



Breakthrough Ideas for Gender Parity in Engineering

Regina Griego, Sandia National Labs

At the INCOSE International Workshop the Empowering Women as Leaders in Systems Engineering (EWLSE) group held a brainstorming session on “Breakthrough Ideas for Gender Parity in Engineering.” The premise of the brainstorm is that progress has been very slow or stalling for increasing women in engineering, particularly systems engineering. The exercise was to address: What are breakthrough ideas to the goal of achieving gender parity within 20 years. A tall order, but the participants in the EWLSE brainstorming session formed four groups of about 5-6 people in each and were provided ideas on visioning for a future of gender parity. The teams were named Team Amazing, Team Wonderful, Team Diversity, and Team Respect (all self-named).

The themes that came forward included: changing culture within and outside engineering companies, creating advocacy and self-accountability throughout organizations, and impacting the future through the education system.

Changing culture by far was discussed greatest by all the teams. Internal culture ideas included respect for work/life integration choices, creation of explicit local culture on teams to level the playing field, and consciously create opportunities for women leaders (make promotion path explicit, not implicit to the in-crowd). External culture included changing pop-culture’s portrayal of “women’s work or roles” and funded research on the value of gender diversity specifically in engineering.

On the theme of creating advocacy and self accountability for gender parity, ideas like creating explicit champions in the engineering line management for gender parity, training all managers to be advocates for diversity (in particular gender parity), providing mentoring groups and nurturing a mentoring environment, and encouraging everyone to self-monitor to make the culture gender-friendly.

For the last theme on impacting the future through the education system, ideas included creating more gender parity among faculty, pairing women students (in particular graduate students) with industry mentors, training engineering faculty on implicit bias and diversity awareness (particularly aimed as gender issues), hosting women engineers as visiting lectures for engineering classes, and sponsoring “take a girl to work” days regularly (not just daughters).

There was lively discussion during each group’s brainstorm. More people joined as the teams reported out and discussions were even more animated. We intend to further the conversation at the Conference on Systems Engineering Research (CSER) at Redondo Beach in Los Angeles with an EWLSE panel to be held 10:30-noon Saturday, March 25th, and again at the INCOSE IS 2017 with an EWLSE panel “Systems Engineering Leadership: Navigational Instruments and Guides.” ∞



Not For Women Only

Heidi Hahn, Los Alamos National Lab

A few links to articles and videos.

Amy Cuddy: Your Body Language Shapes Who You Are. Watch » Body language affects how others see us, but it may also change how we see ourselves. Social psychologist Amy Cuddy shows how “power posing” — standing in a posture of confidence, even when we don’t feel confident — can affect testosterone and cortisol levels in the brain, and might even have an impact on our chances for success.

I show this to my Future Female Leaders in Engineering students, and thought chapter members might enjoy it too!

The NASA Rocket Scientist Leaving Mars For Politics—From The Atlantic Monthly. After 13 years at her dream job at the Jet Propulsion Laboratory, Tracy Van Houten (who is a systems engineer, by the way!) feels newly called to run for office. Article at www.theatlantic.com/science/archive/2017/02/nasa-tracy-van-houten/517335.

Female Tech and Entrepreneur Experts Wanted: How to Get Yourself on Stage and in the Press, by Patricia Fletcher.

How one woman stopped complaining that there were no women on stage at tech events and decided to do something about it.

Read about it here: www.inc.com/patricia-fletcher/female-tech-and-entrepreneur-experts-wanted-how-to-get-yourself-on-stage-and-in-.html.

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A Survey Request

Heidi Hahn, Los Alamos National Lab

Empowering Women as Leaders in Systems Engineering (EWLSE) is a relatively new INCOSE initiative in which men and women work together as advocates for women as leaders in systems engineering. One of the interests that EWLSE has is in collaborating at the INCOSE Chapter, Regional, and Sector Levels. EWLSE is interested in knowing the level of interest in establishing such collaborations with chapters and in what form they would be most helpful. Results will be aggregated and shared with Enchantment Chapter leaders as input into their strategic plans.

Please give us your opinions on this short (5 minutes or less) survey. You will find the survey here: www.surveymonkey.com/r/EWLSE

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