now like to resume their careers. Details at <http://www.aps.org/educ/cswp/blewett/index.cfm>.

### For Everyone

CSWP Events at APS Annual Meetings include invited sessions, networking breakfasts, and receptions (co-sponsored with the Committee on the Minorities in Physics (COM).) These events are open to all with an interest in women and/or minorities in physics. Information on these events is posted on the CSWP website.

Colloquium Speakers List of Women in Physics: an online list of names and talk titles of 320 women, indexed by field and state. A companion list for minorities in physics is also available. Travel Grants for Women Speakers Program provides small grants to physics departments to fund visits by women colloquium speakers.

The *Gazette*, the official newsletter of the CSWP, features updates on CSWP activities and programs, book reviews, statistical reports, and articles on programs designed to increase the participation of women and girls in science. The *Gazette* is mailed out Spring and Fall, past issues are available in PDF format.

Friends of CSWP List serve offers interested APS members an opportunity to hear more about the work of the CSWP and offer suggestions for future activities, topics for discussion, etc.

WIPHYS (Women in Physics) List serve includes over 450 subscribers from around the world who exchange advice, network, and discuss issues of interest to women in physics.

*Are you thinking about graduate schools?  
Are you looking for one that is "female friendly"?  
Check out the results of an informal survey and  
read what departments say about themselves at  
<http://cswp.catlla.com/results.php>.*



# The American Physical Society 2005-2006 Travel Grants for Women Speakers Program



**Purpose** The program is intended to expand the opportunity for physics departments to invite women colloquium/seminar speakers who can serve as role models for women undergraduates, graduate students and faculty. The program also recognizes the scientific accomplishments and contributions of these women physicists.

**Grant** The program will reimburse U.S. colleges and universities for up to \$500 for travel expenses for one of two women colloquium/seminar speakers invited during the 2005-2006 academic year.

**Qualifications** All physics and/or science departments in the United States are encouraged to apply. Canadian and Mexican colleges and universities are also eligible, provided that the speakers they invite are currently employed by U.S. institutions. Invited women speakers should be physicists or in a closely related field, such as astronomy. Speakers should be currently in the U.S. The APS maintains the Women Speakers List which is available online at ([www.aps.org/educ/women-speaker.cfm](http://www.aps.org/educ/women-speaker.cfm)). However, selection of the speaker need not be limited to this list. Neither of the two speakers may be a faculty member of the host institution.

**Guidelines** Reimbursement is for travel and lodging expenses only. Honoraria or extraneous expenses at the colloquium itself, such as refreshments, will not be reimbursed.

**Application** The Travel Grants for Women Speakers Application Form ([www.aps.org/educ/cswp/travelgrant.cfm](http://www.aps.org/educ/cswp/travelgrant.cfm)) should be submitted to APS identifying the institution, the names of the two speakers to be invited and the possible dates of their talks. Please note that funds for the program are limited. The Travel Grants for Women Speakers Application Form should be submitted as early as possible, even if speakers and dates are tentative, or if the speakers are scheduled for the spring semester. The application form will be reviewed by APS, and the institutions will be notified of approval or rejection of their application within two weeks. Institutions whose applications have been approved will receive a Travel and Expense Report Form to submit for reimbursement.

See following page for application form.

## Women Speakers List

Need a speaker? Consider consulting the American Physical Society Women Speakers List (WSL), an online list of over 300 women physicists who are willing to give colloquium or seminar talks to various audiences. This list serves as a wonderful resource for colleges, universities, and general audiences. It has been especially useful for Colloquium chairs and for those taking advantage of the Travel Grant Program for Women Speakers. To make the WSL easy to use, we have made the online version searchable by state, field of physics, or speakers' last names.



If you'd like to search the list to find a woman speaker, go to [www.aps.org/educ/women-speaker.cfm](http://www.aps.org/educ/women-speaker.cfm)

Women physicists who would like to be listed on the Women Speakers List or those who'd like to modify their existing entries can do so at [www.aps.org/educ/women-speaker-enroll.cfm](http://www.aps.org/educ/women-speaker-enroll.cfm) or see page 13.

APS also has a companion program for minority speakers. Information on the Travel Grant Program for Minority Speakers can be found at [www.aps.org/educ/com/travelgrant.cfm](http://www.aps.org/educ/com/travelgrant.cfm). The Minority Speakers List can be found at [www.aps.org/educ/minority-speaker.cfm](http://www.aps.org/educ/minority-speaker.cfm).

# 2005-2006 TRAVEL GRANTS FOR WOMEN SPEAKERS

## ◆ APPLICATION FORM ◆

This form is also available on the Internet at [www.aps.org/educ/cswp/women-app.cfm](http://www.aps.org/educ/cswp/women-app.cfm)

This form must be filled out and approval received from the APS in order to be eligible for up to \$500 travel reimbursement.

**Please note that submitting this application form does not guarantee reimbursement.**

You will be notified within two weeks of receipt of this application whether or not it has been approved.

DATE:	_____				
INSTITUTION:	_____				
DEPARTMENT:	_____				
ADDRESS:	_____				
CITY:	_____	STATE:	_____	ZIP:	_____
APPLICATION PREPARED BY (Required):	_____				
NAME:	_____	TITLE:	_____		
PHONE:	_____	FAX:	_____		
EMAIL:	_____				

Please list information on the speakers below. Please indicate if speakers' dates or talk titles are tentative.

DATE OF COLLOQUIUM:	_____				
SPEAKER'S NAME:	_____				
HOME INSTITUTION:	_____				
HOME DEPARTMENT:	_____				
ADDRESS:	_____				
CITY:	_____	STATE:	_____	ZIP:	_____
PHONE:	_____	FAX:	_____		
EMAIL:	_____				
TITLE OF TALK:	_____				

DATE OF COLLOQUIUM:	_____				
SPEAKER'S NAME:	_____				
HOME INSTITUTION:	_____				
HOME DEPARTMENT:	_____				
ADDRESS:	_____				
CITY:	_____	STATE:	_____	ZIP:	_____
PHONE:	_____	FAX:	_____		
EMAIL:	_____				
TITLE OF TALK:	_____				

Please return this form to:

Arlene Modeste Knowles, Travel Grants for Women Speakers Program  
The American Physical Society  
One Physics Ellipse  
College Park, MD 20740-3844  
Tel: (301)209-3232 • Fax: (301)209-0865 • Email: [travelgrant@aps.org](mailto:travelgrant@aps.org)



## Current Employment Information (28 Characters per line)

Employer: \_\_\_\_\_

Department/Division: \_\_\_\_\_

Position/Title: \_\_\_\_\_

## Professional Activity Information

CURRENT WORK STATUS (Check One)	TYPE OF WORK ACTIVITY	FIELD OF PHYSICS		
		Current Interest	Highest Degree	
1 ___ Faculty, Non-Tenured 2 ___ Faculty, Tenured 3 ___ Inactive/Unemployed 4 ___ Long-term/Permanent Employee 5 ___ Post Doc./Research Assoc. 6 ___ Retired 7 ___ Self-Employed 8 ___ Student Full Time 9 ___ Student Part Time 10 ___ Teaching/Precollege 11 ___ Other (please explain) _____ _____	Please check up to four of the activities in which you engage most frequently.  1 ___ Administration/Management 2 ___ Applied Research 3 ___ Basic Research 4 ___ Committees/Professional Org. 5 ___ Computer Programming 6 ___ Development and/or Design 7 ___ Engineering 8 ___ Manufacturing 9 ___ Proposal Preparation 10 ___ Teaching - Secondary School 11 ___ Teaching - Undergraduate 12 ___ Teaching - Graduate 13 ___ Technical 14 ___ Technical Sales 15 ___ Writing/Editing 16 ___ Other (please specify) _____ _____	(check up to 4 in each column)  1 ___ 1 ___ 2 ___ 2 ___ 3 ___ 3 ___ 4 ___ 4 ___ 5 ___ 5 ___ 6 ___ 6 ___ 7 ___ 7 ___ 8 ___ 8 ___ 9 ___ 9 ___ 10 ___ 10 ___ 11 ___ 11 ___ 12 ___ 12 ___ 13 ___ 13 ___ 14 ___ 14 ___ 15 ___ 15 ___ 16 ___ 16 ___ 17 ___ 17 ___ 18 ___ 18 ___ 19 ___ 19 ___ 20 ___ 20 ___ 21 ___ 21 ___ 22 ___ 22 ___ 23 ___ 23 ___ 24 ___ 24 ___ 25 ___ 25 ___ 26 ___ 26 ___ 27 ___ 27 ___ 28 ___ 28 ___ 29 ___ 29 ___ 30 ___ 30 ___ 31 ___ 31 ___ 32 ___ 32 ___ 33 ___ 33 ___ 99 ___ 99 ___	Accelerator Physics Acoustics Astronomy & Astrophysics Atomic & Molecular Physics Biophysics Chemical Physics Computational Physics Computer Science Condensed Matter Physics Education Electromagnetism Electronics Elementary Particles & Fields General Physics Geology Geophysics High Polymer Physics Low Temperature Physics Materials Science Mathematical Mechanics Medical Physics Non-Physics Nuclear Physics Optics Physics of Fluids Plasma Physics Quantum Electronics Solid State Physics Space Physics Superconductivity Surface Science Thermal Physics Other (please specify) _____	
<b>TYPE OF WORKPLACE FOR CURRENT OR LAST WORK</b>  1 ___ College - 2 year 2 ___ College - 4 year 3 ___ Consultant 4 ___ Government 5 ___ Industry 6 ___ National Lab 7 ___ Non-Profit Institution 8 ___ Secondary School 9 ___ University 10 ___ NA 11 ___ Other (Please explain) _____ _____	<b>DEGREE TYPE (Highest)</b>  1 ___ Theoretical 2 ___ Experimental 3 ___ Both 4 ___ Other (please explain) _____ _____			

## APS Membership Information

Are you an APS member?:

No Check here if you wish to receive an application -

Yes Please provide your APS membership number, if available, from the top left of an APS mailing label:  
 \_\_\_\_\_

### Office Use Only

Date of entry: \_\_\_\_\_

Roster #: \_\_\_\_\_

Initials \_\_\_\_\_

*Thank you for your participation. The information you have provided will be kept strictly confidential and will be made available only to CSWP and COM members and APS staff liaisons. Please return this form to the address on the reverse side.*

# Women Speakers List (WSL)

## Enrollment/Modification Form 2005–2006

Additions/Modifications may also be made on the Internet at [www.aps.org/educ/women-speaker-enroll.cfm](http://www.aps.org/educ/women-speaker-enroll.cfm)  
An online copy of the WSL is also available.

The *Women Speakers List* is compiled by The American Physical Society Committee on the Status of Women in Physics (CSWP). The list is updated continuously online. Comments, questions and entries should be addressed to:

**Women Speakers List • APS • One Physics Ellipse • College Park, MD 20740-3844 • (301) 209-3232**

To enroll or update your current entry, please fill out this form completely and return it to the address above.  
*Please print clearly or type.*

**Title/ Name**  Dr.  Prof.  Mrs.  Ms. \_\_\_\_\_ **Date** \_\_\_\_\_

**Institution** \_\_\_\_\_ **Telephone** \_\_\_\_\_

**Address** \_\_\_\_\_ **Fax** \_\_\_\_\_

\_\_\_\_\_ **Email** \_\_\_\_\_

**City** \_\_\_\_\_ **State** \_\_\_\_\_ **Zip Code** \_\_\_\_\_

If you have moved out of state, list previous state: \_\_\_\_\_

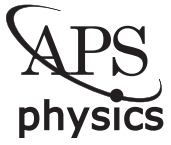
**New Entry**       **Modification**

**For which audiences are you willing to speak? (Please check all that apply)**

Middle school       High school       General Audiences       Colloquium

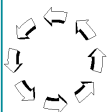
To register a new title, give the title as you want it to appear in the left column below. Then check the section(s) where it is to be inserted. To delete a title, indicate the title and check the appropriate box below. A limit of four total entries will be imposed. You may use additional pages if you are submitting more than four modifications. PLEASE TYPE OR PRINT LEGIBLY PAYING PARTICULAR ATTENTION TO FORMULAS. WE REGRET THAT WE ARE UNABLE TO INCLUDE ILLEGIBLE ENTRIES.

TALK TITLE	PHYSICS SUBFIELD (limit 4)																								
<p>1.      <input type="checkbox"/> Add this title                      <input type="checkbox"/> Delete this title</p>	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;"><input type="checkbox"/> Accelerators</td> <td style="width: 33%; border: none;"><input type="checkbox"/> Education</td> <td style="width: 33%; border: none;"><input type="checkbox"/> Nuclear</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Astrophysics</td> <td style="border: none;"><input type="checkbox"/> Fluid Dynamics</td> <td style="border: none;"><input type="checkbox"/> Optics/Optical</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Atomic/Molecular</td> <td style="border: none;"><input type="checkbox"/> General</td> <td style="border: none;"><input type="checkbox"/> Particle</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Biological/Medical</td> <td style="border: none;"><input type="checkbox"/> Geophysics/ Environmental/Energy</td> <td style="border: none;"><input type="checkbox"/> Physics &amp; Society</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Chemical</td> <td style="border: none;"><input type="checkbox"/> History</td> <td style="border: none;"><input type="checkbox"/> Plasma</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Computational</td> <td style="border: none;"><input type="checkbox"/> Interface/Device</td> <td style="border: none;"><input type="checkbox"/> Polymer</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Condensed Matter</td> <td style="border: none;"><input type="checkbox"/> Materials</td> <td style="border: none;"><input type="checkbox"/> Statisical/Nonlinear</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Diversity</td> <td style="border: none;"></td> <td style="border: none;"><input type="checkbox"/> Other</td> </tr> </table>	<input type="checkbox"/> Accelerators	<input type="checkbox"/> Education	<input type="checkbox"/> Nuclear	<input type="checkbox"/> Astrophysics	<input type="checkbox"/> Fluid Dynamics	<input type="checkbox"/> Optics/Optical	<input type="checkbox"/> Atomic/Molecular	<input type="checkbox"/> General	<input type="checkbox"/> Particle	<input type="checkbox"/> Biological/Medical	<input type="checkbox"/> Geophysics/ Environmental/Energy	<input type="checkbox"/> Physics & Society	<input type="checkbox"/> Chemical	<input type="checkbox"/> History	<input type="checkbox"/> Plasma	<input type="checkbox"/> Computational	<input type="checkbox"/> Interface/Device	<input type="checkbox"/> Polymer	<input type="checkbox"/> Condensed Matter	<input type="checkbox"/> Materials	<input type="checkbox"/> Statisical/Nonlinear	<input type="checkbox"/> Diversity		<input type="checkbox"/> Other
<input type="checkbox"/> Accelerators	<input type="checkbox"/> Education	<input type="checkbox"/> Nuclear																							
<input type="checkbox"/> Astrophysics	<input type="checkbox"/> Fluid Dynamics	<input type="checkbox"/> Optics/Optical																							
<input type="checkbox"/> Atomic/Molecular	<input type="checkbox"/> General	<input type="checkbox"/> Particle																							
<input type="checkbox"/> Biological/Medical	<input type="checkbox"/> Geophysics/ Environmental/Energy	<input type="checkbox"/> Physics & Society																							
<input type="checkbox"/> Chemical	<input type="checkbox"/> History	<input type="checkbox"/> Plasma																							
<input type="checkbox"/> Computational	<input type="checkbox"/> Interface/Device	<input type="checkbox"/> Polymer																							
<input type="checkbox"/> Condensed Matter	<input type="checkbox"/> Materials	<input type="checkbox"/> Statisical/Nonlinear																							
<input type="checkbox"/> Diversity		<input type="checkbox"/> Other																							
<p>2.      <input type="checkbox"/> Add this title                      <input type="checkbox"/> Delete this title</p>	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;"><input type="checkbox"/> Accelerators</td> <td style="width: 33%; border: none;"><input type="checkbox"/> Education</td> <td style="width: 33%; border: none;"><input type="checkbox"/> Nuclear</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Astrophysics</td> <td style="border: none;"><input type="checkbox"/> Fluid Dynamics</td> <td style="border: none;"><input type="checkbox"/> Optics/Optical</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Atomic/Molecular</td> <td style="border: none;"><input type="checkbox"/> General</td> <td style="border: none;"><input type="checkbox"/> Particle</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Biological/Medical</td> <td style="border: none;"><input type="checkbox"/> Geophysics/ Environmental/Energy</td> <td style="border: none;"><input type="checkbox"/> Physics &amp; Society</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Chemical</td> <td style="border: none;"><input type="checkbox"/> History</td> <td style="border: none;"><input type="checkbox"/> Plasma</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Computational</td> <td style="border: none;"><input type="checkbox"/> Interface/Device</td> <td style="border: none;"><input type="checkbox"/> Polymer</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Condensed Matter</td> <td style="border: none;"><input type="checkbox"/> Materials</td> <td style="border: none;"><input type="checkbox"/> Statisical/Nonlinear</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Diversity</td> <td style="border: none;"></td> <td style="border: none;"><input type="checkbox"/> Other</td> </tr> </table>	<input type="checkbox"/> Accelerators	<input type="checkbox"/> Education	<input type="checkbox"/> Nuclear	<input type="checkbox"/> Astrophysics	<input type="checkbox"/> Fluid Dynamics	<input type="checkbox"/> Optics/Optical	<input type="checkbox"/> Atomic/Molecular	<input type="checkbox"/> General	<input type="checkbox"/> Particle	<input type="checkbox"/> Biological/Medical	<input type="checkbox"/> Geophysics/ Environmental/Energy	<input type="checkbox"/> Physics & Society	<input type="checkbox"/> Chemical	<input type="checkbox"/> History	<input type="checkbox"/> Plasma	<input type="checkbox"/> Computational	<input type="checkbox"/> Interface/Device	<input type="checkbox"/> Polymer	<input type="checkbox"/> Condensed Matter	<input type="checkbox"/> Materials	<input type="checkbox"/> Statisical/Nonlinear	<input type="checkbox"/> Diversity		<input type="checkbox"/> Other
<input type="checkbox"/> Accelerators	<input type="checkbox"/> Education	<input type="checkbox"/> Nuclear																							
<input type="checkbox"/> Astrophysics	<input type="checkbox"/> Fluid Dynamics	<input type="checkbox"/> Optics/Optical																							
<input type="checkbox"/> Atomic/Molecular	<input type="checkbox"/> General	<input type="checkbox"/> Particle																							
<input type="checkbox"/> Biological/Medical	<input type="checkbox"/> Geophysics/ Environmental/Energy	<input type="checkbox"/> Physics & Society																							
<input type="checkbox"/> Chemical	<input type="checkbox"/> History	<input type="checkbox"/> Plasma																							
<input type="checkbox"/> Computational	<input type="checkbox"/> Interface/Device	<input type="checkbox"/> Polymer																							
<input type="checkbox"/> Condensed Matter	<input type="checkbox"/> Materials	<input type="checkbox"/> Statisical/Nonlinear																							
<input type="checkbox"/> Diversity		<input type="checkbox"/> Other																							
<p>3.      <input type="checkbox"/> Add this title                      <input type="checkbox"/> Delete this title</p>	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;"><input type="checkbox"/> Accelerators</td> <td style="width: 33%; border: none;"><input type="checkbox"/> Education</td> <td style="width: 33%; border: none;"><input type="checkbox"/> Nuclear</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Astrophysics</td> <td style="border: none;"><input type="checkbox"/> Fluid Dynamics</td> <td style="border: none;"><input type="checkbox"/> Optics/Optical</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Atomic/Molecular</td> <td style="border: none;"><input type="checkbox"/> General</td> <td style="border: none;"><input type="checkbox"/> Particle</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Biological/Medical</td> <td style="border: none;"><input type="checkbox"/> Geophysics/ Environmental/Energy</td> <td style="border: none;"><input type="checkbox"/> Physics &amp; Society</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Chemical</td> <td style="border: none;"><input type="checkbox"/> History</td> <td style="border: none;"><input type="checkbox"/> Plasma</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Computational</td> <td style="border: none;"><input type="checkbox"/> Interface/Device</td> <td style="border: none;"><input type="checkbox"/> Polymer</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Condensed Matter</td> <td style="border: none;"><input type="checkbox"/> Materials</td> <td style="border: none;"><input type="checkbox"/> Statisical/Nonlinear</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Diversity</td> <td style="border: none;"></td> <td style="border: none;"><input type="checkbox"/> Other</td> </tr> </table>	<input type="checkbox"/> Accelerators	<input type="checkbox"/> Education	<input type="checkbox"/> Nuclear	<input type="checkbox"/> Astrophysics	<input type="checkbox"/> Fluid Dynamics	<input type="checkbox"/> Optics/Optical	<input type="checkbox"/> Atomic/Molecular	<input type="checkbox"/> General	<input type="checkbox"/> Particle	<input type="checkbox"/> Biological/Medical	<input type="checkbox"/> Geophysics/ Environmental/Energy	<input type="checkbox"/> Physics & Society	<input type="checkbox"/> Chemical	<input type="checkbox"/> History	<input type="checkbox"/> Plasma	<input type="checkbox"/> Computational	<input type="checkbox"/> Interface/Device	<input type="checkbox"/> Polymer	<input type="checkbox"/> Condensed Matter	<input type="checkbox"/> Materials	<input type="checkbox"/> Statisical/Nonlinear	<input type="checkbox"/> Diversity		<input type="checkbox"/> Other
<input type="checkbox"/> Accelerators	<input type="checkbox"/> Education	<input type="checkbox"/> Nuclear																							
<input type="checkbox"/> Astrophysics	<input type="checkbox"/> Fluid Dynamics	<input type="checkbox"/> Optics/Optical																							
<input type="checkbox"/> Atomic/Molecular	<input type="checkbox"/> General	<input type="checkbox"/> Particle																							
<input type="checkbox"/> Biological/Medical	<input type="checkbox"/> Geophysics/ Environmental/Energy	<input type="checkbox"/> Physics & Society																							
<input type="checkbox"/> Chemical	<input type="checkbox"/> History	<input type="checkbox"/> Plasma																							
<input type="checkbox"/> Computational	<input type="checkbox"/> Interface/Device	<input type="checkbox"/> Polymer																							
<input type="checkbox"/> Condensed Matter	<input type="checkbox"/> Materials	<input type="checkbox"/> Statisical/Nonlinear																							
<input type="checkbox"/> Diversity		<input type="checkbox"/> Other																							
<p>4.      <input type="checkbox"/> Add this title                      <input type="checkbox"/> Delete this title</p>	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;"><input type="checkbox"/> Accelerators</td> <td style="width: 33%; border: none;"><input type="checkbox"/> Education</td> <td style="width: 33%; border: none;"><input type="checkbox"/> Nuclear</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Astrophysics</td> <td style="border: none;"><input type="checkbox"/> Fluid Dynamics</td> <td style="border: none;"><input type="checkbox"/> Optics/Optical</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Atomic/Molecular</td> <td style="border: none;"><input type="checkbox"/> General</td> <td style="border: none;"><input type="checkbox"/> Particle</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Biological/Medical</td> <td style="border: none;"><input type="checkbox"/> Geophysics/ Environmental/Energy</td> <td style="border: none;"><input type="checkbox"/> Physics &amp; Society</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Chemical</td> <td style="border: none;"><input type="checkbox"/> History</td> <td style="border: none;"><input type="checkbox"/> Plasma</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Computational</td> <td style="border: none;"><input type="checkbox"/> Interface/Device</td> <td style="border: none;"><input type="checkbox"/> Polymer</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Condensed Matter</td> <td style="border: none;"><input type="checkbox"/> Materials</td> <td style="border: none;"><input type="checkbox"/> Statisical/Nonlinear</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Diversity</td> <td style="border: none;"></td> <td style="border: none;"><input type="checkbox"/> Other</td> </tr> </table>	<input type="checkbox"/> Accelerators	<input type="checkbox"/> Education	<input type="checkbox"/> Nuclear	<input type="checkbox"/> Astrophysics	<input type="checkbox"/> Fluid Dynamics	<input type="checkbox"/> Optics/Optical	<input type="checkbox"/> Atomic/Molecular	<input type="checkbox"/> General	<input type="checkbox"/> Particle	<input type="checkbox"/> Biological/Medical	<input type="checkbox"/> Geophysics/ Environmental/Energy	<input type="checkbox"/> Physics & Society	<input type="checkbox"/> Chemical	<input type="checkbox"/> History	<input type="checkbox"/> Plasma	<input type="checkbox"/> Computational	<input type="checkbox"/> Interface/Device	<input type="checkbox"/> Polymer	<input type="checkbox"/> Condensed Matter	<input type="checkbox"/> Materials	<input type="checkbox"/> Statisical/Nonlinear	<input type="checkbox"/> Diversity		<input type="checkbox"/> Other
<input type="checkbox"/> Accelerators	<input type="checkbox"/> Education	<input type="checkbox"/> Nuclear																							
<input type="checkbox"/> Astrophysics	<input type="checkbox"/> Fluid Dynamics	<input type="checkbox"/> Optics/Optical																							
<input type="checkbox"/> Atomic/Molecular	<input type="checkbox"/> General	<input type="checkbox"/> Particle																							
<input type="checkbox"/> Biological/Medical	<input type="checkbox"/> Geophysics/ Environmental/Energy	<input type="checkbox"/> Physics & Society																							
<input type="checkbox"/> Chemical	<input type="checkbox"/> History	<input type="checkbox"/> Plasma																							
<input type="checkbox"/> Computational	<input type="checkbox"/> Interface/Device	<input type="checkbox"/> Polymer																							
<input type="checkbox"/> Condensed Matter	<input type="checkbox"/> Materials	<input type="checkbox"/> Statisical/Nonlinear																							
<input type="checkbox"/> Diversity		<input type="checkbox"/> Other																							



AMERICAN PHYSICAL SOCIETY  
Committee on the Status of Women in Physics  
One Physics Ellipse  
College Park, MD 20740-3844

FIRST CLASS  
U.S. Postage  
**PAID**  
Bowie, MD  
Permit No. 4434



The *Gazette* is printed with soy ink on recycled paper. When you are finished with this newsletter, please recycle it or pass it on to a friend.