

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 MAY 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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IEEE WIE Column THE INSTITUTE, "Female Engineer - NOT an Oxymoron", by Karen Moore

Smith College recently announced that they would become the first all-women's college to offer an engineering degree. Unfortunately, at least one prominent electronics web magazine chose to run a feature article in response to the Smith announcement—an article titled "Is Female Engineer an Oxymoron?" In this article, the author put forth several opinions, including "girls just don't do engineering," and that "females seem to be naturally drawn to other hobbies and interests but not engineering." The author of this feature, a 32 year veteran of power electronics, says that he has not, at any point in his career, worked with a woman engineer. He says that the women he is aware of in engineering don't seem to have the love of or aptitude for "real" technical work, and end up in areas such as program management, reliability, and component engineering. He even cites famous women scientists such as Marie Curie, and wonders why there are no equally well-known female engineers. I would like to address some of those issues and questions.

One truth to what this man writes is that there are not many women in the engineering workforce at the present time—less than 10%. What this man does not know, apparently, is that undergraduate enrollment in engineering has increased dramatically over the past 5 decades. In the 1949-1950 academic year, only 175 of the 52,246 engineering degrees granted went to women--about 0.33%. By 1975, the women graduating in engineering increased to about 2% of degrees granted. By 1995 women made up over 15%. The increasing percentages of women coming into the field will over time result in a higher percentage of women in the engineering workforce, but this will take time, particularly when you put these numbers into the perspective of 35 or 40-year careers.

Even with the small numbers of women in the field, there are already a number of women who have been recognized for groundbreaking work. It is interesting to note that the first women inventors, before the mid-19th century, did not ever get credit for their work, as they were not allowed to own intellectual property. Patents belonged to their husbands or some other male friend or relative. The 20th century has produced many well-known women engineers. Hedy Lamarr is best known for her acting career, but she also invented a remote-controlled, jam-proof radio communications system that was patented during World War II. Mildred Dresselhaus has done groundbreaking research in the area of carbon nanotubes. Jenny Rosenthal Bramley is well known for her innovative work in lasers. NASA's space program has produced too many technically superior women to name here.

The question we really should be addressing here is not whether or not women are capable of engineering, but rather how to get more women into the field, and how to make engineering a more desirable profession. Role models are, of course, key to this. As more and more women enter the field, there will be more role models available for girls to see—to see that women can be and are engineers, and that engineering is a desirable field to enter. Programs like the one at Smith can only help encourage young women to enter technical fields. Mentoring of girls and women of all ages has also been shown to be a positive influence. Many major companies are implementing programs to give opportunities to well-qualified women and minorities, because these companies realize that moving forward, diversity will not be an option. By the year 2000, 68% of new entrants into the U.S. work force being women and, diversity will be an imperative and reality, and having a diverse work force will be the only way to do business.

I think that, as members of the engineering community, we need to be careful about what statements we make about diversity in engineering. A statement from an experienced engineer saying "for years I have been of the opinion that electrical engineering is a boy's career, and that girls just don't do engineering," has the potential to make technically excellent female engineers feel belittled, discriminated against, insecure, and angry. None of this is very productive to women or their employers. As responsible engineers, we need to think long and hard about the longer-range implications of what we publish, and what we say, because these things may have much greater impact than we imagine.

Personally, I choose to say "Bravo Smith!" Smith faculty and administration made their decision in response to what they see as an ever growing need for women in engineering and, moreover, engineers who are diversely trained and have education in both technical areas and liberal arts. I wish the best of luck to Smith College in their efforts to begin an engineering program and promote a diverse and diversely educated workforce.

Karen Moore is the 1999 Chair of the IEEE Women in Engineering Committee

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IEEE History in the Making, "Engineering Tomorrow: Today's Technology Experts Envision the Next Century"

The IEEE is publishing a limited edition book titled "Engineering Tomorrow: Today's Technology Experts Envision the Next Century." This full-color, coffee table stylebook includes interview-based essays from over 50 IEEE visionaries who envision what the technologies of the next century will bring. Filled with full-color photographs and contributions from technology leaders such as Robert W. Lucky and Nobel prize winners Arno A. Penzias and Charles H. Townes, "Engineering Tomorrow" is edited by Janie Fouke, a former IEEE society president, director of Division X, and professor at Case Western Reserve University. It is written by journalist Trudy E. Bell, formerly of Scientific American, Omni and IEEE Spectrum Magazine.

All surplus funds from the sale of "Engineering Tomorrow" will be donated to the IEEE Foundation to support engineering educational activities. To find out more information contact: engineeringtomorrow@ieee.org.

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Lucent Technologies Foundation - New Philanthropic Initiative,
WEPAN Proposal to participate

The Lucent Technologies Foundation has launched a new philanthropic initiative focused on Improving Pre-College Educational Opportunities for Women and Under-represented Minorities. WEPAN is one of 14 organizations that they are soliciting a proposal from.

Many of our WEPAN members are involved with pre-college initiatives and are interested in having resources available for this population. Therefore the WEPAN Executive Committee has approved the concept of submitting a proposal to Lucent that will focus on developing hands-on modules that incorporate engineering principles and scripts providing info about the connections between engineering and contributions they make to society. The modules and scripts will be tailored for students in grades K-12 and the scripts will be inclusive of all people.

These modules will be developed and tested by WIE, WISE, MEP program directors in school districts in their regions, or during campus-hosted programs for this target group. The modules will be evaluated, modified and then

disseminated to appropriate groups. One anticipated outcome is that teachers in grades K-12 will use them in their math and science curriculum.

At this point we will need WIE/WISE and MEP Directors who are willing To be primary test sites which will mean testing the modules with students in grades 5-12 and evaluating those modules by requiring your students and teachers to complete evaluation forms that will be prepared for you (YOU DO NOT NEED TO INCLUDE ALL GRADE LEVELS. This will occur during the year 2000. Primary test sites will be selected using three criteria:

- Your college/university is located in "Lucent preferred states" and can do outreach to Lucent preferred cities.**
- Your college/university has the personnel and experience to follow through with the testing and evaluation component of this project.
- The director, dean or contact person is willing to write a letter of support indicating a commitment to this project by May 1.

There will be a stipend associated with being a test site for this Project. The tentative budget figures indicate \$5000.

**Lucent preferred locations include: San Jose (CA), Denver (CO), Orlando (FL), Atlanta (GA), Newark, Asbury Park and Plainfield (NJ), Columbus (OH), Allentown and Reading (PA), Dallas (TX), Washington D.C., Oklahoma City, Boston (MA) St. Louis (MO), Omaha (NE).

If you have a strong pre-college program and are not located in these cities - but are interested in participating let me know as well.

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Georgia Tech Names First Woman Dean
Dr. Sue V. Rosser as Dean of the Ivan Allen College

On 19 March 1999, The Georgia Institute of Technology named Dr. Sue V. Rosser as Dean of the Ivan Allen College-the humanities and social sciences arm of the Institute. Dean Rosser will be the first woman to serve as a dean of an academic college in Georgia Tech's 110-year history. She begins her new position in mid-July. Since July 1995, Rosser served as Professor of Anthropology at the University of Florida. She also directed the Center for Women's Studies and Gender Research. From July 1994 - December 1995, she was Senior Program Officer for Women's Programs at the National Science Foundation. From 1986 to 1995 she served as Director of Women's Studies at the University of South Carolina, where she also was a Professor of Family and Preventive Medicine in the Medical School.

"Dr. Rosser's background in Science, combined with her National Science Foundation and administrative experience is extremely valuable," said Dr. Michael Thomas, provost of Academic Affairs, Georgia Tech. "Both the faculty and student members of the Search Committee were impressed by her energy, vitality, vision and strong personal integrity. She is ideally suited to head our Ivan Allen College as the place where the humanities, social sciences and technology most closely converge."

Rosser has researched and published extensively on topics related to women in Science fields. Her most recent book, "Re-Engineering Female Friendly Science," was published by Teachers College Press at Columbia University in 1997. She has served on several editorial boards and currently serves on the editorial boards of the National Women's Studies Association Journal and Women's Studies Quarterly. She has held several grants from the National Science Foundation, including "A USC System Model for Transformation of Science and Math Teaching to Reach Women in Varied Campus Settings" and "POWRE Workshop." Rosser received her Doctoral Degree in

Zoology from the University of Wisconsin - Madison in 1973. She earned both her undergraduate and master's degrees from the University of Wisconsin - Madison as well.

The search committee included at least one representative from each School in the Ivan Allen College and three students. "Dean Rosser is a nationally distinguished scholar with a strong foundation in the sciences and science education," said Thomas "Danny" Boston, head of the Search Committee and Professor of Economics. "Her science background allows her to communicate very easily with the deans and administrators of the Science and Engineering programs at Tech, and she easily bridges the gaps between science, engineering, social science and humanities."

The Ivan Allen College at Georgia Tech includes the Schools of Economics; History, Technology and Society; the Sam Nunn School of International Affairs; Literature, Communication and Culture; and Public Policy. Other departments housed within the College are Air Force ROTC; Military Science; Modern Languages; and Naval Science. Research centers in the College are the Center for International Strategy, Technology and Policy and the New Media Center.

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Web Site Designed to Help Girls Learn Math

"Through the Glass Wall" (www.terc.edu/mathequity/gw/html/gwhome.html) is a new website developed by The Technical Education Research Center (TERC) to help provide materials to assist girls in their pursuit of mathematical studies. The "Glass Wall" premise is that research indicates girls are lagging behind boys in using computers to build math and logical skills. Part of TERC's mission is to examine the patterns by which girls learn math and to identify the games most suited to take advantage of these characteristics. About 50 games are reviewed. Links to publishers are included, as are links to in-depth reviews. TERC is based in Cambridge, MA, and was founded in 1965 by scientists at Massachusetts Institute of Technology. For more information call (617)547-0403 or email Cara_DiMattia@terc.edu.

Source: USA Ed.Net Briefs, March 29, 1999; The Seattle Times, March 21, 1999

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Fulbright Scholar Program for Faculty and Professionals

The Fulbright Scholar Program for Faculty and Professionals announces a new fellowship, supported in part by the NOKIA Corporation, to bring an American specialist to lecture and conduct research at Finnish universities in electronics, information, or communication technologies. This award is either for 4 months, beginning September 1999 or January/February 2000 or 9 months beginning September 1999. Proposed host institutions are: the Institute of Radio Communications, Helsinki University of Technology; the Centre for Wireless Communications, Oulu University; or, the Digital Media Institute, Tampere University of Technology.

The deadline for applications is August 1, 1999. In addition to contacting Muriel Joffe, interested applicants may also consult the CIES web site at www.cies.org or by e-mail to apprequest@cies.iie.org.

For application materials and additional information, contact:
Muriel Joffe, Ph.D.
Senior Program Officer
Council for International Exchange of Scholars
Tel: 202-686-6249 / E-mail: mjoffe@cies.iie.org

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WIE Jobs File for May 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.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.

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Smith College Search: Founding Chairperson of the Picker Engineering Program

Smith College is looking for an outstanding, creative engineering educator for the position of founding chairperson of the recently announced Picker Engineering Program. This is the first engineering program at a women's college and one of the very few at any liberal arts college.

Candidates should possess administrative experience, an established research reputation, and a strong interest in teaching engineering in a liberal arts environment. They must have the vision and enthusiasm for the unique task of building the foundations of a new, high-quality engineering program. While the initial areas of concentration will likely include computer engineering, electrical engineering, materials science, environmental engineering, and systems engineering, candidates from all engineering disciplines will be considered. The appointment will be at the rank of professor with tenure. The founding chairperson will work together with the engineering advisory committee to determine the fields in which Smith will offer engineering courses, and will be in a position to hire a number of tenure-track engineering professors in the immediate future. The goal of the Program is to graduate about 25 students per year.

Located in Western Massachusetts, Smith College is the largest women's college in the nation and a leader in the education of women scientists. Smith is a member of the Five-College Consortium, which also includes Amherst College, Hampshire College, Mount Holyoke College and the University of Massachusetts at Amherst. The University has a highly ranked college of engineering, with which Smith will be collaborating. Smith also offers a 3-2 engineering program with Dartmouth College. Review of applications will commence immediately and will continue until the post is filled.

Candidates are asked to send their c.v. and a list of references to:

Professor Malgorzata Z. Pfabe
Director, Engineering Advisory Committee
Sophia Smith Professor of Physics
Department of Physics
Smith College
Northampton, MA 01063

Smith College is an equal opportunity employer encouraging excellence through diversity.

Please respond to Professor Pfabe. Additional contact information:
413-585-3886, fax 413-585-3786, e-mail: mpfabe@sophia.smith.edu

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PUT IT ON DISPLAY! IEEE Marketing Exhibits Incentive

The IEEE Marketing Exhibits Department is offering a special incentive to all IEEE volunteers who may be interested in sponsoring a Cooperative Display.

If you are planning on hosting or attending an IEEE meeting or conference and would like an IEEE presence of membership applications, catalogues, brochures, promotional items or books, the IEEE Exhibits Department will pay up to \$250 in the U.S. and \$500 outside of the U.S. towards the printing of price lists, shipping, and labor charges.

For information and to be placed on the 1999 IEEE Exhibits Schedule, contact Beverly Banks, IEEE Marketing at b.banks@ieee.org.

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U.S. Department of Education Partners with Everybody Wins! Literacy Program

U.S. Secretary of Education Richard W. Riley and the U.S. Department of Education have established a partnership with Everybody Wins! (EW!)DC, the largest children's literacy and mentoring organization in Washington, DC. Privately funded and not for profit, EW! DC plans to serve over 2,800 students in 20 schools in the Washington metropolitan area.

EW!DC offers two programs, "Power Lunch" and "StoryTime." The Power Lunch program is a unique literacy and mentoring activity that partners adults with public elementary school children to stimulate their interest in reading and writing. Once a week, volunteer reading mentors go to local schools to meet with their student partners and share conversation and good books during the lunch hour. The Power Lunch program benefits children academically and socially by bringing a diverse selection of children's literature into the schools and providing students with caring adult readers who act as informal mentors and positive role models. Most of the volunteers continue to read with the same student partners for several years, turning "power lunches" into "powerful relationships."

"We are delighted to have the Department of Education as a partner in the Power Lunch program," said Joanie Chase, EW! Executive Director. "We're so glad we can work together to foster the love of reading and learning with our children."

The StoryTime program brings storytellers to elementary schools that otherwise receive very few special enrichment opportunities. Once a month, storytellers, local authors, and other performers visit the schools and bring the magic of storytelling to groups of children. Often the performances are interactive, calling upon children to play musical instruments, make sound effects, or dance. The stories always end happily and each student leaves with a new book.

For more information about EW!DC, call (202) 624-3957 or visit www.erols.com/ebodywin/.

Excerpted from Community Update, U.S. Department of Education, April 1999, Issue No. 66

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InfoWorld Partners with Women in Tech to Produce New Quarterly Magazine Supplement

New PR opportunities open with the launch of WITI FastTrack, an InfoWorld quarterly magazine targeted primarily to women in technology and premiering as an 18-page supplement in IW's February 22 issue.

Produced by IW, FastTrack is published through an alliance between IW and Women In Technology International, which has more than 6,000 members, 95% of whom are professionals working in tech organizations.

Reprints of FastTrack---the last-minute name chosen over the almost-picked "WITI World," a play on the names of both organizations---are distributed as programs at WITI's quarterly conferences. Tag line for the supplement is "Women Advancing Technology."

IW editor-in-chief Sandy Reed carries the same title for the supplement. Renee Gotcher ("Go-chur"), IW's "Enterprise Computing Product Reviews" section editor, is the developmental editor and contact for FastTrack PR queries, preferably by e-mail: renee_gotcher@infoworld.com.

IW news staffers are writing original material for FastTrack, which has its own cover story, "angle and approach," Reed says. "While the title is FastTrack and it's about women advancing technology, we're not writing it exclusively for women." IW's core piggyback audience is close to 92% male "but we're writing about issues also of interest to women in science and technology among our InfoWorld readership," she says.

FastTrack covers trends and issues within the IT marketplace and its stories are intended to be of interest to both men and women. "Lots of publications cover technology and lots of publications cover women," notes Reed. "But none makes it a point to include the point of view of women involved in technology."

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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) 562-5502 /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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www.ieee.org/organizations/committee/women/ E-mail: women@ieee.org