



Not For Women Only

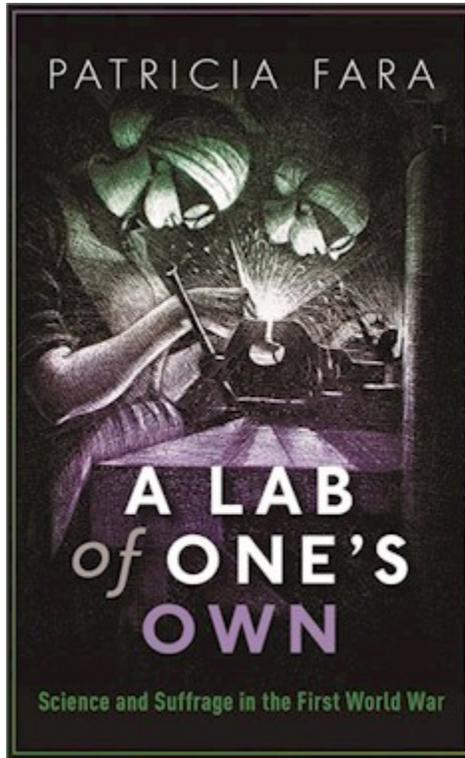
Heidi Hahn, Los Alamos National Lab

Another story along the lines of the movie *Hidden Figures* (about the critical roles played by black women at NASA in the early days), but this time the female “calculators” are unmasking Russian spies, including people like the Rosenbergs and Klaus Fuchs, who had penetrated the Manhattan Project. This should be particularly interesting to our Sandia and Los Alamos colleagues (and anyone else with an interest in WWII history):

www.smithsonianmag.com/history/women-code-breakers-unmasked-soviet-spies-180970034.

The 16 March 2018 issue of *Science* (which I’m just now getting around to reading!) was just a treasure trove of interesting articles. Summaries are linked, but full pdf is behind the AAAS paywall:

- To read something truly scary, here’s an article on how China used systems engineering to craft its modern surveillance state: <http://science.sciencemag.org/content/sci/359/6381/1206.full.pdf>.
- And one about how social inequalities such as income inequality and inequalities in learning opportunities lead to gender gaps in performance in math, science, and reading. The girls come out on top in the latter! <http://science.sciencemag.org/content/sci/359/6381/1219.full.pdf>.
- Ladies, get off social media and get back to your research: <http://science.sciencemag.org/content/sci/359/6381/1294.full.pdf>.
- Here’s one about a new book, *A Lab of One’s Own*, that shows how women prospered when they stepped into scientific roles left vacant by WWI: <http://science.sciencemag.org/content/sci/359/6381/1221.full.pdf>. Or for a freely available book excerpt, go to www.the-scientist.com/reading-frames/book-excerpt-from-a-lab-of-ones-own-30022.



What Can You Learn About Systems Engineering by Building a Lego™ Car?

Los Alamos National Laboratory’s (LANL’s) Future Female Leaders in Engineering (FFLIE) Program brings female engineering undergraduate students to the Laboratory for summer internships, which include a technical work assignment and a specialized eight-week long professional development program.

During their first year in the program, FFLIE students receive training on LANL’s Mission Assurance (MA) Program, which involves the integrated application of systems engineering (SE), project management (PM), and engineering quality and rigor (QA) to ensure mission success. The instruction is organized around the

system development project life cycle and emphasizes activities and artifacts associated with the various life cycle phases.

A home improvement project (adapted from Braakhuis, Janssen, Koudenburg, de Liefde, Malotaux, Rens, and Stevenson, 2010) is used in a series of table-top exercises throughout to illustrate various points. The training culminates with a project – building a car for a Lego™ Derby race – on which the students exercise the skills they have just learned in the classroom instruction.

In her presentation on this topic at IS2018, Heidi briefly reviewed the instructional content, with an emphasis on the activities and artifacts exercised in the Derby project; provided lessons learned; and concluded that there’s a lot one can learn about SE by building a Lego™ Derby car if the experience is properly structured! The instructional materials have now been reviewed by LANL management and approved for public release. Send Heidi an email (hahn@lanl.gov) if you would like to receive a copy.

IS2019 Preparations Underway!

The call for submissions for IS2019 is out. Proposals for papers, panels, and tutorials are due November 16, 2018. There is also an option for “paperless” presentations; proposals for those are due February 15, 2019. Info about the submission process and templates are at: www.incose.org/docs/default-source/events-documents/is2019/promotion/is2019-call-for-submissions.pdf?sfvrsn=c22095c6_6.

Ann (Hodges) and Heidi are well along on their paper (working title “Integrating Program/Project Management and Systems Engineering in Practice”) that captures learnings from the tutorial they gave for the chapter and at IS2018. We hope to see great representation of chapter members’ work in Orlando next summer, so get crackin’. November will be here before we know it! ∞

Intel’s 2017 Diversity & Inclusion Annual Report—It’s Working!

Barbara Whye, Intel Vice President, excerpted from [here](#):

If we want to shape the future of technology, we must be representative of that future. [Read the 2017 report here](#).

Our progress

Since 2015, our gap to full representation in our U.S. workforce has narrowed from 2,300 employees to 376 employees—an 84 percent improvement.

Our female representation continues to increase and currently stands at 26.5 percent, a key driver in our overall progress.

For women and Hispanic and Native American populations, the growth in our leadership positions exceeded the overall population growth of these groups at Intel. These are promising signs

for our progression goals.

What’s next?

Our first leg of this journey is to create a workforce that reflects the diversity of the skilled labor market available—which I’m proud to say we’re on track to do.

Our CEO, Brian Krzanich, and I share a vision for a future where Intel’s population mirrors that of the U.S. population and is fully, truly representative.

We want to make this industry better and accessible for all of our children—so they can find the same joy and opportunities in this exciting industry that impacts and changes our world.

[Editor: diversity is numeric, inclusion is cultural.] ∞