

IEEE WIE MARCH 1999 NEWSLETTER

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INTERNATIONAL SYMPOSIUM ON TECHNOLOGY AND SOCIETY (ISTAS'99) STUDENT PAPER COMPETITION

ISTAS'99 announces a student paper competition for presentation at the ISTAS'99 conference to be held at Rutgers University, New Brunswick, NJ, July 29-31, 1999.

The conference theme is Women and Technology: Historical, Societal and Professional Perspectives.

The roles of women in technology are more diverse, controversial, and important today than ever before. Historically, women's involvement in the creation, manufacture, and use of new technologies has been seriously neglected. Even today, the public has an understanding of society that usually treats women as "technological illiterates" with little stake in any aspect of new technologies. Yet, since the 1950s women have tried to technologically empower themselves, particularly by entering the engineering profession. They have done so in great numbers, although today it is glaringly obvious women are still underrepresented in engineering. Women in the field still face gender-based obstacles, expectations, and biases despite decades of efforts to eradicate these problems.

Graduate and undergraduate students are encouraged to submit papers for topics related to this general theme:

- *Impact of information technology on women and women's work.
- *Women workers in industry and manufacturing.
- *Women in the engineering workforce.
- *Women faculty and students in science and engineering education.
- *Motherhood and technology.
- *Historical and current perspectives on women and technological development.
- *Technology and gender inequality.

Papers in additional general areas of interest to the members of SSIT will be accepted:

- *Environmental, health, safety, and peace-related implications of technology.

- *Social, economic, and ethical issues involving energy, information, and telecommunications technologies.
- *History of technology. Systems analysis in public policy decisions.
- *Research methods for technology-policy analysis.

Abstracts submitted for this competition will be reviewed and evaluated by a committee from SSIT with the top three receiving invitations to present their papers at a special session at the conference. Travel, registration, and lodging expenses will be paid by the conference for the three presenters.

It is anticipated that approximately \$700 for each presenter will be available to cover these expenses.

Key dates: Abstracts due: April 1, 1999

Notification of Winners and Invitations to present: May 14, 1999 Individuals interested, submit a one page abstract by mail to:

Kenneth R. Foster
Department of Bioengineering University of Pennsylvania
220 S. 33rd St.
Philadelphia, PA 19104-6392 Or Fax to: 215-753-2071.

Questions should be directed to Kenneth R. Foster at the above address or to: Laura Swibel E-mail: lswibel@sas.upenn.edu

Co-Sponsors: IEEE Society for the Social Implications of Technology, IEEE History Center, IEEE Committee on Women in Engineering Cooperating Institutions: Rutgers, The State University of New Jersey.

For updates, visit www4.ncsu.edu/unity/users/j/jherkert/ist99cfp.html

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AMERICAN LOUDSPEAKER MANUFACTURERS ASSOCIATION (ALMA)
SPRING SYMPOSIUM AT MARRIOTT NASHVILLE AIRPORT - 28 APRIL 1999

Focus on "Test and Measurement Systems"

The American Loudspeaker Manufacturers Association (ALMA) Spring Symposium will be held at the Marriott Nashville Airport on April 28, 1999 for the second in a series of symposia on "Test and Measurement of Loudspeakers". Following on the heels of ALMA's wildly successful Winter Symposium on "What to Measure and Why", the spring meeting will focus on commercially available measurement systems.

At press time, invitations had been extended to Linear-X (LMS), Bruel & Kjaer, Liberty Instruments (LAUD), DRA Labs (MLSSA), Goldline/TEF (TEF), SYSid Labs (SYSid) and Audiomatica (CLIO). Breaking from ALMA's traditional format of panel discussions, each manufacturer will have 20-30 minutes to discuss the appropriate uses of their system and their respective strengths and capabilities.

In addition to the presentations by the equipment manufacturers, a series of invited guests will share their test and measurement expertise with the symposium attendees: Don Keele (Electro-Voice, Buchanan, MI). Originally scheduled for this past winter's symposium, Don was unable to attend due to weather-related travel problems. We are happy to announce that Don has agreed to participate in April's symposium to present his long-awaited paper which will contain a brief history of loudspeaker test and measurement and an overview of the most popular test methods and techniques. John Murray of Peavey Electronics will discuss the nuances and limitations -- of

equalization. Deward Timothy of Poll Sound, an expert on making field measurements of installed speaker systems, will discuss how to use those measurements to adjust the system for optimum performance.

The Symposium, Wednesday, April 28, 1999 starts with committee meetings at 8:00 am; exhibits open at 10:00; lunch is served at 11:30; the General Assembly Meeting at 12:30; technical presentations start at 1:30 PM. A networking cocktail hour rounds out the day at 5:00 PM.

ALMA Symposia are open to members as well as non-members. Fees for ALMA members, per person, registering by March 31 are -- \$135.00 with Members-only Dinner, \$75.00 Symposium only. After March 31, (add \$35) \$170.00 with Members-only dinner, \$110.00 Symposium only. For non-members--Symposium is \$175. After March 31, (add \$35) -- \$210.00.

The ALMA "Members-only Dinner" (\$60) will be Tuesday, April 27 at 7:00 PM, location TBA.

Exhibitors are invited to display for \$600.00 plus ALMA membership.

Hotel rooms are reserved for ALMA at The Marriot Nashville Airport, 600 Marriot Drive, Nashville, TN 37214-5010 at the rate of \$99.00. Note: Cutoff for hotel reservations is April 2, 1999; thereafter rate and availability can't be guaranteed. Please call them directly to reserve at: Tel: 615/889-9300 Fax: 615/889-9315.

Registration forms will be mailed with the Spring issue of ALMANews at the end of February and will be available on the ALMA Web site. For more information contact:

Carol Bousquet, Executive Director American Loudspeaker Manufacturers Association 39 Ames Road Groton, Ma 01450 Tel: 978/448-5658 Fax: 978/448-6851/E-mail: cbous@ma.ultranet.com Web Site: www.ALMA.org <<http://www.alma.org/>>

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UPDATE FROM THE U.S. DEPARTMENT OF EDUCATION: "COMMUNITY UPDATE" FIRST LADY LAUNCHES THE MARS MILLENNIUM PROJECT

Citing the White House Millennium Council's theme "Honor the Past, Imagine the Future," First Lady Hilary Rodham Clinton launched the Mars Millennium Project on January 14, 1999, at the National Air and Space Museum in Washington, D.C.

The Mars Millennium Project is an exciting youth initiative that challenges students across the nation to imagine and plan a community on the planet Mars for the year 2030.

The Project is an interdisciplinary effort that will involve kindergarten through high school students in classrooms and youth groups throughout the United States. Hundreds of thousands of young people will work in teams and with educators, community leaders and professionals, in many fields to weave the arts, sciences, and humanities into an exploration of their own communities. They will then create projects or designs for a new community on Mars one that is scientifically sound and offers a high quality of life and one in which they would be proud to live.

Participation kits geared for grade levels K-2, 3-5, 6-8, and 9-12, as well as community organizations, will be available in March 1999. Students will work on their designs during the 1999-2000 school year. Project concepts will be entered into a National Registry and finished works displayed in an online virtual gallery and at local and national exhibits in the spring and summer of 2000.

The project is guided by the U.S. Department of Education, the National Aeronautics and Space Administration and its Jet Propulsion Laboratory, the National Endowment for the Arts, and the J. Paul Getty Trust, in concert with the White House Millennium Council. In addition, more than 90 of our nation's most prestigious organizations, corporations and businesses have signed on in support of this project, many of whom are supplying resources and materials to promote the project and providing additional learning opportunities to project teams.

To help those who wish to plan project activities, below are some pertinent dates:

March 1999 Participation kits available May 1999 Kick-off Teleconference Fall 1999
Activities under way nationwide Late 1999/Early 2000
Works in progress Spring/Summer 2000 Designs showcased at community evens. On-line Interactive display of outstanding projects. Recognition of Mars Mission Specialists

For more information on how you can become involved in this exciting nationwide initiative, visit: or contact project managers at (310) 274.8787, extension 150, E-mail: mars@pvcla.com / www.mars2030.net, or contact project managers at (310) 274.8787, extension 150E-mail: mars@pvcla.com/
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WOMEN, MINORITIES MAKE HUGE S&E EDUCATION GAINS, BUT ARE STILL UNDERREPRESENTED OVERALL

The number of women and underrepresented minority group members earning baccalaureate to doctoral degrees in Science and Engineering (S&E) fields rose as much as 68 percent from 1985 and 1995, according to a National Science Foundation (NSF) Division of Science Resources Studies (SRS) Data Brief.

Yet despite these huge gains, their representation in S&E higher education remained below their representation in the U.S. population of 18- to 30-year-olds.

The number of women receiving S&E bachelor's degrees increased by 36 percent (from 128,871 to 175,931) between 1985 and 1995 - for 46 percent of all S&E bachelor's degrees awarded.

Over the same period, the growth in the number of underrepresented racial/ethnic minority recipients of S&E bachelor's degrees was an even more striking 62 percent from 31,950 to 51,844 - accounting for 13.5 percent of all S&E bachelor's degrees awarded in 1995 to U.S. citizens and permanent residents.

Among U.S. citizens and permanent residents, the number of women earning S&E doctoral degrees rose by 65 percent (from 4,184 to 6,892) between 1985 and 1995, and the number of underrepresented minorities rose by 68 percent, from 711 to 1,194.

In engineering, women earned only 10 percent of all doctorates in 1995 - while underrepresented minority men earned about 4 percent, and underrepresented minority women earned less than one percent. Psychology was the only S&E field in which more women than men earned doctorates in 1995.

In 1995, women were 50 percent of the U.S. 18-to-30-year- old population; African Americans were 14 percent; Hispanics 13 percent; and Native Americans were 0.8 percent. Women earned, respectively, 46 and 36 percent of all S&E bachelor's degrees and doctorates in 1995; African Americans, 7 and 3 percent; Hispanics, 6 and 3 percent; and Native Americans, 0.6 and 0.4 percent.

The exception among minority groups (U.S. citizens and permanent residents only) was Asians, who accounted for 4 percent of the U.S. 18- to 30-year-old population, but earned 8 percent of all S&E bachelor's degrees and 19 percent of all S&E doctorates in 1995.

As was the case with undergraduate S&E enrollment, graduate student enrollment in S&E grew over this period, with the 18 percent increase due mostly to the higher participation of women and minorities.

Women S&E graduate students increased by 45 percent (to 41 percent of all graduate S&E enrollment of U.S. citizens and permanent residents); Hispanics by 64 percent (to slightly over 4 percent); Native Americans by 100 percent (to 0.5 of the total).

The Data Brief is available at: www.nsf.gov/sbe/srs/databr/db99320.htm

More detailed data on these topics will be included in an upcoming National Science Foundation Science Resources Studies report, Women, Minorities, and Persons with Disabilities in Science and Engineering: 1998. Source: www.nsf.gov/cgi-bin/getpub?pr992

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NSF Custom News Service www.nsf.gov/home/cns/start.htm
Please send questions and comments to webmaster@nsf.gov
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NEW CHALLENGE FOR THEORETICAL PHYSICIST

Shirley Ann Jackson has a pretty impressive collection of firsts. In 1973, she was the first black woman to earn a doctorate in any field from the Massachusetts Institute of Technology. In 1995, she became the first woman and first black person to head the U.S. Nuclear Regulatory Commission.

Last month, Rensselaer Polytechnic Institute chose Ms. Jackson as its next president, making her the first black woman to lead one of the country's top technological universities. She will take over at Rensselaer in July.

It is a time of great concern about the relative lack of black and female scientists. In 1996, according to the National Science Foundation, only three black women in the United States earned Ph.D's in Ms. Jackson's chosen field of physics.

Ms. Jackson, a theoretical physicist, credits her achievements to a fascination with science, stoked by the interest of her father, a mail carrier, and to a determination to succeed in the field of her choice. In her new job, as one of the nation's most-visible African-American and female science educators, she hopes to help many more students who are passionate about science become researchers and leaders in the field.

Mrs. Jackson says she loved science as far back as she can remember. As a young child in Washington, D. C., she even conducted her own experiments. For years, Ms. Jackson recalls, she collected live bees and tested their habits and diet, the results of which she recorded carefully in a daily journal.

Her dedication to the field got her through some tough days as an undergraduate. When she enrolled at M.I.T. in the mid-1960s, Ms. Jackson was one of fewer than a dozen black students. She was often ostracized and excluded from study groups, she says at least until she proved she could do the work.

"Certainly", she says. "things were a bit isolating. I think you have to be driven by what you want to do that motivates you to overcome obstacles."

After earning her Ph.D. in theoretical physics in 1973, Ms. Jackson spent most of her career in industry, studying quantum physics and optical physics at what was then AT&T Bell Laboratories in New Jersey until 1991. She then spent four years as a physics professor at Rutgers University before becoming chairwoman of the nuclear Regulatory Commission in 1995.

Rensselaer is an ideal place, Ms. Jackson says, to combine her experience and interest in education and industry: It's an "entrepreneurial institution." She says, that has "always been focused on having what comes out of the classroom and research have a direct impact."

Reflecting her words, Rensselaer's mission statement declares that "we celebrate discovery, and the responsible application of technology, to create knowledge and global prosperity."

Accordingly, Ms. Jackson says, one of her main goals as president will be to create new partnerships with industry. Apart from a desire to support innovative teaching methods and raise the university's endowment, Ms. Jackson is reluctant to talk very much about what else she will do as president, preferring to wait, she says, until she knows

more about what the job will require. One thing she knows she cannot ignore is the problem to which she is an exception: the paucity of black and female scientists.

Ms. Jackson believes that more women and black students want careers in science than ever before, and that, as the president of a polytechnic university, she will be well situated to help them realize their goals. Again, she declines to explain specifically how she will attack the problem, but she says Rensselaer might, among other things, work more closely with high schools to raise the level of science education.

Charles M. Vest, the president of Ms. Jackson's alma mater, M.I.T., says she has been an invaluable presence as a member of the Institute's Board of Trustees, on which she holds a permanent seat.

"She has been a very major player on our executive committee and has seen what is faced by academic administrators very close up," said Mr. Vest. "I have found Shirley to be quite a no-nonsense thinker and talker, yet simultaneously a very warm person.

"I think she will be an extraordinary university president."

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WIE JOBS FILE FOR MARCH 1999

WIE has initiated a WIE Job Posting File with job postings that have been forwarded to us, unsolicited. If you would like to subscribe to this monthly posting file, send a message to majordomo@ieee.org and type: subscribe women-jobs. This file will be maintained on a monthly basis. If you have any comments on the file, or would like to submit posting information, please submit to WIE at: women@ieee.org.

We are pleased to offer other IEEE sites that contains job listings:

The IEEE USA Jobs Listing Service on the www at:
www.ieee.org/usab/DOCUMENTS/EMPLOYMENT/employment.menu.html

The IEEE Careers & Education Web Site: "Careers & Education, Enabling Careers through Life-long Learning" can be accessed at www.ieee.org/eab/.

In addition to the above employment listings, you may wish to visit the Women in Technology International(WITI) web site at www.witi.com/. WITI has joined forces with Advancing Women www.advancingwomen.com/ and Career Mosaic ® to create two new co-branded sites devoted to the employment needs of women.

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IEEE Membership Information: Senior Member Senior Member is the highest IEEE membership grade that may be obtained by application.

Why Apply? for recognition of accomplishment by peers for professional advancement for personal satisfaction

Who should apply? Engineers, scientists, educators, technical executives or those in IEEE designated fields who have at least ten years active professional practice, with five or more years of significant performance, accomplishments in engineering, publications, management, education or professional contributions.

We highly recommend all qualified IEEE members to apply for Senior Membership. Another reason to apply for Senior Member grade is that Senior Member grade is required before one is eligible for IEEE Fellow nomination.

To obtain Senior Member Application forms, please contact:

IEEE Operations Center
Admission and Advancement Committee
445 Hoes Lane PO Box 1331
Piscataway, NJ 088551331 Tel:(732)5625502/Fax:(732)9810225

Email: rab.aa@ieee.org

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WIE Committee Scopes of Interest:

Scope 1: Gather and disseminate information regarding the status of women and initiatives for, by and on behalf of women in engineering and science.

Scope 2: Enable mentoring and education programs within IEEE. Make available information regarding gender-related educational issues which may improve the entry and retention of women in engineering programs.

Scope 3: Increase the participation and membership of women within IEEE.

Scope 4: Address ways to improve the climate for women in IEEE and the workplace.

IEEE Women in Engineering Committee

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URL: www.ieee.org/organizations/committee/women/

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