

The IEEE web site has undergone a change to a new "look and feel." The new "look" refers to the bright and attractive design of the pages and the "feel" is in the consistency and organization of the site information. The site features an improved search capability that uses keywords to make it more useful. The IEEE Women in Engineering (WIE) Committee's web site can be found at www.ieee.org/organizations/committee/women. Please change your bookmarks!

IEEE WIE APRIL 1999 NEWSLETTER

If you would like to subscribe to this newsletter, please send a message to "majordomo@ieee.org" and type in the message body, subscribe women-newsletter.

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- *International Symposium on Technology and Society (ISTAS'99) Student Paper Competition - Call for Papers
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WIE March 1999 Column, Engineering: In need of a makeover?
by Julie Sheridan-Eng

When graduating college seniors in Idaho were asked last year why they didn't consider careers in engineering, responses included "I prefer a career that deals with people rather than things" and "I can't imagine sitting in front of a computer all day." These comments may seem perplexing to those of us who sometimes deal with things and sit in front of computers, but who couldn't do our jobs without interacting with people. They are, however, representative of the stereotypes people have about the engineering profession.

A recent Harris Poll survey for the American Association of Engineering Societies, co-sponsored by IEEE-USA, showed that 61 percent of Americans feel they are "not very well informed or not informed at all about engineering and engineers." When the responses are separated by gender, a whopping 78 percent of women feel they are not informed about engineering and engineers.

So what does the average American think engineers do? More than half those surveyed relate engineering to constructing, building, designing, drawing and planning. Greater than 50 percent believe we contribute to economic growth. About 5 percent still relate engineering to railroad train operators. But what is more interesting is what they think we don't do. Less than 3 percent of those polled associate engineers with being creative, inventing, pioneering, or seeking knowledge. Less than 30 percent think we care about the community, 20 percent believe we improve the quality of life, and 20 percent think we are sensitive to social concerns. Only 20 percent think we're inclusive of women and minorities.

So, why should we care about society's perception of our profession? As more and more of the American economy depends on revenues of high-tech companies, several engineering professional associations have predicted a dearth of engineers. While the high-tech economy has boomed, the number of American undergraduate engineering degrees awarded has decreased 14 percent since 1987. And women and minorities, who comprise one of the fastest-growing segments of the labor force, are the least informed about our profession, and are viewed as excluded from it. Clearly, the engineering profession is in dire need of a makeover.

Young people are drawn to and emulate public images. What public images exist to interest and educate them about engineering? There's no "L.A. Engineer" television program portraying the excitement of engineers at a high-tech start-up just about to go public, or any series of public service announcements describing engineers' contributions to medicine, space, the environment and our quality of life. In fact, I can't even think of a household name that serves

as a role model of the engineering profession. And certainly not one that helps break down traditional techie stereotypes.

Maybe we need to hire a public image consultant, so young people will associate engineers with innovations such as the Internet, cell phones, flat-panel displays, the Mars expedition, magnetic resonance imaging, and lasers for surgery. And so everyone will know that we need the sharpest, brightest minds to not only envision and develop these high-tech products, but to solve problems, make decisions, lead projects, start companies, manage businesses and educate. The good news is that 87 percent of Americans polled believe that high technology is good for society. We just need to effectively communicate the variety of roles we as engineers play in bringing it to them.

Julie Sheridan Eng is a member of Technical Staff in Optoelectronics at Lucent Technologies in Breinigsville Pa., USA. Chair of the IEEE Committee on Women in Engineering from 1997-1998, she is currently chair of the WIE sub-committee on Governmental and Public Policy. She is a member of the LEO society. Dr. Sheridan Eng is grateful to the IEEE-USA for a copy of the Harris Poll survey and to Harry Armstrong III for the Idaho survey.

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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, 29-31 July 1999.

The conference theme is this 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 that 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.

Papers submitted for this competition will be reviewed and evaluated by a committee from SSIT with the top 3 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 3 presenters. It is anticipated that approximately \$700 for each presenter will be available to cover these expenses.

Key dates:
Papers due: April 1, 1999

Notification of Winners and Invitations to present: May 14, 1999. For individuals interested, submit your paper by mail to:

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

Questions should be directed to Kenneth R. Foster at the above address or to Laura Swibel by email at lswibel@sas.upenn.edu

Co-Sponsors: IEEE Society for the Social Implications of Technology, IEEE History Center, IEEE Women in Engineering Committee 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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Office of Naval Research - Postdoctoral Fellowship Program

Dear Colleague,
There is a current initiative being undertaken by the Office of Naval Research (ONR) to increase the number of women Postdocs in the ONR Postdoctoral Fellowship Program. This program provides supplemental funding from ONR to assist in funding women postdocs, thereby increasing their representation at ONR labs.

The general objective of the ONR Postdoctoral Fellowship Program is to encourage the involvement of creative, capable and highly trained scientists and engineers from academia and industry in areas of great interest and relevance to the Navy. Fellows can conduct research in a wide range of fields, such as, but not limited to: acoustics, hydrodynamics, chemistry, aerodynamics, astrophysics, electron devices, biotechnology, oceanography, communications, command control and intelligence, computer hardware and software, materials, target detection, weaponry, signal processing, simulation, training, manufacturing, construction, and logistics.

This program is managed by the American Society for Engineering Education (ASEE). Complete program information can be found at our website: www.asee.org/fellowship/html/onr.htm

For more information about the Fellowship program or the Women in Postdocs Initiative contact ASEE's Projects Office by email at: projects@asee.org, by telephone:(202)331-3525

by regular mail:
ONR Postdoctoral Fellowship
American Society for Engineering Education
1818 N Street, NW, Suite 600
Washington, DC 20036

Michael Moore, Program Assistant
American Society for Engineering Education
m.moore@asee.org

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Wireless: Voice/Data Communication - Life on Mars?

From January to December of this year, NASA's Mars Polar Lander, will travel nearly 6.75 million kilometers to reach the icy Martian polar cap on that planet. The satellite containing the "Mars Microphone" will enable mankind to hear sounds on Mars, while its robotic ear will listen to and analyze audio information.

Installed in the Polar Lander is a highly versatile chip developed by Sensory Inc., in Sunnyvale, Calif., capable of generating and recognizing speech and recording sounds. The Martian recordings will be made in 10-second increments and will be posted live on UC Berkeley's Space Science Laboratory's Web site, www.plasma2.ssl.berkeley.edu/marsmic/. Because of a less dense atmosphere on Mars, sounds are expected to be similar to - but fainter than - sounds on Earth. Sounds expected to be captured include sand blowing against the Lander and surrounding terrain, other wind sounds, and sounds from electrical discharges in the dust clouds.

Excerpted from "Communications News", February 1999.

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Integrated Sensing Architectures at the University of Kentucky
Fellowship Program

This Integrative Graduate Education and Research Training (IGERT) Program, which is funded by the National Science Foundation, provides fellowships to students interested in the science and engineering of sensors and sensing architectures. Our nine faculty members are from the Departments of Chemistry, Electrical Engineering, and Chemical and Materials Engineering.

The IGERT Program has established a cross-disciplinary doctoral program in science and engineering using state-of-the-art equipment and facilities. Graduate students participating in the IGERT Program receive their Ph.D. degree in their chosen field and benefit from a host of cross-disciplinary education and research activities in sensors and related technologies. The research program is focused around five different multi-disciplinary themes that integrate principles from two or more of the following areas: analytical chemistry, organic synthesis, molecular recognition, signal processing, materials, chemical engineering, bioengineering, micro-machining, and molecular biology.

The IGERT Fellowship is worth about \$25,000 per year. This is a multi-year Fellowship that includes tuition, a great stipend, paid trips to conferences, as well as allotments for books and supplies.

Autumn Adams
Department of Chemistry
217 Chemistry/Physics Bldg.
Lexington, KY 40506-0055
Phone (606) 257-6350 / Fax (606) 323-1069 / adadams@pop.uky.edu

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WIE Jobs File for April 1999, PART 1

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.ieeeusa.org/jobs.html.

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

*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.

For special interest, the April 1999 WIE Jobs File, Part 1 contains positions accepting applications and nominations at universities and colleges. The April file contains postings from the following:

- *University of Manitoba, Canada
- *Rutgers, The State University of New Jersey
- *University of Maine
- *University of Maryland - College Park Campus
- *Southern Illinois University Carbondale
- *University of Alabama

PLEASE NOTE THAT DUE TO A LARGE SUBMISSION OF POSTINGS, WE WILL ISSUE PART 11 OF THE APRIL FILE MID-MONTH TO INCLUDE ALL RECEIVED. THANK YOU!

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SEARCH FOR: Dean, College of Engineering - Southern Illinois University Carbondale

Southern Illinois University Carbondale is actively searching for applications and nominations for the position of Dean of the College of Engineering. See the ad below and also their web page at www.engr.siu.edu/deanjob.html

Dean, College of Engineering
Southern Illinois University Carbondale

Southern Illinois University Carbondale invites nominations or applications for the position of Dean of the College of Engineering. The position is available July 1, 1999. Founded in 1869, Southern Illinois University is a Carnegie Research II university with an enrollment of 22,250 students and is located in Carbondale, an economic center of Southern Illinois.

The College of Engineering offers accredited undergraduate programs in Civil Engineering, Electrical Engineering, Mechanical Engineering, Mining Engineering, Engineering Technology and Industrial Technology as well as graduate programs through the doctorate. The College has 70 full-time faculty members, about 1100 undergraduate students and 187 graduate students. Graduates of the College perform exceptionally well on the FE (Fundamentals of Engineering) examination. The College houses the Materials Technology Center and the NSF Center for Advanced Friction Studies.

The Dean is the chief administrative officer of the College of Engineering and reports to the Vice Chancellor for Academic Affairs and Provost. The Dean provides academic leadership including the planning, development and promotion of the College's educational and research activities, the maintenance of high-quality instruction, the development of strong graduate programs based on high quality research, and the implementation of recruitment and retention policies of the College.

Candidates must possess an earned doctorate in engineering or in another related area; a distinguished record of teaching, research, scholarship, and professional background with credentials for tenured appointment at the rank of professor in one of the departments within the College; and proven administrative experience and managerial skills. Candidates must also demonstrate: a clear commitment to academic excellence in engineering and technology education, and research; excellent oral and written communication skills and the ability to articulate effectively the College's mission to students, faculty, alumni, external funding agencies, and other decision-making bodies; a high standard of professional integrity and a strong sense of professional ethics; and a commitment to cultural diversity and equal opportunity. Applicants from outside academia with the appropriate credentials are welcome. A more detailed job description and other information about the University are available upon request; consult the College home page at www.engr.siu.edu.

This is a security sensitive position. Before any offer of employment is made, the University will conduct a pre-employment background investigation that includes a criminal background check.

Review of applications will begin March 15, 1999. To be considered, applications must include a current curriculum vita, a separately labeled and identified personal vision statement for the position, and the name, address and phone number of at least five references. Send nominations and applications to:

John S. Jackson, Vice Chancellor for Academic Affairs and Provost Telephone: 618/453-1838 / e-mail: mhaworth@siu.edu

Mailcode 4305
Southern Illinois University
Carbondale, IL 62901-4305

SIUC is an affirmative action/equal opportunity employer and welcomes applications from women and minorities.

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FIAP is pleased to announce: The IBM Research Division Student Research Scholarship for Women in Physics,
announced by Jim Kaufman, FIAP

Goals:

- * Encourage women students to pursue graduate studies in science and engineering

Award:

- * \$2500 scholarship per year
- * Summer internship at IBM's Almaden Research Center in San Jose, CA

Criteria:

- * Applicant must be a female sophomore or junior
- * Majoring in chemistry, physics, materials science or engineering, computer science or engineering, chemical, electrical, mechanical engineering.
- * Have a minimum 3.0 GPA

Application will include:

- * a 250 word essay describing students' interest in research and how this opportunity will advance their career goals
- * resume
- * official copy of transcript
- * two letters of recommendation

An Application form can be obtained and printed from the following APS web site
www.almaden.ibm.com/st/Scholarship/APS-CSWP/application.html .

Deadline: April 2, 1999 (postmarked)

Please bring this exciting new program to the attention of qualified candidates. Applications and supporting documentation must be submitted by April 2, 1999 to:

IBM Scholarship for Women
c/o Tara McLoughlin
The American Physical Society
One Physics Ellipse
College Park, MD 20740

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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
445 Hoes Lane, PO Box 1331, Piscataway, NJ 08855-1331
www.ieee.org/organizations/committee/women/ E-mail: women@ieee.org