

2005 Annual Report The Committee on the Status of Women in Physics

The 2005 CSWP committee consists of Aihua Xie (Chair) of Oklahoma State University, Sherry Yennello (Vice-Chair) of Texas A&M University, Kimberly Susan Budil of LLNL, Burnice Durand of University of Wisconsin, Patricia M Mooney of Simon Fraser University, Margaret M Murnane of JILA/University of Colorado-Boulder, Peter Sheldon of Randolph-Macon Woman's College, Marc Sher of College of William & Mary, Roxanne P. Springer of Duke University.

1. Recent statistics on women in physics in the United States

In early 2005, AIP Statistical Research Center released its new statistical report on "*Women in Physics and Astronomy, 2005*". According to the report, women in physics earned 22% of bachelor's degree and 18% of PhDs in 2003. As reference, women in physics earned only 8% of bachelor's degree and 4% of PhDs in 1974. Despite such steady increases, the participation of women in physics remains far behind other fields. In 2003, women in astronomy earned 46% of bachelor's degree and 26% of PhDs, while overall, women in US earned 55% of all bachelor's degrees and 45% of all PhDs.

The 2005 AIP report also showed that in 2002 the percentage of faculty positions held by women in physics were 5% of full professor, 11% of associate professor, 16% of assistant professor, and 10% of all ranks. More women have been hired at assistant professor level, partly reflecting increased number of women who received PhDs in physics in recent years. However, the percentage of physics faculty positions held by women in 2002 was only 7% among PhD granting physics departments, much smaller than those of master degree granting departments (13%) and bachelor degree granting departments (14%). The numbers of Hispanic and African-American Women who received physics bachelor and PhDs remained exceptionally low. Only a total of 35 African-American women and a total of 57 Hispanic women have received Physics PhDs in the period over nearly 30 years (1976-2003).

2. Second IUPAP International Conference on Women in Physics

The second IUPAP International Conference on Women in Physics was held in May 23-25, 2005 in Rio de Janeiro, Brazil. Nearly 150 women and men physicists from 42 countries attended the conference for 3 days of energizing and inspirational presentations, discussion sessions, posters, and networking. The main goal of the Conference was to recognize and advance the important role of women in physics. The Conference was also one of many worldwide events celebrating the World Year of Physics 2005.

CSWP helped with the selection of US delegates to the Conference. CSWP member, Kim Budil, was the co-leader of the US team. CSWP Chair, Aihua Xie, presented a plenary talk on "*The Status of Women in Physics in USA*" at the Conference.

Other US delegates were Beverly Karplus Hartline (co-leader of the US team), Katharine Gebbie, Rachel Ivie, Laura H. Greene, Richard Hazeltine, Elvira Williams, Barbara L. Whitten, Luz J. Martinez-Miranda, Laura Kay, Theda Daniels-Race, Apriel K. Hodari, Ariel Michelman Ribeiro, Jami M. Valentine, Zhenya Zastavker, Juana Ines Rudati, Karen Daniels, and Renee Horton.

To promote the recruitment, retention, and advancement of women of all races and nationalities in physics, the conference participants representing the physics communities of 42 countries unanimously recommended Conference Resolution (with 6 actions to be taken) to IUPAP, which was approved at the 25th IUPAP General Assembly in Cape Town, South African in November 2005.

Additional information about the Conference may be found at:
<http://www.cbpf.br/~women-physics/> for the conference, and
<http://proceedings.aip.org/proceedings/confproceed/795.jsp> for the conference proceedings.

3. Professional Skill Development Workshop for Women in Physics

CSWP received funding from the National Science Foundation to offer a series of five one-day workshops entitled *Professional Skill Developments for Women Physicists*. These workshops will provide professional training on effective negotiation, communication and leadership skills. In addition, the workshops will offer a special opportunity for networking.

The first two workshops were offered to tenured women physicists at the 2005 APS March Meeting (Los Angeles) and April Meeting (Tampa). The four professional facilitators were Nancy Houfek (Harvard), Lee Warren (Harvard), Barbara Butterfield (Univ. of Michigan), and Jane Tucker (Duke University). The reactions from workshop participants were overwhelmingly positive.

In 2006, the two workshops will be aimed at tenure track and newly tenured women faculty. One will be held on **Sunday**, March 12, 2006, Baltimore, and another on Friday, April 21, 2006, Dallas. In 2007, a similar workshop is planned for senior women physicists in industry and national labs.

4. Female Friendly Physics Departments

To assist undergraduate seniors in assessing the climate for women at various graduate schools, CSWP conducted a web-based survey (designed by Marc Sher) and received more than 100 responses from Ph.D. granting physics departments. The results are posted at the CSWP website: <http://cswp.catlla.com/results.php>. Gary White of AIP has sent an email to Society of Physics Students members in October, inviting undergraduates to visit the website and make use of the information when considering graduate schools.

5. APS March/April Meeting Activities

CSWP sponsored and co-sponsored a range of activities at the 2005 APS March and April meetings. At the 2005 APS March Meeting, CSWP/FIAP Networking Breakfast Annual Meeting attracted 41 participants. The featured speaker was Laura Smoliar of Lightwave Electronics. CSWP/DBP organized a joint symposium on “Women at the Forefront of Biophysics”. CSWP/COM co-sponsored a session on “Diversity: Issues and Remedies”. There was also a joint CSWP/COM Reception. At the 2005 APS April Meeting, a CSWP/DNP symposium was organized on “To the Heart of the Matter”, and a CSWP/DPF Networking Luncheon with Helen Quinn, past-president of APS, as featured speaker.

Preparations for 2006 March/April Meetings are well on the way. At the 2006 March Meeting, a special session will focus on the 2005 IUPAP International Conference on Women in Physics. In addition, CSWP will co-sponsor a symposium organized by the Forum of Physics and Society (FPS), Forum on Graduate Student Affairs (FGSA), and the Forum on Education (FEEd), “*What’s Changed for Women in Physics?*”. At the 2006 April Meeting, CSWP will co-sponsor a session on “*Pioneering Women Astronomers*” with the Forum on the History of Physics (FHP). CSWP will also co-sponsor a session on “*Women in Science Policy*” with the Forum on Physics and Society (FPS).

6. Site Visit Program

Margaret Murnane served as the coordinator of site visit program in 2005. There were a total of four site visits conducted in 2005: University of Michigan, NIST at Boulder, NIST at Gaithersburg, and Iowa State University. There were concerns regarding the effectiveness of the site visit program and how it may be improved.

7. Hildred Blewett Scholarship

The M. Hildred Blewett Scholarship for Women in Physics is designed to assist women to return to physics research careers after having had to interrupt their career for family reasons. The scholarship consists of a one-year award of up to \$45,000, which can be used toward dependent care, salary, travel, equipment, and tuition and fees. There were 12 applications received in 2005. Rebecca Forrest of the University of Houston has been named the winner of the first M. Hildred Blewett Scholarship for Women in Physics. The selection subcommittee consisted of Yennello, Sher and Xie.

8. Survey of Senior Women Physicists

In response to the concern that proportionately less attention is paid to senior women physicists than to junior women, two participants from 2005 Professional Skills Development Workshop, Kathy Levin (Univ. of Chicago) and Tahlat Rahman (Kansas State University), have proposed surveying senior women to determine their level of job satisfaction, then holding a conference at the University of Chicago in Spring 2006. CSWP (led by Durand) assisted the development of the survey questionnaire.

9. Other CSWP programs

Other ongoing activities include publications of two CSWP Gazette newsletters (in spring and fall), travel grants program for women speakers, and APS/IBM Research Internship for Undergraduate Women. Other special events include CSWP's response to Harvard President Summer's comment on Women in Science, inquiry into possible gender bias in funding from DOE and NSF, and fund raising for APS MGM award program.