

National Association of Multicultural Program Advocates www.namepa.org



2010 Conference

SETTING SAIL FOR THE FUTURE

Leveraging diversity for a stronger crew

Baltimore, Maryland Marriott Inner Harbor at Camden Yards April 12-14



Welcome from the Presidents

Welcome to the 4th joint national conference of the National Association of Multicultural Engineering Program Advocates (NAMEPA) and the Women in Engineering ProActive Network (WEPAN). Every five years, our organizations have hosted a joint conference that provides an educational and networking environment for our constituents. The previous conferences have been a synergistic success, creating a diverse and dynamic event for all participants. Without a doubt this year's conference will yield the same positive energy. Our theme for 2010 is: "Setting Sail for the Future: Leveraging Diversity for a Stronger Crew."

Certainly, we are living in a time of great change. The advent of cyber communication and international competition has led us to a truly global marketplace. Yet, with all the advances in technology, our country remains challenged to increase the numbers of women and racially underrepresented engineers in our universities and industry. As the US continues to lead in technological discovery, all of its populations must be invited to participate bringing increased diversity of thought and perspective to the engineering profession. This conference provides a unique collaborative forum where the work of educational researchers, student retention practitioners and industry representatives can be leveraged to produce more effective solutions.

The Conference Planning Committee, with the leadership and participation of individuals from both of our organizations, has created an agenda that is indeed exciting. This year's conference will explore a series of relevant themes including the impact of local and national policies on Multicultural Engineering Programs (MEP), Women in Engineering (WIE) programs, diversity, and advancing tomorrow's talent. The presentations address a wide array of issues of importance to industry, government and educational professionals and the opportunities for networking are numerous. We hope you will enjoy this conference, and leave with a feeling that your time here was extremely worthwhile.

Finally, we want to acknowledge our conference sponsors. It is through their generous support of our organizations that we are able to come together in this conference and forward the diversity agenda throughout the year. With their continued support, we will all work together to increase access and enhance the success of women and other underrepresented professionals in engineering.



Amy Freeman, PhD President, NAMEPA, Inc.



Julie Martin Trenor, PhD President, WEPAN, Inc.



Amy Freeman, Ph.D.



Julie Martin Trenor, Ph.D.



About NAMEPA

Since 1979, the National Association of Multicultural Engineering Program Advocates (NAMEPA) has served to increase the effectiveness of educators, corporations, government agencies and nonprofit organizations. We are committed to increasing the number of traditionally underrepresented minority engineers by providing a comprehensive overview of the total minority engineering effort and the challenges inherent in developing a minority engineer. NAMEPA holds as its core values Appreciation of Diversity, Collaborative Efforts, Volunteerism, and Professionalism.

Its Mission is to provide quality services, information, and tools for our stakeholders to produce a diverse pool of engineers and scientists, and achieve equity and parity in the nation's workforce. NAMEPA's members represent 98 colleges and universities and directly reach more than 28,000 students. More information is available on the organization at www.namepa.org.

Ahnut WEPAN

The Women in Engineering ProActive Network's (WEPAN) primary audience is professionals who recruit, retain, and develop female engineering talent in both university and corporate settings. WEPAN is the single provider of a professional community, network, body of knowledge, and resource hub specifically for campus and corporate-based women in engineering experts.

WEPAN's mission is to be the nation's leading organization and catalyst for transforming culture in engineering education to promote the success of all women.

Visit www.wepan.org to learn more about WEPAN and the WEPAN Knowledge Center at www.wepanknowledgecenter.org to gain access to WEPAN's online professional community and resources.

The NAMEPA/WEPAN National Conference

This flagship event is an important forum for ideas and a venue for conversations among minority and women in engineering leaders, corporate advocates, researchers, academic leaders, and government officers to:

- Gain access to current research, statistics, and best practices on women in engineering.
- Build corporate-campus networks with minority engineering program and women in engineering professionals from across the country.
- Recognize excellence by honoring key individuals, programs, and corporations for accomplishments aligned with the NAMEPA and WEPAN missions. NAMEPA and WEPAN awards serve to continuously raise the bar for extraordinary service, significant achievement, model programs, notable achievement in research, and exceptional work environments that augment the success of minority and women engineers.

Key to Conference Themes Port 3 **How To Get Funding** Port 1 Port 4 **Cultivating Tomorrow's Talent** Diversity Port 2 **Effective Messaging Policy**

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Keynote Speakers



Eric Jolly, Ph.D.

Aligning Policies and Practices for Student Success Eric Jolly, Ph.D.

Dr. Eric J. Jolly is president of the Science Museum of Minnesota. which is among the nation's largest and most-esteemed science museums. He leads a museum that develops and presents exhibits, films and educational programs to 1.3 million people in the upper Midwest and to millions more

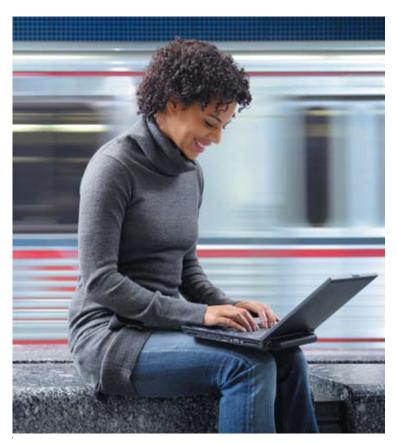
around the world through its traveling programs.

Dr. Jolly is known for his personal passion for STEM education and for working to identify solutions that address our country's achievement gap. Dr. Jolly is widely recognized for his contributions to mathematics and science education, frequently working with such groups as the American Association for the Advancement of Science, National Action Council for Minorities in Engineering, National Council for Teachers of Mathematics, and the National Science Teachers Association. Dr. Jolly's work with youth, families, and communities includes diverse organizations such as Youth Alive!, The Innovation Center, American Youth Policy Forum, the American Museum of Natural History, the Open Society Institutes' Youth Media Programs and the AAAS Healthy Families 2010 project.

Dr. Jolly was a founding partner to the national "Collaboration for Equity" project, and co-director of "Access by Design"—a technology project of the National Science Foundation. In 1994 he founded the National Institute of Affirmative Action. He serves on numerous national advisory boards, including the Smithsonian National Museum of the American Indian, Committee on Opportunities in Science for the American Association for the Advancement of Science (as past chair), and the Cornell Laboratory of Ornithology. He is also on the Association of Science-Technology Centers Board of Directors.

Dr. Jolly has published many scholarly articles and lectured throughout the world. Most recently, he published "Engagement, Capacity and Continuity: A Trilogy For Student Success," which analyzes why successful individual reform efforts have not led to broader increases in students achieving at high levels nor entering careers in science and math.

Dr. Jolly has a Ph.D. in psychology from the University of Oklahoma. His undergraduate studies were physics and psychology.



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Keynote Speakers



Shirley Malcom, Ph.D.

From Policy 1010 to Action 2.0: What every STEM Advocate **Needs to Know** Shirley Malcom, Ph.D.

Dr. Shirley Malcom is Head of the Directorate for Education and Human Resources Programs of the American Association for the Advancement of Science (AAAS). The directorate includes AAAS programs in education, activities for underrepresented groups, and public understanding of science

and technology. Dr. Malcom serves on several boards including the Heinz Endowments and the H. John Heinz III Center for Science, Economics and the Environment and is an honorary trustee of the American Museum of Natural History. In 2006 she was named as co-chair (with Leon Lederman) of the National Science Board Commission on 21st Century Education in STEM. She serves as a Regent of Morgan State University and as a

trustee of Caltech. In addition, she has chaired a number of national committees addressing education reform and access to scientific and technical education, careers and literacy. Dr. Malcom is a former trustee of the Carnegie Corporation of New York. She is a fellow of the AAAS and the American Academy of Arts and Sciences. She served on the National Science Board, the policymaking body of the National Science Foundation, from 1994 to 1998. and from 1994-2001 served on the President's Committee of Advisors on Science and Technology. Dr. Malcom received her doctorate in ecology from Pennsylvania State University; master's degree in zoology from the University of California, Los Angeles; and bachelor's degree with distinction in zoology from the University of Washington. She also holds 15 honorary degrees. In 2003 Dr. Malcom received the Public Welfare Medal of the National Academy of Sciences, the highest award given by the Academy.



Mia Ong, Ph.D.

Advancing the Status of Women of Color in STEM: Challenges, Strengths, and the National Imperative Mia Ong, Ph.D.

Maria (Mia) Ong, Ph.D., serves as a Principal Investigator at the Education Research Collaborative at TERC, a science, technology, engineering, and mathematics (STEM) education research and development non-profit in Cambridge, MA. Dr. Ong works on qualitative research related to

promoting diversity and gender equity in STEM education, with a focus on women of color in higher education and early careers. Author of "Body Projects of Young Women of Color in Physics" (Social Problems, 2005), she is currently PI of two NSF-sponsored studies on women of color in STEM: the "Inside the Double Bind" study with Dr. Gary Orfield, which has identified and synthesized 115 empirical studies on women of color in STEM, and a research study with Dr. Apriel Hodari, "Beyond the Double Bind," which analyzes life stories of women of color in STEM and the programs that support their success. Dr. Ong led the organization of the national Mini-Symposium on Women of Color in STEM, which took place in Arlington, VA in October 2009. She is currently editing a volume based on presentations from the mini-symposium.

Dr. Ong received a B.A. with High Honors in Sociology and Anthropology from Swarthmore College in 1994. She earned, in 2002, a Ph.D. in Social and Cultural Studies in Education from Berkeley and went on to postdoctoral/ lectureship positions at Wellesley College and the Harvard Graduate School of Education. Between 1991 and 1995, she began her career in STEM education as an elementary mathematics teacher and curriculum developer. Between 1996 and 2000, she directed an undergraduate physics program for underrepresented students at UC Berkeley; for this work, she was a co-recipient of the U.S. Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. In 2005, she served on the U.S. delegation at the 2nd IUPAP International Conference on Women in Physics. Dr. Ong presently serves as a Member of the Social Science Advisory Board for the National Center for Women and Information Technology (NCWIT) and as a Member of the Committee on Equal Opportunities in Science and Engineering (CEOSE), the Advisory Committee of the GPRA Performance Assessment (AC/GPA), and the Social, Behavioral, and Economic Sciences Advisory Committee (SBEAC) at the National Science Foundation.

Keynote Speakers



Valerie Young, Ph.D.

Helping Students Overcome The Impostor Syndrome Valerie Young, Ph.D.

Dr. Valerie Young is an internationally known speaker and workshop leader. She has delivered the How to Feel As Bright and Capable As Everyone Seems to Think You Are program at such diverse organizations as Intel, Chrysler, Boeing, Bristol Meyers Squibb, and Procter & Gamble.

No stranger to higher education she has spoken at numerous colleges and universities including Harvard, MIT, Stanford, Columbia, NYU Medical School, Boston University School of Medicine, Johns Hopkins, Cornell, California Institute for Technology, Rensselaer Polytechnic Institute, Duke, Johns Hopkins, Smith, the University of Wisconsin, University of Texas, University of Iowa, University of California San Francisco, University of Washington, University of Virginia, University of North Carolina, University of Michigan, University of Colorado, University of Massachusetts, Texas A&M and many others. Dr. Young's insight and humor have made her a popular guest and keynote speaker. Some of the associations she has addressed include American Women in Radio and Television, the Society of Women Engineers, the Association of Women in Science, American Institute of Chemical Engineers... to name just a few.

Her career-related tips have been cited in such publications as The Wall Street Journal, USA Weekend, Kiplinger's magazine, Woman's Day, Entrepreneur, The Chicago Tribune, Redbook, Fitness, Self, and The Chronicle of Higher Education well as online at MSN.com and iVillage. com.

In addition to her work at ImpostorSyndrome.com she is the Dreamer in Residence at ChangingCourse.com and is the publisher of the Changing Course newsletter read by over 23,000 people around the world.

She is author of an upcoming book on the impostor syndrome with Crown Publishing, a division of Random House. the Social, Behavioral, and Economic Sciences Advisory Committee (SBEAC) at the National Science Foundation.





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Women in Engineering Cockrell School Program



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NAMEPA/WEPAN 2010 Joint National Conference SCHEDULE AT A GLANCE

Monday, April 12		
8:00 am – 4:00 pm	NAMEPA Board Meeting, University 3 & 4	
8:00 am – 4:00 pm	WEPAN Board Meeting, Northrop Grumman	
1:00 pm – 8:00 pm	Registration Open, Stadium Pre-Foyer	
1:30 pm – 2:30 pm	Workshop: The First 90 Days: Critical Success Strategies for Leaders at All Levels, Stadium 3	
1:30 pm – 3:30 pm	Workshop: Designing Girls: Outreach to Inspire Girls in Engineering, Stadium 1	
2:45 pm – 3:45 pm	Workshop: Effective Data and Program Presentation, Stadium 3	
4:00 pm – 5:00 pm	Newcomer's Session, Chesapeake	
5:00 pm – 7:00 pm	Dinner Discussion Groups (dinner on your own), Marriot Lobby	
5:00 pm – 7:00 pm	WEPAN Corporate Advisory Council, B&O Railroad	
7:00 pm – 9:00 pm	Welcome Dessert Reception, Stadium Ballroom	

	Tuesday, April 13
7:00 am – 5:30 pm	Registration Open, Stadium Pre-Foyer
7:30 am – 8:00 am	Breakfast, Grand Ballroom
8:00 am – 9:15 am	Keynote Speaker: Dr. Eric Jolly, Aligning Policies and Practices for Student Success, Grand Ballroom
9:30 am – 3:00 pm	WEPAN Knowledge Center, Stadium Pre-Foyer
9:30 am – 10:30 am	Panel: Cooperation vs. Competition: Cultivating Tomorrow's Talent Through Student Organizations, Grand Ballroom
9:30 am – 10:30 am	 Paper Session, Chesapeake N is for Network: New Tools for Mapping Organizational Change Pipeline to Engineering Diverse Future in New York City Student Organizations, WEPAN, and NACME
9:30 am – 10:30 am	 Paper Session, Stadium 1-2 A Semi-Qualitative Analysis of Womens' Adjustment to STEM Majors Making Academic Progress: The University of Michigan STEM Academy The CalWomenTech Project: Using Surveys to Inform Retention Strategies of Female Technology Students
9:30 am – 10:30 am	 Paper Session, Stadium 3-5 Connecting Students to Their Future Female Recruits Explore Engineering Project Leveraging Resources: Shortening Contact Time without Negatively Impacting Efficacy
10:45 am – 11:45 am	Workshop: Broadening Opportunity through Leadership and Diversity: Getting to Vision and Mission in One Day, Chesapeake
10:45 am – 11:45 am	Workshop: Planning Strategically: How to Intentionally Cultivate Tomorrow's Talent, Stadium 1-2

10:45 am – 11:45 am	 Paper Session, Stadium 3-5 Effects of Faculty-Student Interactions on Faculty Career Satisfaction Women in University Leadership Positions: Comparing Institutions with Strong and Weak Gender Equity Track Records
10:45 am – 11:45 am	Panel: Growing the Engineering Talent Pipeline – How Lockheed Martin Does It, Grand Ballroom
12:00 pm – 1:45 pm	Keynote Luncheon: Dr. Valerie Young, Helping Students Overcome The Impostor Syndrome, Grand Ballroom
2:00 pm – 3:00 pm	Panel: Public Policy for Engineers, Stadium 1-2
2:00 pm – 3:00 pm	Panel: Retention of Undergraduate Engineering Students: Extending Research into Practice, Stadium 3-5
2:00 pm – 3:00 pm	 Paper Session, Chesapeake Diversity of the Engineering Industrial Workforce Effective Partnerships to Increase Female Attainment of Engineering Bachelors' Degrees UM LSAMP: 15 Successful Years of Student Retention and Graduation
3:15 pm – 5:30 pm	SHOWCASE, University Ballroom
4:30 pm – 6:30 pm	NAMEPA Regional Meetings, Stadium Ballroom
4:30 pm – 6:30 pm	NAMEPA Corporate Advisory Board, B&O Railroad
5:30 pm – 6:30 pm	Explore WEPAN Committees, Grand Ballroom
6:30 pm – 9:00 pm	Dinner (on your own), Dinner Discussion Groups

	Wednesday, April 14
7:00 am – 8:30 am	Breakfast (on your own), with hotel coupon
8:00 am – 4:00 pm	Registration Open, Stadium Pre-Foyer
8:30 am – 9:45 am	Keynote Speaker: Dr. Shirley Malcom, From Policy 1010 to Action 2.0: What every STEM Advocate Needs to Know, Grand Ballroom
10:00 am – 4:45 pm	WEPAN Knowledge Center, Stadium Pre-Foyer
10:00 am – 11:00 am	Panel: Why So Few? Girls and Women in Science, Technology, Engineering, and Math, Stadium 1-2
10:00 am – 11:00 am	 Paper Session, Chesapeake Exploring Strategies for a University/Non-Metropolitan Community College Collaboration Interpreting Successes of a Community College-University Partnership in Retaining Underrepresented Engineering Students
10:00 am – 11:00 am	 Paper Session, Stadium 3-5 A Model for Corporate Engagement Framing Change: Feminist Theories, the Conceptual Frameworks of ADVANCE IT Grant Proposals, and the Relationship to Program Sustainability and Success Using Your Past to Fund Your Future: A Case Study Examination of the Foundation-Directed Grant Writing Process From Failure to Success
10:00 am – 12:15 pm	Panel: Retention, Migration, and Critical Mass: Conversations With Researchers Using the MIDFIELD Database, University Ballroom
11:15 am – 12:15 pm	Workshop: An Army of One! What To Do When YOU Are The MEP Office, Chesapeake
11:15 am – 12:15 pm	Panel: Demographic Changes, Identity and WISE/MSEP Programs, Stadium 1-2

11:15 am – 12:15 pm	Panel: Engineer Your Life: Effective Communication Messages, Stadium 3-5
12:30 pm – 2:15 pm	Keynote Luncheon: Dr. Mia Ong, Advancing the Status of Women of Color in STEM: Challenges, Strengths, and the National Imperative, Grand Ballroom
2:30 pm – 3:30 pm	Panel: Growing K-12 Engineering Talent: The Gateway Project, Stadium 3-5
2:30 pm – 3:30 pm	 Paper Session, Chesapeake Retaining Women Engineering Undergraduates: Does Wellness Education Make a Difference? The Science of Fire Using Service Learning to Engage American Indian Students in Engineering
2:30 pm – 4:45 pm	Workshop: Research-based Tips for Cultivation Tomorrow's Talent, Stadium 1-2
2:30 pm – 4:45 pm	Workshop: When Bad Things Happen to Good MEP Programs: Successfully Adapting to Institutional Change, University Ballroom
3:45 pm – 4:45 pm	 Paper Session, Stadium 3-5 An Analysis of a Scholarship Program for Underrepresented Ethnic and Women Engineering Students and its Impact on Retention and Academic Performance Assessing the Factors that Influence the Career Choices of Minority PhD Graduates in STEM Fields In Her Words: Factors Influencing African American Women to Pursue and Complete Doctoral Degrees in Engineering
3:45 pm – 4:45 pm	Workshop: WEPAN Knowledge Center, Chesapeake
3:45 pm – 5:00 pm	NAMEPA Business Meeting, Grand Ballroom
6:00 pm – 9:00 pm	GALA Dinner & Awards Ceremony, B&O Railroad Museum

2010 NAMEPA / WEPAN National Conference Proceedings

View or search the NAMEPA/WEPAN Conference database for the full text of the 2010 papers. Conference content includes papers on the following topics: Diversity, Policy, How to get Funding, Cultivating Tomorrow's Talent, and Effective Messaging. This site is the official digital archive of the Proceedings of the 2010 NAMEPA/WEPAN National Conference and was created by WEPAN in cooperation with the Office of Digital Scholarly Publishing, a joint effort of The Pennsylvania State University Libraries and the Penn State Press. The site was developed and is maintained by the Office of Digital Scholarly Publishing. www.wepan.org

Multicultural Competency Development: Preparing Students to Live and Work in a Diverse World

Multicultural competency is the knowledge, skills and personal attributes needed to live and work in a diverse world. Kansas State University acknowledges the importance of helping students develop these multicultural competencies. In 2000–2001, the Tilford Group, led by Dr. Juanita McGowan, conducted focus groups with industry, administrators, faculty, and students, and developed a synthesis of multicultural competencies from those and subsequent discussions. This framework is an excellent resource for both WEPAN and NAMEPA members as we work to build more culturally competent engineering graduates.

More information on these Tilford Multicultural Competencies can be found at http://www.k-state.edu/tilford/MulticulturalCompetencies.htm







Pre-Conference Monday, April 12

8:00 am - 4:00 pm

NAMEPA Board Meeting,

University 3&4

8:00 am - 4:00 pm

WEPAN Board Meeting,

Northrop Grumman

1:00 pm - 8:00 pm

Registration Open,

Stadium Pre-Foyer



1:30 - 2:30 pm

Workshop: Cultivating Tomorrow's Talent,

The First 90 Days: Critical Success Strategies for **Leaders at All Levels**

Anthea Johnson Rogen

Ideal for leaders at all levels! You've landed a new postion! Now what? This workshop will explore methods of managing job transition based on principles from Michael Watkin's popular book. Participants also will learn how to add value to their new organization faster, how to use their strengths, identify and improve their weaknesses.



2:45 - 3:45 pm

Workshop: Effective Messaging,

Effective Data and Program Presentation Bevlee Watford

Are you often asked for student or program information that you then spend hours putting into an appropriate format? This workshop presents a databook that you can utilize to market your programs (and your organization) to your superiors and potential funding agencies increasing the visibility and impact of your efforts.



1:30 - 3:30 pm

Workshop: Cultivating Tomorrow's Talent,

Designing Girls: Outreach to Inspire Girls in **Engineering**

Linda Kekelis, Emily Doolittle, Jeri Countryman

Techbridge will share our design curriculum including making catapults, dissecting and prototyping toys. Participants will try our Bubble Design activity that introduces the engineering design process and different engineering roles. They will receive Get Involved. Make a Difference which offers practical tips for outreach across a variety of venues.

4:00 – 5:00 pm

Newcomer's Session, Chesapeake



Newcomer's Session is sponsored by BP

NAMEPA and WEPAN are excited to welcome new members and conference attendees during our special Newcomer's Session. This session offers the perfect opportunity to learn more about both organizations while networking with representatives from institutions of higher learning, corporations, government agencies and other not-for-profit organizations that are focused on the full participation of underrepresented minorities and women in engineering. During the Newcomer's Session, NAMEPA and WEPAN leaders will be ready and willing to help you learn how to optimize your conference experience. Welcome to your first NAMEPA and WEPAN joint conference!

5:00 - 7:00 pm

Dinner Disscusion Groups,

assorted local restaurants

List of discussion groups and attendees will be at the registration desk.

Have a lively dinner discussion on a featured topic with other conference attendees. Dinner Discussion Groups are organized to provide you with an opportunity to discuss issues that interest you or issues that you would like to investigate further. All groups will meet in the Lobby of the Marriott at 5pm SHARP to walk to the restaurant.

5:00 - 7:00 pm

WEPAN Corporate Advisory Council,

B&O Railroad

WEPAN CAC will hold a dinner meeting Monday April 12th from 5pm to 7pm in the B&O Railroad Room. The goal of the CAC is to strengthen WEPAN's strategic direction ultimately resulting in a stronger future workforce for our corporate partners.

7:00 - 9:00 pm Welcome Dessert Reception, Stadium Ballroom



Welcome Dessert Reception is sponsored by 3M

Make new friends and reconnect with old ones at the conference opening reception and welcoming ceremonies.



Tuesday, April 13

7:00 am - 5:30 pm

Registration Open,

Stadium Pre-Fover

7:30 - 8:00 am

Breakfast, Grand Ballroom



Breakfast

is sponsored by Dupont

8:00 - 9:15 am Keynote Speaker, Grand Ballroom

Dr. Eric Jolly Aligning Policies and Practices for Student Success

9:30 am - 3:00 pm **WEPAN Knowledge Center:** Effective Use of the Resource,

Stadium Pre-Foyer

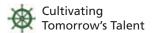
Jane Langeman

Stop by to create your own account and learn how to get the most from this compilation of information about women and engineering.













9:30 - 10:30 am

Paper Session: Policy,

Chesapeake

Moderator: Katie Kizziar

N is for Network: New Tools for Mapping **Organizational Change**

Nancy Steffen-Fluhr, Regina Collins, Anatoliy Gruzd, Babajide Osatuyi

Researchers from NJIT ADVANCE describe a recent study of the relationship between the structure of faculty research networks and faculty retention. They show how network mapping can be used to support the advancement of new women and minority faculty by providing them with an insider's view of the organizational landscape.

Pipeline to Engineering Diverse Future in New York City Ardie Walser, Rawlins Beharry, Amanda Bernal-Carlo

In the 21st century, unique academic pathways that explore careers in engineering and provide a pipeline to engineering education are essential to sustain Americas' competitiveness. Dynamic partnerships facilitating undergraduate engineering studies within CUNYs' urban landscape provide the medium for diverse engineering students to access the excellence of Groves' engineering education.



Student Organizations, WEPAN, and NACME Mary Anderson-Rowland

This paper was written in response to a plea for help from SWE student leaders who are frustrated and discouraged that there is competition between WIEPs and SWE student sections and that they do not have support from their Dean's Office. The topic also applied to MEPs and to minority student organizations.



9:30 - 10:30 am

Paper Session: Cultivating Tomorrow's Talent, Stadium 1-2

Moderator: Linda Wilson

A Semi-Qualitative Analysis of Womens' Adjustment to STEM Majors

Robert Lent, Matthew Miller, Paige Smith, Nicole Bryan, Kayi Hui, Matthew Jezzi, Robert Lim, Helena Martin

This analysis of women engineering majors extends prior social cognitive career theory (Lent, Brown & Hackett, 1994) research by examining factors that promote successful adjustment. Participants reported several types of academic, social, and financial hurdles during their first semester. They also described factors that facilitated their academic progress and adjustment.

Making Academic Progress: The University of Michigan STEM Academy

Cinda-Sue Davis, Darryl Koch, Guy Meadows, Edward St. John, Derrick Scott

The University of Michigan STEM (M-STEM) Academy serves talented diverse incoming engineering students who, for reasons of socioeconomic class, first generation college student status, race, gender, or lack of high school rigor might not be successful in pursuing a Michigan STEM degree. We will describe the programmatic components and assessment.

The CalWomenTech Project: Using Surveys to Inform **Retention Strategies of Female Technology Students** Donna Milgram

What support strategies do women students in STEM courses really find most helpful? In 2009, IWITTS conducted a survey of female students in technology courses in which they are underrepresented across eight community colleges participating in the NSF-highlighted CalWomenTech Project (n=60). Join Donna Milgram, IWITTS Executive Director, as she reveals these telling results and explains how they have been used to evaluate and inform support strategies employed by colleges to retain women in STEM. The workshop will also cover successful retention strategies implemented by the CalWomenTech colleges and free resources available online for educators.





Paper Session: Cultivating Tomorrow's Talent, Stadium 3-5

Moderator: Suzie Laurich-McIntyre

Connecting Students to Their Future Leslie Wilkins, Diana Warren, Isla Young

GeoTech for Hawaii Schools is a statewide initiative added to the Women in Technology STEM Education portfolio of program offerings. Since its inception ten years ago, WIT has piloted and grown a number of programs for girls, women, native Hawaiians and underrepresented populations that specifically cultivate skills and interest in engineering. This paper discusses the outcomes of the professional development events for public school teachers of Hawaii that are helping to cultivate future engineers with skill sets in geospatial technology.

Female Recruits Explore Engineering Project Monica Bruning, Jill Bystydzienski, Margaret Eisenhart

Female Recruits Explore Engineering (FREE) is a career exploration research project involving high achieving, mostly low-income, multi-cultural high school girls. The project facilitated explorations of engineering as a career option, tracked the course of the girls' explorations and considerations during their 3 years of high school. The analysis identifies and maps the influences that shape their sense of the profession, and describes the girls' views and feelings about career options in engineering.

Leveraging Resources: Shortening Contact Time Without Negatively Impacting Efficacy Evelyn Laffey, Candiece White

The Academy at Rutgers for Girls in Engineering & Technology (TARGET) familiarizes girls with engineering. Over 12 years, TARGET evolved to offer six, weekly summer sessions for 144 pre-college girls and academic year follow-up. We offer a model that leverages resources by shortening contact time without sacrificing efficacy.

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9:30 - 10:30 am

Panel and Speaker Presentation: Cultivating Tomorrow's Talent,

Grand Ballroom

Moderator: Alaine M. Allen

Cooperation vs. Competition: Cultivating Tomorrow's **Talent Through Student Organizations**

Tricia Berry, Andrea Ogilvie, Sara Hernandez

Where women in engineering and/or minority engineering programs coexist with student organizations, collaboration is critical for the success of all recruitment and retention efforts and conflict and competition can both undermine efforts and waste precious time. Explore successful student organizations engagement models and strategies for creating a collaborative working environment.



Broadening Opportunity through Leadership and Diversity: Getting to Vision and Mission in One Day Beverly Louie, Jackie Sullivan

This workshop will replicate the one day retreat format and materials that was used to create the BOLD Center's hedgehog, vision and mission statements.



Planning Strategically: How to Intentionally Cultivate **Tomorrow's Talent**

Denise Grant

This nuts-and-bolts workshop will review the critical first steps to creating a strategy document based on strategic planning and appreciative inquiry frameworks. Participants of the workshop will leave with the formulation of a strategy and the steps to implement that strategy to include resource (time, people, money) considerations.



10:45 - 11:45 am

Paper Session: Cultivating Tomorrow's Talent, Stadium 3-5

Moderator: *Elizabeth Litzler*

Effects of Faculty-Student Interactions on Faculty Career Satisfaction

Christina Leshko, Evelyn Laffey, Natalie Batmanian

The purpose of this study is to understand the impact that two student/faculty networking luncheons have on female engineering faculty. The research question guiding this study is: To what extent does interaction with students enhance faculty's professional career satisfaction?







Women in University Leadership Positions: Comparing Institutions with Strong and Weak **Gender Equity Track Records**

Canan Bilen-Green, Karen Froelich

Although half of new Ph.D. degrees are awarded to women, representation of women faculty in the upper ranks is limited. Using AAUP 2006 faculty gender equity indicators, this study examines structural dimensions of institutions with strong compared to weak track records regarding prevalence of women in the higher academic ranks.



10:45 - 11:45 am

Panel and Speaker Presentation: Cultivating Tomorrow's Talent,

Grand Ballroom

Moderator: Jamie Kretsch

Growing the Engineering Talent Pipeline - How Lockheed Martin Does It



Panel and Speaker Presentation is sponsored by Lockheed Martin

The key to the defense industry's ability to develop stateof-the-art technologies of the future is to encourage our future workforce to pursue careers in engineering and science. This panel describes the depth of Lockheed Martin programs and community outreach activities, which focus on increasing the engineering talent pipeline in STEM fields from K-12 all the way through collegiate.

12:00 – 1:45 pm Lunch and Keynote, Grand Ballroom



Keynote Luncheon is sponsored by NUCOR

Dr. Valerie Young Helping Students Overcome The Impostor Syndrome



2:00 - 3:00 pm

Panel and Speaker Presentation: Policy,

Stadium 1-2

Moderator: M. Renee Baker

Public Policy for Engineers Cathy Pieronek

This one-hour panel discussion is sponsored by the Society of Women Engineers and will focus on training participants on how to communicate with elected representatives generally, and how to address elected representatives on issues of technical interest specifically, with a focus on SWE's public policy statements on Title IX, K-12 STEM education and affirmative action/equal opportunity.



2:00 - 3:00 pm

Panel and Speaker Presentation: Cultivating Tomorrow's Talent,

Stadium 3-5

Moderator: LaVerne Bitsie-Baldwin

Retention of Undergraduate Engineering Students: Extending Research into Practice

Susan Metz, Elizabeth Litzler

Findings from 21 engineering schools involved in PACE: Project to Assess Climate in Engineering and three research-based retention strategies that ENGAGE: Engaging Students in Engineering is implementing with 10 engineering schools will be presented. Join this interactive discussion to address the challenges of implementing actions based on these initiatives on campus.



2:00 - 3:00 pm

Paper Session: Diversity,

Chesapeake

Moderator: Lisa G. Norwood

Diversity of the Engineering Industrial Workforce

Port 1: Diversity Paper Session

Catherine Didion

This paper focuses on the The NAE's Committee on Capitalizing on the S & E Workforce in Industry's efforts to identify best practices and provide data to guide industry policy makers. The paper will review the representation of women and underrepresented minorities in the industrial workforce, the routes of advancement, and what current challenges exist in their recruitment, retention and advancement.

Effective Partnerships to Increase Female Attainment of Engineering Bachelors' Degrees

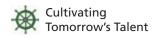
Elizabeth Cady, Norman Fortenberry, Catherine Didion

Nineteen university departments of mechanical and electrical/computer engineering received small grants to conduct projects related to increasing the number of women attaining engineering bachelor's degrees. Projects included middle or high school outreach, undergraduate retention, faculty development, and/or academic and outreach material development, review and revision.

UM LSAMP: 15 Successful Years of Student Retention and Graduation

Tamara Hamilton, Rosemary Parker

UM is ranked by Diverse Issues in Higher Education as sixth for awarding bachelors' degrees to African American students. The LSAMP program serves approximately 100 students through academic seminars, a Bridge Program, undergraduate research stipends, and attendance at professional conferences. Goals of the program are assessed using University and NSF data on degrees awards, GPA, and retention rates.





SHOWCASE



3:15 – 5:30 pm University Ballroom

1. Applying Research to Practice: Creating a Sound Foundation for Your Activities

Barbara Bogue, Elizabeth Cady

ARP (Applying Research to Practice) Resources are user-friendly guides to research ranging from stereotype threat to girls' achievement in science to Title IX. ARP Resources, Olio (the new collected publication of ARPs) and how to use ARPs will be featured. Collaboration of The Assessing Women and Men in Engineering (SWE AWE Project) and the Center for the Advancement of Scholarship in Engineering Education (CASEE) at the National Academy of Engineering.

2. How to Feel as Bright and Capable as Everyone Seems to Think You Are: What Every Academic Needs to Know About Competence, the Impostor Syndrome, and the Art of Winging It Valerie Young

Do you dismiss your accomplishments as a "fluke" secretly believing you've "fooled" others into thinking you are smarter or more capable than you "know" you are? Discover why the Impostor Syndrome is a particularly common in higher education and how to feel as bright and capable as you really are.

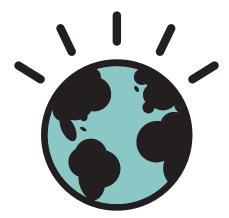
3. Programs to Increase K-12 Interest in STEM Careers
Ana Lazarin, Daniel Bergman, Zulma Toro-Ramos

In an effort to increase the participation of minority students in science, technology, engineering, and math (STEM) fields, the College of Engineering at Wichita State University implemented programs to stimulate students' interest in STEM careers at an early age. These programs include: LEGO Robotics, Summer Camps, and Changing Faces.

4. Programs to Support Advancement of Faculty at North Dakota State University

Canan Bilen-Green, Elizabeth Birmingham, Karen Froelich, Ann Burnett

The goal of the NDSU Advance FORWARD project is to develop and implement a comprehensive research-driven strategy to increase representation and advancement of faculty in academic careers. Key elements include mentoring and grant programs for new and mid-career faculty, and professional development opportunities for faculty and administrators.



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IBM is proud to be a sponsor of the 2010 National Association for Multicultural Engineering Program Advocates (NAMEPA) / Women in Engineering ProActive Network (WEPAN) Conference. Equality is a cornerstone of IBM. In an increasingly competitive world, individual differences, skills, and backgrounds aren't just important, they're invaluable. To find out more about our commitment to workforce diversity, visit **ibm.com**/diversity



5. Promoting Interest in STEM fields among Teen Girls through the Development of Educational **Video Games**

Ying Yu, Falichia Burns, Kristen Hammick

Three video game prototypes are designed to promote interest in STEM fields among teen girls. A set of surveys are designed to solicit ideas and opinions from: teen girls between 13-18 years old; their parents or quardians; current female college students majoring in the STEM fields.

6. Industry Resources: FREE Industry Tools for You and Your Students Deb Adams

In this session an overview of the Academic Initiative will be provided including a list of resources available to students, faculty, and institutions. The registration process for becoming an AI member will be discussed. including an overview of award offerings specifically for AI faculty.

7. Persistence in Engineering Doctoral Programs Evelyn Laffey, Aisha Lawrey

The Female Doctoral Experience was a study investigating factors that influence female students' major choice. If we understand why women leave graduate programs and what identifiable factors increase retention, we can enhance students experience with support programs, so that women choose more often to persist in their doctoral degree programs.

8. Inspire the Next Generation of Engineers with PBS' Design Squad

Natalie Hebshie

Design Squad, PBS's engineering competition series, has free educational resources that give kids the opportunity to flex their design process skills while learning science and engineering concepts. Learn about the show and outreach campaign. Try activities from our latest outreach resources. Hear how others have incorporated Design Squad into their outreach.

9. Integrated Approach to Recruitment & Retention Evelyn Laffey, Candiece White

We have designed two programs: The Academy at Rutgers for Girls in Engineering & Technology and the Rutgers University Women in Engineering Leadership League as a set of recruitment and retention initiatives that cross-utilize program resources. We will discuss how the integrated approach maximizes our return on investment.

10. Serving Up Science and Engineering (to girls especially): A Resource for Outreach Providers Ruta Sevo, Barbara Boque

Our poster session will give people a chance to ask about the book and how it might be useful to them. We have a flier on how to purchase the book. We also offer the service of customizing the book to suit particular audiences, via contract. Profile of the book can be seen at http://stores.lulu.com/sevo and http://momox.org/ servingup

11. STEM? We Do That: Engaging Pre-College **Outreach Programs & K-12 Classroom Projects** Cody Kangas, Stephen Patchin

Michigan Technological University Youth Programs will share effective and exciting STEM outreach practices that will help you build your STEM program. We will provide attendees a view of our successful programming structure, longitudinal data guiding our growth, and a glimpse of our future outreach plans which include STEM Road Shows.

12. Department of Energy Ph.D. Fellowships Jeana Gingery, Sarah Richardson

The Department of Energy (DOE) Computational Science Graduate Fellowship supports doctoral students in scientific or engineering disciplines emphasizing highperformance computing. www.krellinst.org/csqf

The DOE National Nuclear Security Administration Stewardship Science Graduate Fellowship supports doctoral students in subjects such as high energy-density physics, low-energy nuclear science and materials under extreme conditions. www.krellinst.org/ssqf

13. Encouraging K-12 Girls in Science, Technology, **Engineering and Mathematics Through Collaborative Efforts**

Brenda Britsch, Karen Peterson

The National Girls Collaborative Project brings together organizations throughout the United States committed to informing and encouraging girls to pursue careers in science, technology, engineering and mathematics. Learn about NGCP activities in your region and how to utilize valuable resources to strengthen your efforts to engage girls in STEM.

14. Differences in the Authentic Writing Style of **Female Versus Male Engineering Students** Lily Gossage

In reviewing the writing of freshman engineering students, differences exist in the composition style of females as compared to that of males. These differences are believed to influence the level of composition authenticity. This poster will show how these differences might be exploited to help engineering students improve their writing.

15. Engineering Ambassadors: Near Peer Education and Recruiting

Ellen Momsen, Brett McFarlane

The College of Engineering Ambassadors Program is a student-to-student recruitment/education effort using 'near peers' engineering students just one to four years out of high school. COE Ambassadors visit schools throughout the state stressing how engineering helps people and benefits society, aspects of a career choice that appeal to underrepresented students.

16. Engineering Career Conference for High School Girls *Sandra Song, Mahera Philobos*

The paper will describe the Engineering Career Conference, an outreach program for high school girls. A description of the program components, profile of program participants, and program evaluation data will be included. The paper will include pre and post-survey results, which reveal program impact on participants' attitudes, perceptions and aspirations.



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17. Girls Engineer Maine *Sheila Pendse*

This showcase describes the "Engineering Awareness days" where female high school students visited UMaine engineering labs for a day. They worked in a variety of labs learning about converting wood stock to fuels and use of nanoparticles as a way to detect cancer. In addition they heard personal stories from female faculty, students and Engineers Without Borders.

18. MD MESA Still Launching Careers in STEM Paula Shelton

Find out what MD MESA been doing to promote an interest in mathematics, engineering and science. How does MD. MESA partner with other colleges, universities and other organizations? What direction is the organization taking to expand the knowledge of students about emerging technologies relating to STEM careers?

19. Mid-Atlantic Girls Collaborative *Elizabeth Vandenburg*

MAGIC connects girl serving and supporting organizations across Maryland, Virginia, and Washington, DC that are committed to increasing the number of young women pursuing science, technology, engineering, and math (STEM) careers. Resources, tools, trainings and mini-grants are offered through MAGiC in conjunction with the National Girls Collaborative Project.

20. Branding NAMEPA/WEPAN-Bringing University-Based STEM Diversity Programs from Status Quo to Preeminence

Milton Randle

This showcase asserts the absolute need and essentiality for the investment in an effective marketing strategy to move NAMEPA/WEPAN programs to national recognition and empowerment by defining what an effective marketing strategy is and how NAMEPA/WEPAN programs need to re-envision ourselves to address the crucial elements of marketing and public relations.

21. Case Study: IBM and CD Fulkes Middle School, Successful Interaction between Schools and Companies for the Advancement of Diversity in STEM

Denise Collins, Audrey Romonosky, Janel Barfield

In this showcase, discover successful programs and resources employed by IBM volunteers such as EXploring Interests in Technology and Engineering (EX.I.T.E.) Camp, Discover Engineering, and First LEGO League Competition, that led to a sustained and effective relationship between IBM and CD Fulkes Middle School in Texas.

22. CheME & YOU @ OSU: A Chemical Engineering Summer Program for Young Women Entering Grade 9 Ruth Friedman, Glenda La Rue

The Ohio State University's Women in Engineering Program (WiE) offered its first single-discipline engineering camp, CheME & YOU @ OSU, in the summer of 2009. Through photographs and sample camp materials, WiE will provide audiences with information not only on the specific activities, tours, and field trips that were part of this innovative program but also on the process of developing a coherent, six-day curriculum focused on chemical engineering.

23. Comprehensive Equity at Ohio State: Leveraging **Campus Partnerships** Mary Juhas

Project CEOS, Comprehensive Equity at Ohio State, is an NSF ADVANCE project. This presentation will focus on the Project's wide-spread recognition through campus partnerships. The overall goal of our project is to increase the representation and advancement of women in academic STEM careers through research-based interventions that transform workplace culture.

24. "In the Middle of Engineering" - A Model **Enrichment Program at an All Girls Middle School** Brenda Hart, Gary Rivoli

"In the MIddle of Engineering" is a middle school outreach program conducted at Olmstead Academy South, an all female school. The main objective of the program is to inspire young female students and help them recognize that, no matter their backgrounds, they can be successful in the study of engineering.

25. Techbridge: Helping Girls Connect with Engineering Emily Doolittle, Linda Kekelis, Jeri Countryman

Techbridge will showcase samples of our curriculum that introduce girls to the engineering design process and provide copies of our role model outreach guide and toolkit, 'Get Involved. Make a Difference.' These resources include practical tips as well as successful case studies for outreach across a variety of venues.

26. The SWE AWE Project: Tools for Implementing and **Supporting Effective Assessment and Evaluation** Barbara Boque, Rose Marra, Dana Hosko

The SWE AWE Project offers assessment tools for diversity and STEM practitioners (surveys for outreach activities grades 2-12, undergraduate self-efficacy, mentoring, leaving and persisting in Engineering and College Choice. The poster features new elementary surveys and process mapping to organize and support effective assessment and evaluation of STEM and diversity outreach and education. (NSF GSSE 0120642, 0607081, 0010224, 0734072, 0631789)

27. The Use of Social Networking Sites in Fostering **Program/ Student Engagement** Crystal Smith

Social network sites have the potential to change the way we socialize both on an interpersonal and community level. Social changes are already evident among our college students. As adoption spreads did you catch the wave? Some students believe that faculty /staff should not be present on these social sites. Let's discuss the pros and cons of moving into the millennial minds.

28. Toward Understanding Women Advancing **Engineering Education as a Profession in El Paso** Pedro Golding, Blanca Carrasco, Juliette Caire, Debra Little

We need to first understand the cultural environment in our region before we can understand how it influences the choices women make in selecting engineering and other STEM careers. Insight into the El Paso region's culture provides a window for us to understand pathways to advancing engineering education. We perceive that the bounds of what is possible for our young women to achieve can change substantively through education and increasing awareness. UTEP has programs that build to support women in engineering and we can become a model for helping our next generations achieve a balance and sustainability in their professional lives.

29. Who Leaves Engineering? And Why? Barbara Bogue, Rose Marra, Demei Shen, Kelly Rodgers

Understanding why students decide to leave engineering supports effective efforts to retain them. Findings from an AWE Project multiyear survey study highlight strong influences on students' decisions to leave engineering including academic (e.g. curriculum difficulty, poor teaching and advising) and non-academic factor (lack of belonging in engineering) and differences between majority and non-majority students. Funded by NSF Research in Gender in Science and Engineering Program ##0120642.

30. WEPAN Knowledge Center Diane Matt, Jenna Carpenter

The WEPAN Knowledge Center offers several avenues for researchers and practitioners to collaborate. The Professional Community can be used for private communities of research teams, as well as project or participant groups. We present an overview of these opportunities, along with usage statistics that demonstrate significant audience response.

31. Rockwell Collins Corporate Partner Booth

Learn about Rockwell Collins' efforts to recruit and retain women and minority engineers.

32. BP Corporate Partner Booth

Learn about Rockwell Collins' efforts to recruit and retain women and minority engineers.

33. Mentor Net

The E-Mentoring Network for Diversity in Engineering and Science. Our Mission is: 1. To further the progress of women and others underrepresented in scientific and technical fields through the use of a dynamic, technology-supported mentoring network. 2. to advance individuals and society, and enhance engineering and related sciences, by promoting a diversified, expanded and talented global workforce.

4:30 - 6:30 pm NAMEPA Regional Meetings,

Stadium Ballroom

NAMEPA Corporate Advisory Board, 4:30 – 6:30 pm

B&O Railroad

NAMEPA Officers invite key sponsors to serve on the Corporate Advocates Board (CAB). The CAB champions NAMEPA efforts and its directors of Multicultural Engineering Programs (MEP) within their respective companies and with Deans of engineering.

Explore WEPAN Committees, 5:30 – 6:30 pm Grand Ballroom

WEPAN's strategic plan positions our organization to transform culture in engineering education to promote the success of all women. Learn about the exciting ways that WEPAN committees contribute to this important work. Members of the committees will be on hand to share their recent accomplishments as well as their plans for the upcoming year. Pick up a bag, and fill it with goodies from each committee as you learn about opportunities to use your talents to contribute to WEPAN's mission!

6:30 pm - 9:00 pm Dinner on your own, join or create a dinner discussion group. Sign-ups will be located at the registration table.

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Wednesday, April 14

8:00 am - 4:00 pm

Registration Open,

Stadium Pre-Foyer

7:00 – 8:30 am

Breakfast on your own with hotel

coupon

8:30 – 9:45 am

Keynote Speaker, Grand Ballroom

Keynote sponsored by Lockheed Martin

Keynote Speaker, Grand Ballroom

Dr. Shirley Malcom, From Policy 1010 to Action 2.0: What every STEM Advocate Needs to Know

10:00 am - 4:45 pm **WEPAN Knowledge Center:** Effective use of the resource,

Stadium Pre-Fover

Jane Langeman

Stop by to create your own account and learn how to get the most from this compilation of information about women and engineering.



10:00 - 11:00 am

Paper Session: Cultivating Tomorrow's Talent,

Chesapeake

Moderator: Beverly Louie

Exploring Strategies for a University/Non-Metropolitan Community College Collaboration Mary Anderson-Rowland

This paper describes activities used in building a collaboration between a university and non-metropolitan community colleges for engineering and computer science students, with an emphasis on women and underrepresented minority students. Of special interest is a \$300 scholarship program to help transfer students with study skills and resources.

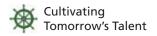
Interpreting Successes of a Community College-University Partnership in Retaining **Underrepresented Engineering Students** Heather Evans, Priti Mody-Pan

This paper utilizes assessment data from a grant-funded partnership to increase engineering degrees in Washington and demonstrates that the program may have closed the gap in experiences for minority students (versus nonminority); however, women still experience differences in academic self-confidence and concerns about work-life balance, suggesting areas for programmatic improvement.













10:00 - 11:00 am

Panel and Speaker Presentation: Cultivating Tomorrow's Talent,

Stadium 1-2

Moderator: Suzanne G. Brainard

Why So Few? Girls and Women in Science, Technology, Engineering, and Math Andresse St. Rose, Christianne Corbett, Catherine Hill

The purpose of this panel is to present recent research findings on gender equity in STEM profiled in a report released in spring, 2010, by the American Association of University Women (AAUW). The audience will learn about the latest social science research exploring why there are still so few women in certain STEM fields and what can be

done about it.



10:00 - 11:00 am

Paper Session: How to get Funding,

Stadium 3-5

Moderator: Mary Rouse

A Model for Corporate Engagement Sandra Song, Mahera Philobos

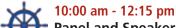
This paper will describe the Women in Engineering Program's model of corporate engagement. The levels of corporate partnership will be defined, and the opportunities the program offers for corporate visibility on campus will be described. Specific programs, including scholarships which are awarded at an annual Excellence Awards banquet will also be described, as will how our approaches can be applied to other academic contexts.

Framing Change: Feminist Theories, the Conceptual Frameworks of ADVANCE IT Grant Proposals, and the **Relationship to Program Sustainability and Success** Elizabeth Birmingham, Canan Bilen-Green, Ann Burnett

This paper asks whether the use of an explicitly feminist framework in conceptualizing an NSF ADVANCE IT grant and its programs has any relationship to the overall success of the programs on campus, if some other discipline-based model is more effective, or if the conceptual framework is an important part of effecting change.

Using Your Past to Fund Your Future: A Case **Study Examination of the Foundation-Directed Grantwriting Process From Failure to Success** Ruth Friedman, Glenda La Rue, Sharnnia Artis

Through a comparative analysis of unsuccessful and successful versions of a grant proposal in support of a single-sex pre-college summer program focused on chemical engineering, this paper delineates strategies for securing foundation support for programs that build upon, extend, and depart from an organization's current engineering outreach and recruitment initiatives.



Panel and Speaker Presentation: Policy,

University Ballroom Moderator: Brenda Hart

Retention, Migration, and Critical Mass: Conversations with Researchers Using the MIDFIELD Database Matthew Ohland, Susan Lord, Michelle Camacho, Catherine Brawner, Richard Layton, Russell Long

A multi-university longitudinal study of over 75,000 engineering student has generated results that challenge long-held beliefs, showing that engineering retention is typical of other fields, women of all races graduate from engineering at similar rates to men, and more. A twohour panel discussion will be enough time to start the discussion.



11:15 am - 12:15 pm

Workshop: Cultivating Tomorrow's Talent,

An Army of ONE! What to do When YOU are the MEP Office...

Elizabeth Bowers Cook

This one-hour workshop will provide hands-on tactics and interactive discussion based on the experiences of a very successful MEP in the southwest. The presenter will help participants coordinate and build a 'tool-kit' of successful and proven methods at managing an MEP and help you guide your program to become one of the highlights of your college/university by using the resource that you know best - YOURSELF!



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Thank you to Du Pont for providing all of the printed materials for the conference.



11:15 am - 12:15 pm

Panel and Speaker Presentation: Diversity,

Moderator: Veronica Vasquez

Demographic Changes, Identity and WISE/MSEP Programs Sheila Edwards Lange

As women and racial minorities become the majority population on campus, students are increasingly insistent that programs and services be responsive to multiple aspects of their identities. This interactive presentation will focus on student identity and engage participants in a discussion about the implications for WISE and MSEP programs.



11:15 am - 12:15 pm

Panel and Speaker Presentation: Effective Messaging,

Stadium 3-5

Moderator: Ruth E. Friedman

Engineer Your Life: Effective Communication Messages Ellen Robinson Tricia Berry, Catherine Didion, Janet Yowell

Evaluation results show that Engineer Your Life (EYL) is breaking down stereotypes in engineering, increasing high school girls' interest in engineering, and inspiring young women to explore engineering courses in college. Join us for a discussion on EYL strategies you can employ at your college/university with panelists from WGBH, NAE, CU Boulder and UT Austin.



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12:30 – 2:15 pm Keynote Luncheon, Grand Ballroom

Keynote Luncheon is sponsored by IBM

Dr. Mia Ong Advancing the Status of Women of Color in STEM: Challenges, Strengths, and the National Imperative

2:30 - 3:30 pm

Paper Session: Cultivating Tomorrow's Talent, Chesapeake

Moderator: Lily Gossage

Retaining Women Engineering Undergraduates: Does Wellness Education Make a Difference? Mary Litzinger

Some women may choose to leave engineering rather than endure the demands of completing an academically challenging curriculum while striving to gain the respect of their male peers. A wellness education program may develop the resiliency that allows females to persist in a major where they are a gendered minority.

The Science of Fire Bruk Berhane, Andre Marshall

This session will describe a novel pre-college program at the University of Maryland in which African-American and Latino middle school students were recruited to participate in a program designed to inspire students to consider an engineering career in general and fire protection engineering in particular.

Using Service Learning to Engage American Indian Students in Engineering

Sheree Watson, Heidi Sherick, Carolyn Plumb

In this paper we will report on a service learning course we have implemented at Montana State University to enhance successful programs we have in place to recruit, retain, and graduate American Indians in engineering, engineering technology, and computer science degree programs.



Research-based Tips for Cultivating Tomorrow's Talent Norman Fortenberry, Elizabeth Cady

This workshop seeks to enhance awareness of the utility of social science research for providing practical guidance for strengthening (a) awareness of engineering as a career field, (b) retention within engineering fields of study, and (c) academic advancement and success in engineering programs. Booklets and videos will be distributed.



2:30 - 3:30 pm

Panel and Speaker Presentation: Cultivating Tomorrow's Talent, Stadium 1-2 Moderator: Ann Gordon-Ross

Growing K-12 Engineering Talent: The Gateway Project Yvonne Spicer, Ellen Robinson, Cynthia Brossman

This panel presentation will discuss strategies to build interests in science, technology, engineering and math (STEM) with educational leaders, teachers, parents and students. Panelist will share proven strategies working with diverse populations as well as a few of the challenges. Particularly the panel will focus on underrepresented groups.



When Bad Things Happen to Good MEP Programs: **Successfully Adapting to Institutional Change** Susan Walden, Randa Shehab, Deborah Trytten, Cindy Foor

Using a case-study of the Multi-cultural Engineering Program at a mid-west institution, participants will read first-hand accounts of how the university's response to changing political and economic forces impacted under-represented engineering students. Participants will transfer the research into practice by translating student experiences into program design.



Jane Langeman, Didey Muniz, Elizabeth Litzler, Jenna Carpenter, Beverly Louie

Have you thought about using the WEPAN Knowledge Center (WKC) but haven't had a guided tour? This handson workshop will help you establish your WKC profile, show you WKC tools to facilitate collaboration with your colleagues, get you started in the WKC professional community, and more.





Paper Session: Cultivating Tomorrow's Talent,

Stadium 3-5

Moderator: Debra Lasich

An Analysis of a Scholarship Program for **Underrepresented Ethnic and Women Engineering** Students and its Impact on Retention and Academic **Performance**

Kenneth Simonson

This paper is an analysis of the development, implementation, and evaluation of a scholarship program for underrepresented ethnic and women engineering students. It will examine the effects of a retention program on academic performance, and the impact of the overall evaluation results on the development of future scholarship proposals.

Assessing the Factors that Influence the Career **Choices of Minority PhD Graduates in STEM Fields** Danyell Wilson, Anne Donnelly

This paper examines the factors that influenced the career decisions of a group of minority Science, Engineering, and Math (SEM) PhD graduates who participated in a professoriate preparation program while attending a research intensive institute for their graduate studies.

In Her Words: Factors Influencing African American **Women to Pursue and Complete Doctoral Degrees** in Engineering

Tiffany Simon

The purpose of this paper was to identify factors that influenced five African American women to pursue and complete doctoral degrees in engineering disciplines from their perspective. Understanding factors that impacted the enrollment and ultimate doctoral degree completion of a small sample of this severely underrepresented student population can facilitate the development and implementation of programs and policies designed to recruit, retain, and graduate women with advanced degrees in engineering disciplines.

3:45 - 5:00 pm

NAMEPA Business Meeting, Grand Ballroom

6:00 - 9:00 pm

GALA Dinner & Awards Ceremony,

ExonMobil

GALA Dinner & Awards Ceremony is sponsored by ExxonMobil

Offsite at B&O Railroad museum

Dress code for the evening is business casual to formal. Meet in the lobby beginning at 5:30 pm for transportation to the event. (We will depart from the back door of the hotel).



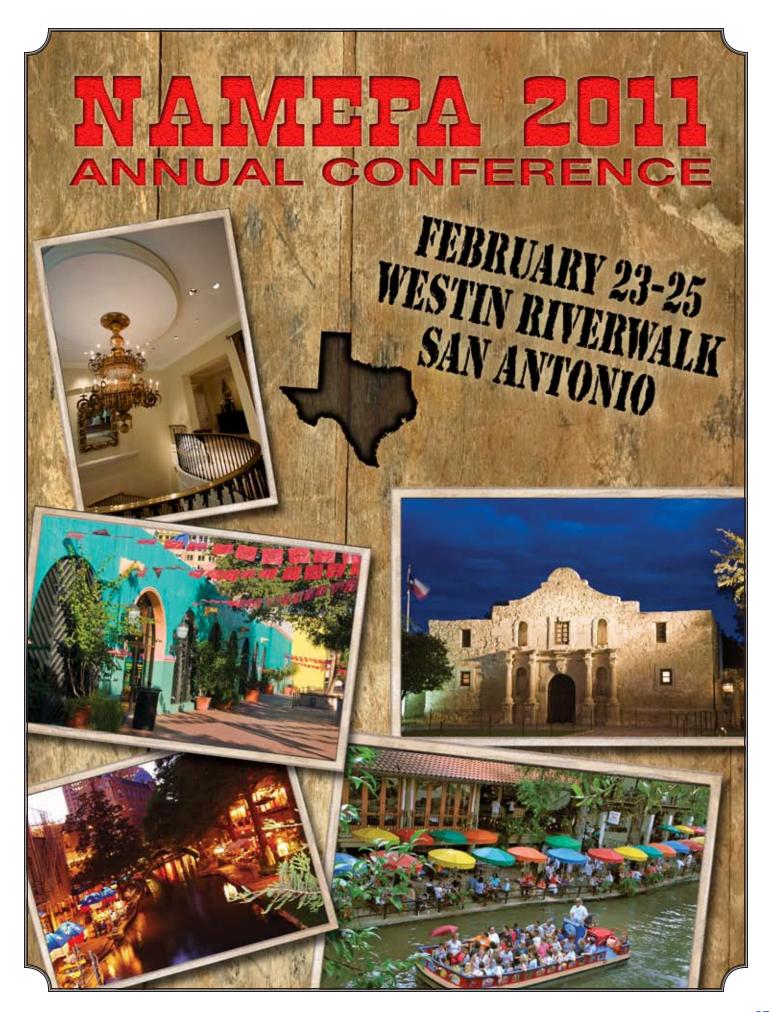
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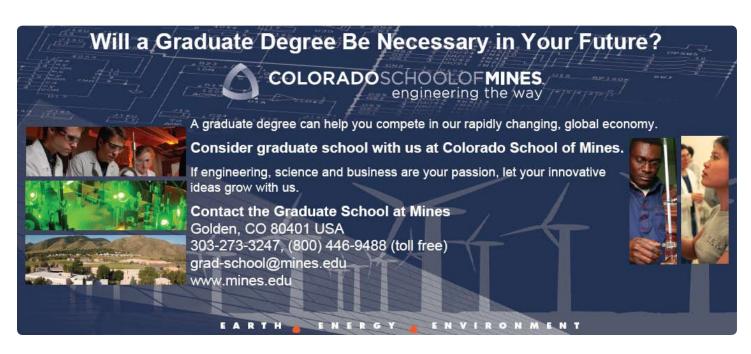
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