Promoting Women as Leaders for Engineering: The Role of Individuals, Organizations and Professional Societies

WELI Leadership Summit Summary

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Acknowledgments

- Judy M. Vance (Iowa State)
- JoAnn Lighty (Utah)
- Deb Niemeier (UC Davis)
- Summit attendees and panelists
- NSF and UConn School of Engineering

WELI Goals

- Provide academic leadership training, mentoring, and networking opportunities for women engineering faculty
- Provide programs to encourage women engineering PhD students to consider an academic career
- Serve as a clearinghouse for information and data related to women in academic leadership

WELI was “born” in 2000

NSF ADVANCE grant

Principal Investigators

- JoAnn Lighty (Utah)
- Pat Nava (UTEP)
- Lisa Aultman-Hall (U Conn)
- Britt Holmén (U Conn)
- Allison MacKay (U Conn)
- Shobha Bhatia (Syracuse)
- Kelly Rusch (LSU)
- Parveen Wahid (Central FL)
- Diane Rover (Iowa State U)
- Judy Vance (Iowa State U)

Conference co-chairs/subcontractors

- Alison Flatau (MD)
- Susan Margulies (Penn)
- Sara Wadia-Fascetti (Northeastern)
- Valerie Davidson (Guelph, Canada)

NSF Award Activities

- Conferences/Workshops
  - October 2003: SWE National Conference Workshop
  - November 2003: Leadership Development Conference – University of Utah
  - May 2004: Leadership Summit – University of Connecticut
  - October 2004: Advanced Leadership Conference – Syracuse University
  - May 2005: Leadership Development Conference – Univ. of Central Florida
  - November 2005: Leadership Workshop – SWE
  - June 2006: Leadership Workshop – WEPAN
- E-community
- Website and Administration
  - www.weli.eng.iastate.edu

WELI Impact

- WELI is a unique and “needed” network of “senior” women engineering faculty
- Conference participants learn from successful women leaders about leadership and how these positions allow them to affect institutional change
- Conference participants are more prepared to enter into leadership positions and to seek additional training
- The focus on women in engineering yields an environment of openness and information exchange
Leadership Summit – May 2004

SUMMIT OBJECTIVE
To develop critical connections between existing organizations to pursue a coordinated collaborative action plan to increase the number of women leaders in industry, government and academia.

ATTENDEES
A total of 75 engineering association reps, industry reps, engineering faculty, NSF ADVANCE grant awardees, and diversity program directors.

Leadership Summit Motivations
• A network of diverse leaders is essential to the future of the engineering profession.
• Leaders are critical elements in defining organizational culture (essential to attracting and maintaining diversity in engineering).
• Women leaders will attract more women and promote diversity at all levels of engineering.
• Coordinated team efforts and resources could achieve greater overall lasting benefits than possible by individual organizations.

Critical Ideas Raised at the Summit
▪ Current efforts for women in engineering do not focus on women faculty or women managers/leaders.
▪ Women (and men) need leadership training.
▪ Engineering Associations could play a critical role in asking academia to be more diverse, as well as providing a training ground for women leaders.

Two Summit Products
1. ten blueprints for actions to increase the number of women leaders in engineering
2. the different roles of (i) individuals, (ii) industry and academic organizations, and (iii) professional engineering societies in realizing more women leaders in engineering, especially academia.

Summit Guidance for Individual Women
1. Get that technical experience (5 years?)
2. Make a career plan (even if it changes)
3. Accept challenges (especially interdisciplinary)
4. Get a mentor (with no power over you in organizational structure)
5. Get a role model
6. Get a network
7. In a leadership role
   ▪ Focus
   ▪ Strong decisions
   ▪ Communicate vision
   ▪ Mentor those behind you
   ▪ Values

Summit Guidance for Organizations
1. Change stems from top
2. Value interdisciplinary work
3. Promote mentorship and networking
4. Diversity and diverse leadership must be explicit measurement criteria for the evaluation of projects and initiatives within the organization
5. Family-friendly policies required

Academia is lagging private sector
Summit Guidance for Professional Engineering Associations

1. Demand diversity in organizations, especially academia
   - Professional associations could clearly and publicly ask universities “Where are your women department heads and deans?”
   - Develop diversity metrics

2. Public Promotion of Diversity
   - Engineering profession is not well understood by the public
3. Facilitate volunteer “trial” leadership roles
4. Provide formal leadership training

Summit Conclusions

1. Academia needs outside support
2. Training, guidance and mentoring is essential
3. Diverse engineering leadership needs a champion or group of champions

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