

CONFERENCE EVALUATION

**Summary of Findings:
Pre-Conference and Post-Conference Surveys**

**NSF Women in Engineering Leadership Summit
Storrs, Connecticut**

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Summary of Findings
Pre-Conference and Post-Conference Surveys
NSF Women in Engineering Leadership Summit
Storrs, Connecticut

INTRODUCTION

This report presents pre- and post-conference survey results for the NSF Women's Engineering Leadership Summit in Storrs, Connecticut in May 2004. This conference is part of a larger series of conferences sponsored by the Women in Engineering Leadership Institute, whose primary mission is facilitate institutional change from the "grass roots" and to ensure that a larger pool of women engineering faculty is ready to enter the academic administrative ranks. As part of this mission, the conferences are designed to ensure that women have equal access to the knowledge, preparation, and mentoring required for assuming leadership positions by fostering the training and networking of women across all types of academic institutions.

The purpose of the Leadership Summit was to bring together existing professional organizations that promote women in academia as a direct or indirect part of their mission to establish broad national goals and effective strategies for increasing the number of women leaders in academia. Representatives from organizations such as the Society of Women Engineers, Committee on the Advancement of Women Chemists, WEPAN and Committee on Status of Women in Computing Research as well as all the engineering societies, all engineering deans and other NSF-ADVANCE grantees were invited to the Summit. The primary objective of the Summit was to develop a coordinated vision and the necessary action plans to strengthen advocacy efforts aimed at increasing the number of women in academic leadership roles.

The Leadership Summit was held over a 3-day period. The main objectives of the Summit were to:

- Initiate a discussion of gaps that exist between the missions and activities of organizations currently working toward the advancement of women in engineering;
- Assess and build the broader support needs and advocacy requirements of mid-career female engineering faculty in order that more women will be ready to move into engineering leadership roles;
- Ensure successful alignment of organization missions and support needs so that organizations can continue to build their individual expertise in facilitating leadership and promoting the advancement of women in engineering with the added knowledge of the women engineering faculty needs, and
- Create an action plan consisting of several initiatives that can reasonably be accomplished during a two-year period for participating organizations to jointly pursue.

The Summit program included three keynote speakers, three panels and several workshops aimed at clarifying and identifying concrete action plans for increasing the number of women

engineering leaders. The keynote speakers included *Dr. Sheila Widnall*, Institute Professor, Massachusetts Institute of Technology and former Secretary of the U.S. Air Force, *Lucy Garliauskas*, Division Director, Federal Highway Division, Rhode Island, and *Dr. Roseanne Foti*, Associate Professor of Psychology, Virginia Tech and an expert in leadership emergence and leadership styles.

The three panels of current women leaders included an *Academics Panel*, comprising the engineering dean of Purdue University, the associate dean of engineering from the University of Utah and the senior advisor to the director of the engineering directorate at the National Science Foundation, an *Industry Executives Panel*, which included executives from Pratt & Whitney, Dupont and Northrop Grumman in addition to the County Public Works Commissioner for Buffalo, and finally, and an *Engineering Associations Panel*, featuring the national president of the American Society of Civil Engineers, the executive director of the National Society of Black Engineers, the immediate national past president of the National Society of Professional Engineers, and the vice president of the Society of Women Engineering.

The workshops included one focused on forming successful collaborative teams, identifying action items, and developing a blueprint of prioritized action items. Nine detailed blueprints outlining short and long term collaborative actions geared to meet the Summit goals emerged from the program. The nine blueprints covered Cultural Change; Incentives to Leadership; Rewards and Awards; Mentoring; External Marketing; External Support; Recruiting; Networking, and Training. Volunteers were recruited to help refine blueprints, with the intent of summarizing Summit actions in a white paper. The final agenda can be found in Appendix C.

A total of 62 participants attended the Summit. The conference attendees were surveyed twice, once prior to the conference and once after the conference. Forty-four of the 62 attendees completed the pre-conference survey and 42 of 62 attendees completed the post-conference evaluation survey. This report summarizes the results of the pre- and post-conference surveys.

PRE-CONFERENCE SURVEY

The pre-conference evaluation survey was organized into two main sections: organizational information and conference outcomes. The survey questions were aimed at eliciting information about initiatives already supported by organizations as well as characterizing the expectations for conference outcomes. Many of the questions discussed below involved respondents providing extended answers. These responses can be found in their entirety in Appendix A.

Organization Information

The pre-conference survey indicated that participants generally represented a broad spectrum of organizations as well as individual and institutional academic interests (Table 1). A range of positions in both academia and industry were reflected in the participants, including, for example, industry and research unit directors to professional society presidents. The participation composition was more heavily oriented toward academics, but with a significant number of attendees, many in industry, representing professional societies (Table 2).

Table 1. Summit Participants¹

Position	Frequency	Percent
Assoc. Chair/Com. Chair	3	6.9
Dept Chair/Head	5	11.3
Assoc Dean	10	22.7
Deans	2	4.5
Corp/Acad Dir. (Research)	4	9.1
Corp/Acad Dir. (Programmatic)	11	25.0
Corporate/Prof. Society Pres.	6	13.6
Business/Training Mgrs	3	6.9
Total	44	100.0

¹Missing responses not included in summary statistics

Table 2. Participant Representation¹

	Frequency	Percent
Industry	1	1.9
Academics	33	62.3
Prof. Societies	17	32.1
Gov. Agencies	2	3.7
Total	53	100.0

¹Missing responses not included in summary statistics

Attendees were asked to describe a variety of characteristics related to the organization they were representing (Table 3). The vast majority of participants (88%) indicated that women currently served on their professional society and/or industry/academic executive boards. Most of the participants noted that the representation of women in the organization they were representing was less than 20%, with a few noting participation in excess of 30% (e.g., SWE). Most believed

that the activities they were undertaking had little duplication with other efforts. It is interesting to note that many of the activities listed by participants were actually very similar (e.g., outreach to high schools), most of the identified activities were undertaken locally and hence, in fact, there was little overlap.

Table 3. Participant Self-Descriptions

Aspect	
Women on Executive Board (% Yes)	88.2
Percent of Organization Membership/Employees Women	
0-10%	26.4
10%-20%	34.0
20%-30%	7.5
>30%	32.1
Extent of Duplication of Activities	
Significant to Moderately High Duplication	34.8
Moderately High to Very Low Duplication	65.2
Extent to Which the Need for Increasing Women Eng. Leadership Has Been Discussed	
Never to Occasionally	45.3
Often to Very Often	54.7
Org. Has Collaborated on Activities related to Increasing Representation of Women (% Yes)	69.2
Barriers Have Been Encountered in Collaborating on Activities Related to Increasing Representation of Women (% Yes)	36.2

¹ Missing responses not included in summary statistics

Responses were split in terms of the extent to which participants believed that the need for increasing women in leadership roles was discussed in their organization. The majority of organizations had collaborated on various types of activities and few participants indicated that they had experienced barriers to collaborations. The types of prior collaborations participants primarily noted included partnering with other universities and professional organizations in outreach efforts and programs aimed at junior high and high school students, and meetings and workshops designed to increase visibility.

The primary barriers experienced by participants in prior efforts at collaboration were limited financial resources and inefficient communication channels. Participants noted that the same donor or funding agency pool was often tapped into by various organizations, which made the sharing of information and collaborations in general more difficult.

Expectations of Conference Outcomes

Attendees were also asked to identify two specific outcomes they desired from the conference (Table 4). The responses (provided verbatim in Appendix A) generally fell into four categories: networking, interest in developing new initiatives, desire to learn basic information, and exposure to successful strategies aimed at preparing women for engineering leadership positions.

In terms of networking, a large number of participants expressed a desire to build better connections between organizations and activities. A few participants identified the need for new initiatives and/or better coordination as a conference outcome. In some instances, participants indicated that a key conference outcome should be the building of a collective voice around what often become (?) disparate organizational activities.

Respondents also identified two other general categories of desired conference outcomes. There were a substantial number of individuals indicating the need for basic information related to the problems of moving women into academic leadership and for increasing the representation of women in general. The types of information identified included funding sources for initiatives, a better sense of the problems being faced by women, and basic demographic data on representation. Closely associated with basic data was a request by a fair number of participants for an elucidation of the type of strategies organizations were using to increase representation and a sense of which of those strategies were considered successful. A few participants also noted that successful strategies should be companioned by clear metrics of success.

Table 4. Briefly describe two specific conference outcomes you would like:

CATEGORY	NO. (%)	EXAMPLES OF RESPONSES
Networking	29	<ul style="list-style-type: none"> • “Building new connections between participating individuals and organizations” • “Develop[ing] a network of colleagues (from industry and academics) interested in increasing the representation of women in engineering”
New Initiatives	9	<ul style="list-style-type: none"> • “Identify a specific initiative that appropriate organizations could secure funding for and implement.” • “At the current time, there is no collective voice (professional society/organization) for engineering faculty women. How can leaders from engineering (academia, industry, professional organizations) collectively impact the number and status of academic women in academia?”
Basic Information	26	<ul style="list-style-type: none"> • “Understanding of problems other women have in the industry” • “Sources of funding for these initiatives”
Successful Strategies	30	<ul style="list-style-type: none"> • “Exposure to new ideas and successful initiatives applied at other universities that could help increase the representation of women in engineering” • “I would like to know what activities really get results”

A small number of participants identified conference outcomes that were not entirely consistent with the conference goals. For instance, one participant identified a desire for learning how to better balance career and family, while another identified “skill enhancement”. While these are important personal outcomes, it was unlikely they would be encompassed as part of the formal Summit goals and activities.

Finally, participants were also asked to identify the types of initiatives they would be willing to partner on and specifically, to expand on any initiatives for which they were considering collaboration (Table 5). Nearly three-fourths of all participants indicated a willingness to collaborate on one of three possible initiatives. However, only about 40% of the participants indicated that they (or the professional society they represented) had a specific initiative associated with increasing the representation of women in engineering for which they were ready to find partners. When asked to expand on the initiative itself, very few participants offered much more in terms of details.

Table 5. Potential Collaborations

Aspect	
Types of Initiatives Willing to Partner On:	
Recruitment of Women Faculty	77.4
Retention of Women Faculty	75.5
Increasing the No. of Women Chairs/Deans	71.7
Have an Initiative Ready to Partner On (% Yes)	37.5
Initiatives Ready for Collaboration:	
Leadership Training	
Seminars Series of Exceptional Women	
Facilitate Networking Opportunities	
Outreach Activities (e.g., High Schools)	
NSF ADVANCE Awards	

¹ Missing responses not included in summary statistics

POST-CONFERENCE EVALUATION SURVEY

The post-conference evaluation survey was divided into three main sections: questions aimed at rating specific conference events and speakers, questions aimed at eliciting qualitative assessments related to conference goals and objectives. As with the pre-conference survey, many of the questions discussed in this section involved respondents providing extended answers, these responses can be found in their entirety in Appendix B. Here, the focus is on general trends and categories of assessment.

Conference Event Ratings

Participants were asked to rate panel discussions and speaker presentations on a scale of 1 to 5, with 1 representing *Very Helpful* and 5 representing *Not Helpful* (Table 6). Most of the mean ratings for the panel events and workshops indicate that attendees generally found them to be helpful to very helpful. The most helpful panel discussions were those by the engineering professional society representatives and the engineering dean's panel. Of the three speakers, participants rated Dr. Foti's talk as very helpful (Table 7). Responses for Dr. Widnall's and Lucy Gariauskas' talks tended to vary quite a bit and suggest that their talks may have been somewhat less helpful than Dr. Foti's talk.

Table 6. Evaluation of Conference Panels/Workshops (N)

Event	1 <i>Very Helpful</i>	2	3	4	5 <i>Not Helpful</i>	Mean
Quick Presentations by Orgs	10	16	9	2	4	2.37
Industry Panel	15	16	4	2	3	2.05
Engineering Panel	17	15	3	1	3	1.92
Prof. Assoc. Panel	20	12	6	1		1.69
Leadership Exercise	9	15	8	5	1	2.32
Forming Collab. Teams	4	23	9	2	2	2.38
Actions Brainstorming	17	17	8			1.77
Blueprint Development Groups	16	16	9			1.83
Roadmap Workshop	11	18	3	2		1.88

Table 7. Evaluation of Conference Speakers (N)

Event	1 <i>Very Helpful</i>	2	3	4	5 <i>Not Helpful</i>	Mean
R. Foti	32	7	2			1.27
L. Gariauskas	7	7	17	8	1	2.71
S. Widnall	8	19	6	1	5	2.38

Conference Outcomes

To assess conference outcomes, participants were asked in a variety of ways to evaluate conference goals and objectives. The first question on the survey asked conference attendees to describe two specific personally important conference outcomes. Nearly every participant identified some aspect of networking as a personally important conference outcome (Table 8). Most conference participants also identified either the development of an action or the ability to identify and talk about common problems as the second most important conference outcome.

With respect to networking, participants expressed significant appreciation for the opportunity to “*Network with a large number of women engineering leaders*” and many noted that they were also meeting new women who could be strong allies. A significant number of participants also identified the importance of developing a concrete action plan as a personally important conference outcome. That a fair number of participants identified the opportunity to talk about common problems as an important outcome was somewhat surprising given the generally national scope of the meeting attendees (e.g., professional society officers).

Table 8. Briefly describe two personally important conference outcomes:

CATEGORY	NO. (%)	EXAMPLES OF RESPONSES
Networking	31 (41)	<ul style="list-style-type: none"> • “Meeting and talking to a group of phenomenal women in engineering leadership” • “Networking with women engineers across the board”
Developing a Plan of Action	20 (27)	<ul style="list-style-type: none"> • “The blueprint process itself – a great takeaway from the summit.” • “Identification of some specific actions to achieve more equality in engineering leadership positions”
Ability to Identify & Talk About Common Problems	16 (21)	<ul style="list-style-type: none"> • “Finding out what other institutions are doing for the advancement of women in engineering” • “Opportunity for senior women leaders in advancing diversity in engineering to convene and find common cause across disciplines and sectors”
Other	8 (11)	<ul style="list-style-type: none"> • “Learning more about what constitutes leadership” • “Rekindled my interest in seeking out challenging leadership opportunities in the academy”

Participants were also asked to assess specific Summit goals (outcomes) in terms of their personal experience at the conference (Table 9). Participants were clear that attendance had made them feel part of stronger network. Participants were in strong agreement that their understanding of leadership in academia and their understanding of the networking opportunities had increased as a result of attending the Summit. In general, participants indicated fairly agreement that all Summit goals had been achieved. The one area in which there was greater variability in the responses was with respect to developing a better understanding of how women engineering leaders can serve as a means for increasing diversity in the engineering profession, both in academia and industry. This is perhaps best captured with one participant’s comment that the least helpful aspect was the “...focus on [the] unproblematic assumption that [having] more women [will equal] more women without conversation about the goals, the future, the

limitations, and even complicity of [the] status quo in marginalizing and minimizing women’s lives.”.

Table 9. Evaluation of Conference Outcomes (N)¹

Conference Outcome	1	2	3	4	5	Mean
Feel Part of Stronger Network	20	18	3			1.59
Better Understanding of Ac./Industry Leadership Styles	17	19	4	2		1.79
Better Understanding of Networking Opportunities	8	28	4	1		1.95
Better Understanding of Women Leaders & Diversity	12	19	8	1	1	2.02
More Interested in Advancing Women Leadership	21	11	10			1.74
Summit Helped Layout Activities and Goals	12	25	4	1		1.86
Will Work Toward Achieving Summit Goals	18	20	4			1.67
Collab. Leadership is Imp. for Increasing Women Leaders	33	7	1	1		1.29
Strong Advocate for Summit Blueprints	13	20	7			1.85

¹ Scale: 1=Strongly Agree; 5=Strongly Disagree

Participants were also asked to identify those aspects of the Summit they found most and least helpful (Table 10). In terms of the most helpful aspects, participants cited the presentations, in particular Dr. Foti’s characterization of leadership, the opportunity for networking, and the development of an action plan (i.e., the blueprints). Aspects of the Summit found least helpful included the 3-minute introductory presentations and a number of structural elements such as the room being too cold, the late afternoon timing of the blueprint activity and need for additional pre-meeting material.

Table 10. Most and Least Helpful Aspects

Aspects of the Summit Found Most Helpful:
<ul style="list-style-type: none"> ▪ R. Foti’s Talk ▪ Networking/Discovering Resources ▪ Brainstorming/Sharing of Information ▪ Blueprint Development
Aspects of the Summit Found Least Helpful:
<ul style="list-style-type: none"> ▪ 3-minute Talks ▪ Structural (temperature, hotel, etc.) <ul style="list-style-type: none"> - Room Temperature - Timing of Blueprint Activity - Pre-meeting Material

A few illustrative comments related to each of the categories are shown below (all participants responses can be found in Appendix B):

What aspect of the conference did you find most helpful?

“Bringing the women together, alone, is great. Talks by panels were particularly great!”

“Opportunity to work in small groups and make some personal contacts/connections with participants; communication of goals and tasks of summit activities; finally, a concrete step forward in promoting changes for women academics”

“I learned most of the information from the industry and academic panels. The blueprints were an excellent way to get ideas and actions down on paper.”

The least helpful aspects identified by participants included,

What aspect did you find least helpful?

“Temperature (cold is better than hot, though); also, 3-minute reports from groups may not have been needed or could have been selectively chosen for their relevance to the focus.”

“I’ve participated in several similar workshops over the years, and as usual participants have varying levels of awareness of the issues facing women in engineering (other than personal experience). Perhaps some pre-meeting reading material would have been helpful.”

Suggestions for Future Conferences

Attendees also offered a wide range of suggestions to enhance future Summits. Most of these suggestions can be grouped into those related to the schedule of activities and those related to the participant composition. For example, a number of participants noted that it would be helpful to have additional time for networking and greater representation of engineering leadership. In general, most Summit participants expressed strong sentiments that the Summit had been well organized and well run.

OBSERVATIONS RELATED TO SURVEY FINDINGS

As noted in the introduction, the Summit had several important objectives,

- To initiate a discussion of gaps that exist between the missions and activities of organizations currently working toward the advancement of women in engineering;
- To assess and build the broader support needs and advocacy requirements of mid-career female engineering faculty in order that more women will be ready to move into engineering leadership roles;
- To ensure successful alignment of organization missions and support needs so that organizations can continue to build their individual expertise in facilitating leadership and promoting the advancement of women in engineering with the added knowledge of the women engineering faculty needs, and
- To create an action plan consisting of several initiatives that can reasonably be accomplished during a two-year period for participating organizations to jointly pursue.

In terms of these objectives, the Summit surveys indicate that nearly all participants identified networking as a key conference outcome. As noted in Table 8, most participants agreed that one important outcome was the opportunity to identify common problems and develop strategies to ensure progress in overcoming these problems. A third key outcome was the blueprint development. These outcomes are very consistent with the stated Summit objectives. However, it should also be noted that to some degree the long-term success of the blueprints depends on the white paper that is to be prepared.

There was a subtle, but fairly prevalent theme in the responses that suggested that more of the engineering leadership should have been present. Invitations were sent to over 700 people. These included all of the Deans of Engineering (approximately 380 names), all engineering societies (Presidents and people who participated in the LEAP and NAE Summit); All ADVANCE awardee PIs and co-PIs; Industry diversity office directors, presidents of companies who have record of funding/are pro-active towards diversity (e.g., Exxon, Dupont, Microsoft, GE, UTC.). There is little question that additional engineering leadership may have been helpful, however, the composition of the audience did not seem to hamper the blueprint development. There is also little empirical evidence to suggest that the types of identified blueprint actions are any more likely to be expediently implemented had deans and provosts actually been in attendance. In fact, a number of participants pointed to the ADVANCE program as demonstrating that, at least thus far, action comes only with resources.

In summary, the Summit was clearly successful in meeting its goals. Participants expressed strong support for the effort and emphasized that the program was well conducted.

APPENDIX A: PRE-CONFERENCE SURVEY

**Subset of Extended Participant Responses
NSF Engineering Leadership Summit, Storrs, CT**

**Pre-Conference Survey
Women in Engineering Leadership Summit
University of Connecticut, Storrs, CT**

ORGANIZATIONAL INFORMATION

1. Which of the following categories best describes your current employer?

	Frequency	Valid Percent
Industry	5	9.4
Academics	40	75.5
Prof. Assoc.	3	5.7
Gov. Agency	5	9.4

2. Some Summit participants are representing their employer; others are representing another organization or association. Which of the following best describes who you are representing at the Summit (ex. Joan works fulltime for A-1 Aeronautics but is regional vice-president for SWE. At the Summit she is representing SWE so checks professional association):

	Frequency	Valid Percent
Valid Industry	1	1.9
Academics	33	62.3
Prof. Assoc.	17	32.1
Gov. Agency	2	3.8

CONFERENCE OUTCOMES

11. Briefly describe two specific things you would like to get out of the Summit:

Outcome 1

Networking
New initiatives/ideas for supporting women faculty once hired (through and well after tenure)
DATA on how other organizations are doing with the number of women
Network with individuals/organizations with similar interests in leadership (particularly academic)
Strategies for encouraging women to pursue academic careers in engineering, and for recruiting and retaining women faculty
How to balance leadership and technical aspects of job
Better understanding of what is already happening and identification of good next steps
Knowledge of activities of others
New ideas for recruiting in all areas
Knowledge about collaborative leadership.
Advice on preparing a NSF ADVANCE Institutional Award proposal.
Learn some of the successful "best practices" at other organizations so we can apply them locally
Learn 3 things I did not know.
Clear understanding of successful recruiting and retention strategies from other Summit attendees
Ideas and metrics for evaluation of current programs
What Society of Fire Protection Engineers) and I personally can do to help WELI achieve it's mission
I would like ideas for programs for making my College (and electrical engineering in general) more attractive to women.
Information about successful programs for recruiting and retaining faculty
National perspective

Women in Engineering Leadership Institute

Women Engineering Leadership Network

Effective ways to promote women sciences
Networking opportunities
A better understanding of how industry deals with female engineering leadership
Discussion on what are the barriers to women advancing to leadership positions in industry/academia
Additional contacts
I would like to know what activities really get results
Getting to know a network of professionals that have the same goals that my organization and I do
Building new connections between participating individuals and organizations
Learn what others are doing
Renewed spirit of hope for a better understanding by institutions and their administrators of the importance of increasing the representation of women in academic leadership, especially in engineering and science. I must confess to a case of lost hope and indifference for my current school
Skill enhancement suggestions on my own leadership development
Ideas on recruitment and retention of women faculty and students
How to promote the technical fields to women, but through mainstream avenues.
Contacts in non-medical academic arenas
At the current time, there is no collective voice (professional society/organization) for engineering faculty women. How can leaders from engineering (academia, industry, professional organizations) collectively impact the number and status of academic women in academia?
Fresh ideas
An idea I can present to our Dean that will convince him to spend time on Women's Leadership issues.
Effective tools currently showing success
Strategies for retaining college women in engineering majors
Meet colleagues
Opportunity to discuss common challenges and opportunities with women in similar roles
Develop a network of colleagues (from industry and academics) interested in increasing the representation of women in engineering
Identify a specific initiative that appropriate organizations could secure funding for and implement.
Strategies for becoming an effective leader
Information on how others are developing strategies/action to effect change at the policy level of organizations
Meet potential partners for future efforts
Meet female leaders in engineering and learn about the positive and negative aspects of being a female engineering leader
Network
I am interested in learning about programs that enhance undergraduate retention of women in Engineering that can be applied to the geosciences.
Find a way to bring more women into the profession and retain them in the profession
Understanding of problems other women have in the industry

Outcome 2

Networking
Ideas for increasing the number of women faculty in engineering at NC State.
What WELI can do to help SFPE help attract more women to the field of fire protection.
I would like to form contacts with whom to share ideas and find potential collaborators on future programs.
Sources of funding for these initiatives
Mentoring
New initiative/ideas for altering faculty perceptions of women candidates
Techniques for changing culture
Information/ideas to effect change in my university

Women in Engineering Leadership Institute

Women Engineering Leadership Network

Strategies for attracting more young girls to seriously consider engineering
How to be an effective leader with the strengths normally associated with women
Meet other like-minded people
Make others aware of the results of our diversity surveys, which enable comparison of faculty diversity across disciplines nationally
Networking/collaboration
Effective ways to recruit minorities in to the sciences
Exposure to different strategies to increase female participation in engineering
Networking
Best practice of leadership development for underrepresented groups in engineering & science
Ideas for workshops for career development
Networking opportunities for both my school's program as well as my professional career.
Meet 3 people I do not know now.
Establish connections with successful female leaders in the engineering profession
Extended network of individuals to go to for support, resources and ideas
New ideas
I would like to learn how to encourage more effective collaborative leadership
Giving, receiving and discussing ideas on how to increase the number of women graduate students
Learning about what other organizations are doing
Gain support for the Women Engineers Project
Collaboration with other to minimize duplicity while maximizing impact
Strategies for working with engineering faculty to promote retention of women and minorities in engineering
Find out what other groups/organizations are doing to met the challenge
Benefit from the learning opportunities that will be provided in the working sessions
Exposure to new ideas and successful initiatives applied at other universities that could help increase the representation of women in engineering
Develop a meaningful way to communicate with organizations who want to collaborate on like initiatives in the future.
Strategies for increasing enrolment of women in engineering
I have scheduled two days of personal retreat following this conference. I am COUNTING on leaving with a set of new tools and ideas, from which I can create ideas for collaboration with young female faculty at my institution who are enthusiastic about build a case for the need of an institutional to recruiting and retaining more female faculty, and increasing the voice of female faculty in the administration
Networking with women leaders attending the conference
Ideas on developing leadership capabilities in women professionals
Updated understanding of the state of the domain of women in engineering / technical leadership
Information on successful advancement programs for faculty and students
What strategies are successful in changing the climate/culture within engineering academia?
New networks
Meet other women leaders who work in corporate relations
Information on, and opportunities to network with, individuals and agencies in the US who are undertaking work similar to that going on in Canada.
Learn about other initiatives that work for possible duplication both in the US and beyond.
Suggestions for self-study of climate in College of Engineering
Strengthening Partnerships
I am interested in other programs that promote the retention of women in academic positions.
Hope that the organization can sign on and become an active participant in this National Women Leadership Project as briefly discussed above
Ways I can help young women pursue technical careers

Women in Engineering Leadership Institute

Women Engineering Leadership Network

12. What types of initiatives do you think your organization would be willing to partner on (select all that apply)?

- 77.4% Recruitment of Women Faculty
- 75.5% Retention of Women Faculty
- 71.7% Increasing the Numbers of Women Faculty as Department Chairs and College Deans

13. Do you have an initiative for which your organization would like to establish a collaboration that would help to increase the number of women faculty or graduate students?

37.5% Yes 60.4% No

If yes, please briefly describe:

Versions of WELI leadership workshops/conferences appropriate for grad students and junior faculty
We would be happy to collaborate with other organizations (industry, academia, professional societies) to bring outstanding women engineers to our campus for seminars and networking events as role models
While our program is aimed at the high school girl, any program that brings more girls to the field will result in a greater pool for faculty or graduate students.
We would like to encourage women faculty to implement the results of their research through Technology Transfer educational opportunities geared toward members of the Connecticut transportation community.
At the university level there has been an appointment of a Director of Special Projects for Enhancing Diversity. This position is responsible for coordinating the collaboration and efforts to increase the number of women faculty and graduate students
One does not currently exist; however, this is a natural extension to our program offerings.
NSF ADVANCE Institutional Award
We are planning a future ADVANCE program. We would also like a seminar exchange with regional schools to increase our number of women seminar speakers
The NSF workshops, the department Women in Computer Science (WICS) group
Speaker series to recruit more women faculty and graduate students
The MSU IDEA (Institutional Diversity: Excellence in Action) is an initiative that addresses challenges with regard to leadership, recruitment and retention of faculty, graduate and undergraduate students
Faculty for the Future (see previous description)
Women's studies program growth into sci/engineering
Self-study of climate in College of Engineering
Would be included as part of this National Women Leadership Project

14. What was your most recent leadership role:

Position	Frequency	Valid Percent
Assoc. Chair/Com. Chair	3	6.9
Dept Chair/Head	5	11.3
Assoc Dean	10	22.7
Deans	2	4.5
Director (Research)	4	9.1
Director (Programmatic)	11	25.0
Corporate/Prof. Society President	6	13.6
Business/Training Mgrs	3	6.9

APPENDIX B: POST-CONFERENCE SURVEY

**Subset of Extended Participant Responses
NSF Engineering Leadership Summit, Storrs, CT**

Conference Evaluation
Women in Engineering Leadership Summit
University of Connecticut, Storrs, CT

Last Name: _____

Note: All information will be kept confidential

CONFERENCE PROGRAM OUTCOMES

3. Briefly describe two specific things that you consider to be personally important outcomes of this conference:

Outcome 1

Development of my own personal plan for leadership
Confirmation of complex issues needing a nonlinear discussion time (re: Monday p.m.) BTW - it really was okay - sometimes people need to process info
Meeting new people
Development of collaborative network
Networking - groups and individuals
I have great personal stories and changes reflective of the group's perspective
Seeing there are common problems
Networking with a large number of women engineering leaders
Highlighted wide variety of ways women engineer academics can be leaders
Meeting women leaders in engineering and hearing their experiences (formally during panels and informally), then reflecting on possibly considering this path in the future
Ability to participate on a blue print team to push an idea forward
Opportunity for critical mass of tenured women faculty in engineering to gather and address needs. (Measurable percentage surely-worth calculating for your report.)
Focus on women in leadership
Specific plan of action
Meeting and talking to a group of phenomenal women in engineering leadership
Exposure to other women leaders in Engineering for collaborative efforts (Provides network)
Positive ideas for next steps
Meeting new people/networking
Recognition of leadership and commitment at Summit
Networking opportunities
Personal commitment to action
Networking-especially with non academic engineering
Finding out what other institutions are doing for the advancement of women in engineering
See [questions] 5 &7
Networking with women engineers across the board
Action Items
Meeting others who share my interests and concerns. *I'm happy to volunteer (and actually help!) to review! Comment on the "culture change" paragraphs in your white paper.*
I can't tell yet
Networking
Strategies on guiding search committees.
Networking opportunities- this group contained a new set of women for me to meet.
Networking- forming personal contacts.
Met and got to know many women who could be strong allies for the work I do.
Rekindle my interest in seeking out challenging leadership opportunities in the academy.

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Identification of some specific goals to achieve more equality in engineering leadership positions.
Meeting the Engineering Women Leadership Community.
Networking with women engineers.
New ideas to implement into our leadership development program and how to concentrate on women engineers.
Buy-in of the summit goal by the entire group
Ability to know who to call at different universities/ assoc.- who is an expert in what.
Networking with other women

Outcome 2

Plan for mentoring and training in my own college
Networking and learning about resources
Looking forward to the Summit white paper and Blueprint implementation
Learning more about what constitutes leadership
I want to do more for my area of influence
information about what is being done
The Blueprints
Met and learned who are actively effecting change in culture of engineering
Becoming involved with a specific action item that I find important and will have an impact on the overall summit goal (and networking at the same time)
The blue print process itself - a great "take away" from the summit
Opportunity for "senior" women leaders in advancing diversity in engineering to convene and find common cause across disciplines and sectors.
Working on solving the issue of changing the trend
Network of people committed to action
What can I do to help this group increase the number of women in engineering leadership?
The importance of having a plan and taking risks in accomplishing professional goals
Networking with other women leaders
New knowledge from speakers and panels
Strength of networking potentials
Deeper understanding of academic culture/esp. issues, since I am not an academic.
Specific blueprints for follow up
Several ideas on what I can do to promote the mission
Networking Opportunities for me
New awareness of the limitations and possibilities of the " leadership" model (which has not historically been particularly powerful in advancing women
Visibility
Award nominations/ granted at national levels as well as nation committee assignments.
Ideas for local activities that can help with overall goals.
Getting different W/E groups together.
Seeing the Association Panel realize there is a practical next step they can take... Go to institutions and ask good questions regarding women engr leaders/
Many new contacts for networking with women leaders.
Networked with individuals that have common goals and knowledge of what these individuals' experiences/expertise/interests are.
Ideas for advancement women faculty.
The introduction to the organization that support women.
A better understanding of the lack of women in leadership positions in engineering. New ideas on how I can help as a social scientist.
Blueprint team sign-up sheets that will ensure the work moves ahead.
A refocus personally on my professional goals.

5. What aspect of the conference did you find *most* helpful?

Insight into my own personal leadership style. Brainstorming - ideas. (This happened mainly due to Industry Managers Panel.)
Program admin was great, networking
Working on blueprints
Industry/Deans/Professional Associations Panel(s). Presentation ("Women Leaders: What the Research Tell Us" by Roseanne Foti)
Bringing the women together, alone, is great. Talks by panels were particularly great!
Identification of how I can make change locally, but my local changes may not "matter" because "big" changes are being sought. Needless - I will continue to make the local changes
Watching the interactions, meeting new people/mix of backgrounds, discovering resources
3 minute lightening rounds of what was going on gave many ideas and great insight on who you needed to meet to find out more and collaborate. FINAL Blueprint exercise
Opportunity to work in small groups and make some personal contacts/connections with participants; communication of goals and tasks of summit activities; finally, a concrete step forward in promoting changes for women academics
Great food and entertainment, panels w/ Q/A
Roseanne Foti and leadership data, dean's panel, blue print process, I also enjoyed the museum tour (the tour was interesting and helped clear my mind)
Quality of participants. - smart, experienced, opinionated
Getting senior women together to focus on the issue.
Brainstorming, meeting everyone, sharing experience
Keynote(lunch) speakers and panels
* Mary McCarthy was incredibly helpful and organized Thank you!* I found the small group work and the panel discussions incredibly helpful. The industry managers' panel was motivational and informational. There was sufficient " networking" time -the meals museum and entertainment were excellent. Foti's Presentation was valuable and intriguing.
The workshop step-by-step design was very good. Do-able blueprints were developed based on the progression of collaboration.
Panels-lessons learned and pathways to success was helpful.
Personal connections and sharing of information
Deepened my understanding of academic career paths, ldrship issues. Great opportunity for networking . Personally- came at an important time in my own professional dwel.-uplifting
Sharing of information across organizations and institutions
Roseanne Foti's talk and the chance to interact with others.
Final blueprint summaries. To my surprise this were focused and overlapping
Discussion in the break out groups really helped me to get to specifics of different issues. This was also the time when there was an intense exchange of ideas.
Discussions
*insert for 4viii-as a necessary but not a sufficient step toward transforming the culture for all the woman. insert for 4ix.-some lacked vision, imagination much was same old.*1.) Meeting others who shared focus on content issues.2.)Nice to see the new networks develop for others on the general focus of the woman in Coalition.
Foti's research and Donna's data
Clearly, there is a need for an increase in the number of women leaders (esp. in academia).
Networking. Opening dialog on issues not addressed in mainstream.
A.Brainstorming ideas and worksheets. Small group discussions. B. Informal networking.
Roseanne Foti's presentation gave me a language and context to frame the discussion and activity better.
Getting to know the other women leaders. Method of developing blueprints- very useful in other venues.
Brainstorming with women (and men) that have diverse backgrounds and talking about individual and global issues participants have faced. The conference/summit focused more on leaders in academia than industry and since I am new to the academic environment it was helpful to learn about specific info/experience of those who have been in academia for some time.

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Meeting people, but I think forming the "blueprints" was probably the most important for the group.
The exercise on effective leaders and leadership styles.
I learned most of the information from the industry and academic panels. The blueprints were an excellent way to get ideas and actions down on paper.
Roseanne Foti's presentation that gave <u>very</u> useful information on leadership styles.
Roseanne's presentation at women's leadership styles. Also meeting people in leadership from eng. Organizations (even know what these org. are). Beginning to understand what the issues are.
Dean's panel, hearing their strategies

6. What aspect did you find *least* helpful?

Panels great - individual talks not very helpful. Summit action matrix talk was frustrating
Well, the temperature
None that were within control of organizers. Perhaps put WELI signs up in van windows. Drivers didn't show them (even after suggesting it) so they drove past some people who were waiting.
Lack of conclusiveness and awareness of variety of engineering/computer science departments. Tended to produce a different sort of "network"
Cold temperature was distracting.
Blueprint development in afternoon session - low energy time
Round tables too small for binders, too cold - got better, slides in activity sessions and leader probably was not necessary
The timing of the blueprint development II, I was tired and had a hard time participating; cold cold cold
Temperature (cold is better than hot, though); also, 3-minute reports from groups may not have been needed or could have been selectively chosen for their relevance to the focus.
The group could have been more diverse. I am glad that associations and industry had representatives but I think that a better mix would have helped the mix
Presentations from front of room to whole group
I had trouble interacting effectively (did not add much value in the workshops because I am not from academia (and don't even know how it works) but since everyone else at my table was the goals /language were oriented for academia.
Because this was my first WELI meeting, I felt a little "out of the loop". I am an outgoing, social person but at the reception on the first night it was difficult to meet people. It was evident that there were several people who knew each other from prior conferences and associations. I believe this is natural and non-intentional. However, as a newcomer it was difficult.
There was just too much information in the 3 minute introductions to follow what everyone is doing.
I speak nationally and have been a member of a number of "blueprint" teams, therefore the value added was limited - (networking was great though!)
Expected more on leadership from Widmall's presentation and response.
Women leaders presentation. Association Panel. Diversity and Leadership in transportation. Speakers in general-too much emphasis. So much to learn from the women in the room-could have elicited more from the remaining with less time devoted to speakers.
I've participated in several similar workshops over the years, and as usual participants have varying levels of awareness of the issues facing women in engineering (other than personal experience). Perhaps some pre-meeting reading material would have been helpful.
The introduction of organizations was too long.
Presentation on leadership styles. Sharing ideas and finding out what other institutions are doing. Becoming aware of the availability of industry.
Some of the "talks"
The relentless focus on unproblematic assumption that more woman =more woman without conversation about the goals, the future, the limitations and even complicity of status quo in marginalizing and minimizing women's lives.
Industry panel
Conference seemed to be steered by those not in leadership positions. It would be good to see more full professors and women academic leaders. Need people in positions of authority.

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Some of the exercises the first morning. Identifying a leader, identify traits. These were almost nonsense.
Lunch on Tuesdays- Need name tags to get local folks to mix with summit participants.
Got a better understanding of the academic work process should help my institute better focus its new leadership initiatives.
Presentations by groups took too long. Temperature was a negative distraction.
Nothing really, but perhaps future summits can be more inclusive of "leadership in industry" issues.
Some domineering personalities with pre-set notions disrupted free flow of info in small groups. (but would guess some would put me in that category)
Some of the discussions in larger groups were not as productive as they should be. I found working in smaller groups 5-6 produced more results.
Each group/organization giving three minute description. The information was overwhelming and was not presented in a way for me to remember the information.
Being in academia, the industry panel was interesting but not necessarily pertinent.
I did not see what Curt Everett brought to the table. I was disappointed that more Deans did not participate.
Industry panel

8. If another Summit were held what might you do differently?

Need longer break - Mondays too short. Networking time was great - needed a little more.
Less aggressive goals schedule, reading list, alt. seating for panels [around elevated panel seating]
1) More power brokers may need to be at the conference. 2) More quantitative data need to be shared.
You all did a great job. I wouldn't change anything! And - thank you!
More warmth! I think it was excellent.
Have more work done before workshop on collaboration with professional societies
Identify more concrete tasks that can be computed, eg. cultural change, large task that will take place one step at a time, have to ID precise tasks.
Change time of important blueprint development session (late afternoon on 2nd day was difficult); on survey - more general positive and needs improvement categories
Really only one thing - heat!
Desperately need more diversity -
Focus on small groups during specific tasks. Please make signup sheets available on web!
You might have a separate workshop table for us folks outside academia. However, I found a "blueprint" where I felt I had skills and interest to help on!
It is difficult to share a room. I realize it is economical, and my situation worked out fine -it just is difficult. I appreciated the longer break on Tuesday-we needed it at that point. I've always been the kid who enjoys recess- Monday could have used longer breaks.* Thank you all for your work- it is appreciated!"
Ask that people introduce themselves not their programs in the 3 minutes. It helps break the ice when you see similar fields, schools, etc. program info can go in the binder.*Uconn did a great job. This was one of the best run workshops I've seen. It was also one of the best networking events I've ever been to.*
1) Focus more on personal leadership plans. 2.) Target existing leaders (deans, Assoc. Deans, Dept heads) which separate Summit-totally different issues in some cases and ability to impact situation.
I'm stretching to find something here! Job well done in getting the right people here.* My energy feels low after passionate hand work for 3 days*
More time for learning from each other in a structured way. Presentations from the funders. Breaks that would allow people to get some exercise. I might not focus on industry at all -except how they can be useful as strategic allies. Didn't give that much time to industry-sort of lip service-which was o.k., but not that useful.
More of the existing research on gender bias could be shared.
Need to be more inclusive -not all women in academic leadership come from ladder rank family.-Dean of students-Dean of Undergraduate studies, Executive Vice Chancellor.
I'd bring more materials from my institutions to share (family friendly policies brochure) and would hope others would also!
There was more focus on academia than industry in this summit. One of the things that came out doing the last panel session and my own personal experience is that school teachers (elem, middle and high) really need to be

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educated - they can have significant influence on girls and currently they seem to have a lot of NEGATIVE influence . Can we do something about this?
I think that you should get more male participants. There are a lot of supportive male out there and males that have done a lot to promote the woman activities
More work on how to change what we teach and not just WHO is teaching and why we're teaching it- Is the point only to produce more better workers for more ,better design of more, better products ,for increased profit in private sector?
We need to get <u>more</u> of the right academic women leaders engaged. If we can't do this there is no hope for any of this. I'd like to see us tackle academics first before branching out to industry/ societies. <u>Focus!</u> Note: there are now 15-20 women engr deans and many chairs - where were they?
Why not actually invite women <u>leaders</u> ? Local dean needs to be more supportive of program. Note: Need to work <u>with</u> engineering deans not against them.
Take a picture of the entire group. Note: Great Job by Lisa, Britl + Mary. Well done.
This summit helped publicize WELI. Not introduce individuals (organization) - too time consuming. Since it will be the 2nd summit- address how different groups have "collaborated" on various women leadership issues.
No real change in my perception/attitude. Women in leadership roles in engineering are still important and valuable. There are also still a lot of obstacles especially for women of color in the greater women in eng community, but progress is being made albeit too slow and too low for me. 25 years have already passed. I'm good for only about 10 more. Women of color are so invisible to the greater community of women as women are to men. If white women can find a way to respectfully include women of color, we'll have a great leadership example for men to follow. Look a little closer at what proposal speakers have been doing so that current efforts are more supportive of summit goals. The Widnall talk didn't offer much to the dialogue. Not sure she answered any of the questions. Introduce/acknowledge all the helpers. Who is the Asian woman at the registration desk and taking pictures? Whole conference was wonderful!
Pack a sweatshirt.
Bring others (faculty, depart. Chairs, Asst/Assoc deans) and dean to this summit.
I would rotate participants with large preponderance women (as here) us 50% or so male at alternating Summits (Men should be selected to favor those who "get it." Need to project speakers name on screen or have large name cards!
It was good. Thank you!
Organize a workshop for honoring/improving leadership skills.
We are at the point now where can focus on action - who will do what and how. The leadership exercise did not really teach anything new- perhaps a vision- the typical things leaders talk about. (same with team exercise) Need more women industry leaders- their perspective is key. More highly ranked engineering school participation. I would like to learn more about Dean's office administrative jobs (high level) that are not faculty- but for staffed instead. Need a network of these folks (similar to Marie Dalen's comment at academic affairs.)
Dynamic speakers are great

APPENDIX C: SUMMIT AGENDA

NSF Engineering Leadership Summit, Storrs, CT

~ AGENDA ~

WOMEN IN ENGINEERING LEADERSHIP SUMMIT

May 3 – May 5, 2004

HOSTED BY WELI¹ AT THE UNIVERSITY OF CONNECTICUT
Funded by NSF and the UConn School of Engineering

Sunday, May 2, 2004:

- 10 a.m. – 6 p.m. Arrival and Hotel Check-In
Vans will travel to and from Hartford Bradley Airport or Amtrak Station, 45 minutes from Summit site
- 6 p.m. – 8 p.m. Registration and “Finger Food” Reception at Nathan Hale Inn on the University of Connecticut Campus

Monday, May 3, 2004:

- 8:00 – 8:30 a.m. Breakfast – Rome Ballroom
- 8:30 – 8:50 a.m. **Introduction and Objectives**
- Welcome DEAN AMIR FAGHRI, UCONN SCHOOL OF ENGINEERING
- The NSF ADVANCE program ALICE HOGAN, NSF
- Overview of Summit Objectives BRITT HOLMÉN, UCONN HOST
- 8:50 – 9:30 a.m. **Leaders & Leadership Exercise** CURTIS J. EVERETT, NSF ACADEMY
- 9:30 – 10:15 a.m. **Women Leaders: What the Research Tells Us** ROSEANNE FOTI, VIRGINIA TECH
- 10:15 – 10:30 a.m. Break
- 10:30 – noon **Introductory Presentations by Participating Organizations**
Each organization attending will give a 3 minute / one slide presentation about their organization.
- 12:00 – 1:30 p.m. Lunch with **Speaker** “DIVERSITY AND ENGINEERING LEADERSHIP IN TRANSPORTATION”
LUCY GARLIAUSKAS, FEDERAL HIGHWAY ADMINISTRATION
- 1:30 – 2:45 p.m. **Industry Managers Panel**
DEB GRUBBE (DUPONT), MARIA LEHMAN (ERIE COUNTY PUBLIC WORKS COMMISSIONER),
ALMA MARTINEZ FALLON (NORTHROP GRUMMAN), MARY ANDRIES (PRATT AND WHITNEY)
- 2:45 – 3:00 p.m. Break
- 3:00 – 4:00 p.m. **Forming Successful Collaborative Teams Workshop**

¹ Women in Engineering Leadership Institute

Establish a working strategy to ensure the Summit membership takes action on the goals and plans developed in the next two days: (a) identify required team structure; (b) identify how one can be a good team member

- 4:00 – 4:45 p.m. **Identification of Summit Actions**
Identify courses of action for Blueprint Development during remainder of Summit
- 4:45 – 5:15 pm Free Time for Participants
- 5:15 pm Meet in front of Nathan Hale Inn for bus transport to dinner
- 6:00 – 9:00 p.m. Dinner in Hartford (Wadsworth Atheneum w/docent-led tour of museum)
<http://www.wadsworthatheneum.org/>

Tuesday, May 4, 2004:

- 8:00 – 8:30 a.m. Breakfast
- 8:30 – 8:45 a.m. **Summary of Monday’s Courses of Action**
- 8:45 – 10:00 a.m. **Engineering Academia Panel**
LINDA KATEHI (PURDUE), JOANNE LIGHTY (U OF UTAH), PRISCILLA NELSON (NSF)
- 10:00 – 10:10 a.m. Break
- 10:10 – 11:20 a.m. **Summit Group: Classification of Actions and Prioritization**
- 11:20 – 11:45 a.m. **Blueprint Development I (breakout groups)**
- 12:00 – 2:00 p.m. Luncheon with **Keynote Speaker** “REMARKS ON WOMEN IN ENGINEERING LEADERSHIP” SHEILA WIDNALL, MIT
- 2:00 – 4:00 p.m. **Blueprint Development II (breakout groups)**
- 4:00 – 6:00 p.m. Free Time
- 6:00 – 9:00 p.m. Dinner and Entertainment on campus

Wednesday, May 5, 2004:

- 8:00 – 8:30 a.m. Breakfast
- 8:30 – 9:45 a.m.** **Professional Associations Panel**
SEMAHAT DEMIR (SWE), PATRICIA GALLOWAY (ASCE), TERRI HELMLINGER (NSPE), MICHELE LEZAMA (NSBE)
- 9:45 – 10:00 a.m. Break
- 10:00 – 11:15 a.m. **Blueprint Group Reports**
- 11:15 – 12:00 **Roadmap and Accountability Statements**
- Noon Box Lunches available
- 12:00 – 3:00 p.m. Departure of Attendees
Shuttle vans will depart for airport and Amtrak station from the front of the hotel.

Industry Managers Panel - Biographies

Panel Monday May 3, 2004 at 1:30 PM Rome Ballroom, University of Connecticut

Mary Andries

Pratt & Whitney - mary.andries@pw.utc.com

Mary Andries joined Pratt & Whitney in 1980 after receiving her B.S. in Mechanical Engineering at the University of Dayton. She is currently Director of Propulsion Systems Analysis Integration for Operational Commercial Engines. Mary is responsible for providing technical direction and strategic leadership for the commercial programs. Ms. Andries was awarded the 2003 P&W YWCA Women Achievers Award for Engineering and the 2003 Distinguished Engineer of the Year by the Hartford section of the American Society of Mechanical Engineers. She is a member of the American Society of Mechanical Engineers. She enjoys spending time with family, cooking, exercising and golfing. She is married with one child.

Deb Grubbe

DuPont - deborah.l.grubbe@usa.dupont.com



Deborah Grubbe is Corporate Director of Safety and Health for DuPont. She is accountable for leading new initiatives in global safety and health for the corporation. Deb was formerly the Operations and Engineering Director for DuPont Nonwovens, where she was accountable for manufacturing, engineering, safety, environmental and information systems for a \$1 billion business with 8 manufacturing facilities around the world. She is active with the Society of Women Engineers, and is a former board member of the Women in Engineering Program Advocated Network (WEPAN). Deborah graduated with a B.S. in Chemical Engineering with Highest Distinction from Purdue University.

Maria Lehman

Erie County Public Works

Maria Lehman is the current Commissioner of Public Works for Erie County. Her area of responsibility is defined by a \$100 million a year capital program, over 550 employees, 1,200 road miles, 284 bridges, 58 facilities encompassing some 280 buildings, a \$38 million annual Utility Cooperative and the County's Weights & Measures Division. Ms. Lehman is a Registered Professional Engineer with a B.S. in Civil Engineering from the State University of New York at Buffalo. She has over 23 years of multi-disciplinary experience in highway and transportation planning, environmental assessment, design, management and construction monitoring.



Alma Martinez Fallon

Northrop Grumman Newport News - president@swe.org,

Alma Martinez Fallon has worked at Northrop Grumman Newport News for 16 years. She is the manager of Planning and Manufacturing Engineering for the Structural Fabrication and Assembly Division and is responsible for leading an organization of engineers, planners, and analysts. She is currently the 41st president for the Society of Women Engineers (SWE). A native of the Dominican Republic, Fallon's parents immigrated to the United States when she was nine. She earned a bachelor's degree in mechanical engineering from Old Dominion University and a master's degree in engineering management from George Washington University.

Engineering Deans Panel - Biographies

Panel Tuesday May 4, 2004 at 8:45 AM Rome Ballroom, University of Connecticut



Janie Fouke

Michigan State University - fouke@egr.msu.edu

Dr. Janie M. Fouke, dean of the College of Engineering at Michigan State University, completed a liberal arts degree in biology at St. Andrews Presbyterian College and graduate degrees in biomedical mathematics and engineering at the University of North Carolina. Before arriving at Michigan State, she served as division director of Bioengineering and Environmental Systems at the National Science Foundation. Dr. Fouke was previously a faculty member of Case Western Reserve University's Department of Biomedical Engineering, a position she had held since 1981. Her research interests are in respiratory mechanics and instrumentation for the evaluation of the lungs. She has published roughly 100 peer reviewed manuscripts and conference papers and a dozen book chapters, editorials and proprietary reports. She served two terms as President of the IEEE/Engineering in Medicine and Biology Society, the largest professional society of bioengineers in the world.



Linda Katehi

Purdue University - katehi@ecn.purdue.edu

Dr. Linda P. B. Katehi joined Purdue in January 2002 as the John A. Edwardson Dean of Engineering and professor of electrical and computer engineering. Before joining Purdue, Dr. Katehi served on the faculty of the University of Michigan, where she was the associate dean for academic affairs in the College of Engineering and a professor of electrical engineering and computer science. Dr. Katehi is an expert in the development and characterization of microwave, millimeter-printed circuits; the computer-aided design of VLSI interconnects; the development and characterization of micromachined circuits for microwave, millimeter-wave, and submillimeter-wave applications including MEMS switches, high-Q evanescent mode filters, and MEMS devices for circuit reconfigurability; the development of low-loss lines for submillimeter-wave and terahertz-frequency applications; the theoretical and experimental study of uniplanar circuits for hybrid-monolithic and monolithic oscillator, amplifier, and mixer applications; and the theoretical and experimental characterization of photonic bandgap materials. She has five patents.



Linda Lucas

University of Alabama, Birmingham - llucas@eng.uab.edu

Dr. Linda Lucas has served in the school of Engineering since 1982 after receiving post-doctoral training at the Nordisk Institutt for Odontologisk Materials Proving in Oslo, Norway. Results of her studies have been published in over 100 publications and more than 250 presentations have been made at regional, national and international scientific meetings. Dr. Lucas is currently the President of the Biomedical Engineering Society and has also served as the president of the Society for Biomaterials, and Chair of the Scientific Review Committee of IDREF (Implant Dentistry Research & Education Foundation). Dr. Lucas' research interests include the characterization and development of bioactive coatings for dental and orthopedic devices, biocompatibility evaluations of biomaterials, biocorrosion mechanisms of dental and orthopedic materials, and bone cement development. Funding for these studies has been made available from the Whitaker Foundation, National Institutes of Health, the National Science Foundation, and various biomedical implant companies.

Engineering Associations Panel - Biographies

Panel Wednesday May 5, 2004 - 8:30 AM Rome Ballroom, University of Connecticut

Semahat S. Demir

University of Memphis - sdemir@memphis.edu



Dr. Samahat Demir is an Associate Professor of Biomedical Engineering at the University of Memphis. She received her B.S. in Electronics Engineering from Istanbul Technical University, M.S. in Biomedical Engineering from Bosphorous University, and an M.S. and Ph.D. in Electrical and Computer Engineering from Rice University. Dr. Demir's current research is in the area of computational bioengineering. Her outstanding outreach to women, minorities, and the international community includes dedicated service at the national level to Society of Women Engineers.

Patricia D. Galloway

Nielsen-Wurster Group, Inc & American Society of Civil Engineers



Patricia D. Galloway is chief executive officer and president of the Nielsen-Wurster Group, Inc., an international management consulting firm based in Princeton, N.J., and owner of a New Jersey-based winery, Unionville Winery. In 2003 Galloway was installed as the national president of the American Society of Civil Engineers. An internationally recognized leader in civil engineering and construction, she is currently the national president of the American Society of Civil Engineers.

Teresa Helmlinger

National Society of Professional Engineers - terri_helmlinger@ncsu.edu



Teresa A. Helmlinger, P.E., F.NSPE from Cary, North Carolina, is the 2003-2004 President of the National Society of Professional Engineers, the first female in the Society's 70-year history to hold the position. Ms. Helmlinger is the Assistant Vice Chancellor for Extension and Engagement and Executive Director of the North Carolina State University's Industrial Extension Service. NCSU's Industrial Extension Service marshals university, state, and federal resources to meet innovation enhancements, process improvements, technology transfer and the professional development needs of small and medium industries.

Michele Lezama

National Society of Black Engineers - mlezama@nsbe.org



Michele Lezama is the Executive Director of the National Society of Black Engineers. As such, she interacts with NSBE's 15,000 members, 30-member National Executive Board and 20-person headquarters staff. Her management responsibilities include accountability for a \$7 million budget, the publication of two national magazines, program implementation, the NSBE website, NSBE On-Line, technology, member and customer relations, development, communications, human resources and financial accounting. Prior to joining the NSBE headquarters staff in March 2000, Ms. Lezama served as director of satellite scrambling operation for Home Box Office, and associate director for broadcast operations and systems integration at CBS. She has also held a number of engineering positions with IBM,

Summit Keynote Speaker

Tuesday May 4, 2004 - noon, Rome Ballroom, University of Connecticut

Sheila Widnall

Massachusetts Institute of Technology
sheila@mit.edu



Sheila Widnall was born July 13, 1938 in Tacoma Washington. She received her B.Sc. (1960), M.S. (1961), and Sc.D. (1964) in Aeronautics and Astronautics from the [Massachusetts Institute of Technology](#). She was appointed Abby Rockefeller Mauze Professor of Aeronautics and Astronautics in 1986. She served as Associate Provost, Massachusetts Institute of Technology from 1992-1993 and as Secretary of the [Air Force](#) from 1993-1997. She was appointed Institute Professor in 1998. Professor Widnall stepped down from her position as Secretary of the Air Force on October 31, 1997 to return to her faculty position at MIT. As Secretary of the Air Force, Dr. Widnall was responsible for all the affairs of the Department of the Air Force including recruiting, organizing, training, administration, logistical support, maintenance, and welfare of personnel. During this time, the Air Force issued its long range vision statement: Global Engagement: A Vision for the 21st Century Air Force, which defined the path from the Air and Space force of today to the Space and Air Force of the next century. Dr. Widnall was also responsible for research and development and other activities prescribed by the President or the Secretary of Defense. She co-chaired the Department of Defense Task Force on Sexual Harassment and Discrimination. As Associate Provost at the Massachusetts Institute of Technology, Dr. Widnall had responsibility for academic integrity including conflict of interest policy, Federal relations, faculty retirement, tenure and promotion policies, and international programs. Dr. Widnall is Vice President of the [National Academy of Engineering](#) and a member of the Executive Committee of the [National Research Council of the National Academies](#). She is a trustee of the [Sloan Foundation](#) and the [Institute for Defense Analysis](#). She is a director of GenCorp, Inc. She has been a trustee of the [Carnegie Corporation](#) and Vice Chair of its Board, a consultant to the [MacArthur Foundation](#), a Director of [the Aerospace Corporation](#), [Draper Laboratories](#), [ANSER Corporation](#), Chemical Fabrics Incorporated and a trustee of the [Boston Museum of Science](#), and a member of the Council, [Smithsonian Institution of Washington](#). She was a member of the Carnegie Commission on Science, Technology and Government. She is a past president of the [American Association for the Advancement of Science](#) and the [American Institute of Aeronautics and Astronautics](#). She received the Lawrence Sperry Achievement Award in 1972 from the American Institute of Aeronautics; the Outstanding Achievement Award in 1975, from the [Society of Women Engineers](#); the Washburn Award in 1987, from the Boston Museum of Science; the [ASME](#) Applied Mechanics Award in 1996; the 1993 National Academy of Engineering Distinguished Service Award; in 1994 honorary Doctor of Science degree from [Princeton University](#); the 1994 [Barnard College](#) Medal of Distinction; the 1995 W. Stuart Symington Award from the Air Force Association; the 1995 [Boston USO](#) Military Service Award; the 1995 Maxwell A. Kriendler Memorial Award from the Air Force Association; the 1996 Durand Lectureship for Public Service from the American Institute of Aeronautics and Astronautics; in 1996 she was inducted into the [Women in Aviation](#) Pioneer Hall of Fame; was named 1996 New Englander of the Year by the New England Council; and received the 1998 Goddard Award from the National Space Club; the Hartinger Award from the NDIA in 1999; the Reed Aeronautics Award from the AIAA in 2000; and the Sprit of St. Louis Medal from ASME in 2001. She is a Fellow of the APS; AAAS; AIAA; the Royal Aeronautical Society and a member of the International Academy of Astronautics; the National Academy of Engineering; and a fellow of the American Academy of Arts and Sciences. She is a member of [The Seattle Mountaineers](#); [The Appalachian Mountain Club](#); The Eastern Yacht Club; [the Charles River Wheelmen](#); and the [Potomac Peddlers](#).

Summit Speaker

Monday May 3, 2004 - 9:30 AM, Rome Ballroom, University of Connecticut



Roseanne Foti

Virginia Tech
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Dr. Roseanne Foti is currently an associate professor of Psychology at Virginia Tech. Her experimental research focuses on leadership styles, especially factors related to people's perception of leaders. Dr. Foti's research encompasses how leaders emerge in small groups, the roles of traits in the leader emergence process, how follower's perceptions affect the emergence of leaders and the links between leader emergence and leader effectiveness. Differences between male and female leadership styles and the perceptions of men and women as leaders is a recent research interest of Roseanne's. Dr. Foti received her bachelor's degree from Millersville State University and master's and Ph.D. degrees in Industrial and Organizational Psychology from the University of Akron.

Summit Speaker

Monday May 3, 2004 - noon, Rome Ballroom, University of Connecticut

Lucy Garliauskas

Federal Highway Division, Rhode Island
Lucy.Garliauskas@fhwa.dot.gov

Lucy Garliauskas currently is the Federal Highway Division Administrator for Rhode Island. She serves as the senior executive and principal representative of FHWA at the state level and is responsible for overseeing federal aid program delivery and providing direction and assistance to FHWA's partners. She began her transportation career at the Maryland Department of Transportation in 1986 where she managed numerous priority highway programs and projects. Prior to her work in transportation, she held positions with the City of Evanston, IL, the DuPage Regional Planning Commission and the Federal Reserve Bank of Chicago. She has a bachelor's degree from Marygrove College, (MI) and a master's degree from the University of Chicago. Ms. Garliauskas is the recipient of the FHWA Administrator's Award in 1999 and the United States Department of Transportation Secretary's Silver Medal in 2001. She is currently a Senior Fellow with the Council for Excellence in Government. During her tenure as national president of the Women's Transportation Seminar (WTS) from 1996-98, WTS grew from 26 to 34 chapters, which was the single largest advancement in over 15 years. She currently serves on the WTS national advisory board. Last year, on their 20th anniversary, the Baltimore Chapter honored her as the "WTS Woman of the Decade."