

Applauding Livermore Women in Computing

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Introduction

Starting in Fall 2013, the Lawrence Livermore Laboratory Women's Association (LLLWA) launched an innovative, inexpensive project to acknowledge both the technical and administrative accomplishments of women on the professional staff at Lawrence Livermore National Laboratory (LLNL). After completing one full fiscal-year cycle, this "applauds" effort has cited 122 female staff members, of whom 36 are computer scientists or computer engineers (about double their percentage in the lab population). This article describes the project and its impact on the workplace community.

Project Design

The "applauds project" was conceived and designed by Nadine R. Horner (horner7@llnl.gov), who during 2013-2014 served as president of LLLWA (and who is also LLNL's external relations officer). Horner has explained her leadership approach as "reinvigorating LLLWA's commitment to the contributions of lab women by advocating through action. This project embodies that approach". It involves two simple actions that further the association's goal of providing "encouragement and support for professional growth." Those actions are:

- (1) sending lab women with newsworthy achievements a private, personalized, congratulatory e-mail (always headed "LLLWA applauds x," from which the project gets its name), and then, if they agree,
- (2) posting a similar lab-public note on the LLLWA Labbook (corporate internal Facebook-like) page the same day for anyone at LLNL to see.

These particular actions were needed because LLNL's scale (6000 people spread across 1.2 square miles in over 100 buildings) makes direct praise for the success of colleagues hard for most busy employees. Also, unlike superficially similar programs elsewhere that focus externally, on customer outreach or loyalty, this internal effort targets building staff morale. The posting rate is somewhat bursty because accomplishments sometimes cluster around events (journal issues, annual meetings, etc.), but it averaged over two applauds messages per week throughout the year. At LLNL, a single volunteer retiree executed the entire applauds project from September 2013, through October 2014.

Computer Science/Computer Engineering Cases

The computing accomplishments recognized by this project span the whole spectrum of possibilities (and staff levels). Some are hardware-oriented or operational achievements. For example, LLLWA applauded:

- Anna Marie Bailey (a facilities manager) and Becky Springmeyer (a group leader) for returning from the Supercomputing 2013 conference with HPCWire's "Best application of green computing in HPC" certificate.
- Denise Hinkel for co-authoring a proposal to the U.S. Department of Energy's INCITE program that earned her 200 million core hours on a DOE supercomputer to simulate the kind of laser-plasma interactions seen at LLNL's National Ignition Facility.

LLLWA acknowledged other women for their software-oriented successes, for instance:

- Lisa Poyneer, a computer engineer, for developing algorithms used to correct for atmospheric turbulence and then testing them on the adaptive optics of the Gemini Planet Imager.
- Shea Gardner, whose 2003 bioinformatics work on PCR assays for hepatitis A finally completed 10 years of verification tests and was added to the U.S. Food and Drug Administration's Bacteriological Analytical Manual in March, 2014.

Finally, LLLWA also applauded administrative accomplishments or work-related extensions of intellectual life. Computing professionals typifying such successes included:

- Brenda Ianiro, who earned her Lean Six Sigma yellow belt certification for process improvement in information technology.
- Angeline Lee, who organized and hosted the LLNL Computation Directorate's fifth Hackathon event.
- Jessie Gaylord, Marisol Gamboa, and Robyne Teslich, who joined other LLNL women (also applauded) in the lab's first Google+ Hangout discussion for young women on "Find your STEM role model," sponsored by DOE and NASA.

Participation Rate

Although the Computation Directorate accounts for about 16% of the LLNL staff, its women earned just under 30% of the LLLWA applauds messages throughout the 2013-2014 year. This is partly because computing is an especially robust technical area at LLNL that touches almost every research project at the laboratory. And partly the Computation Directorate, under the leadership of Dona L. Crawford, actively shares its adventures through many paths, from formal announcements and public-relations stories to informal mailing lists and a monthly directorate-wide online newsletter. All of this makes the

contributions of its women members easier to discover. (Of course, LLLWA's applauds project always tries to acknowledge each woman's underlying accomplishment, not the mere fact that it was mentioned enough to allow it to be discovered.)

Dual Impact

The applauds project has had a positive impact not only on the women who received its individual messages, but also on the broader institutional community.

Of those applauded, only one declined the public posting (because she was involved in national security work) and fully half have sent LLLWA unsolicited but enthusiastic notes of thanks. Clearly, receiving a short, private, but personalized acknowledgement for one's professional success engenders deserved pride, along with gratitude and some times just relief that someone has noticed. The applauds messages, although not intended as a recruiting tool, have also often triggered more volunteer engagement with the women's association. They sometimes prompted recipients to attend LLLWA networking events or to donate at the annual scholarship fundraiser (whose attendance rose 30% during the applauds-project year). Finally, each message also provides personal encouragement that busy adults sometimes do not hear from equally busy supervisors or mentors.

Everyone in the institutional community benefits indirectly as well. "LLLWA applauds" public postings (slightly) increase the professional visibility of every applauded woman, which expands at least a little the set of community members now aware of her abilities and their successful application to some challenge or opportunity. This makes it easier for others to recruit or tap that talent when they face future challenges, a boost for mutually beneficial collaborations.

Likewise, while ignored or secret successes can still have positive consequences, they cannot inspire others nor serve as role models for junior colleagues. The gentle, open sharing of technical and work-related achievements turns each one into an explicit example for others of what they too can do or try. Tony Baylis, head of LLNL's Office of Strategic Diversity and Inclusion, appreciates how "such sharing of the breadth, depth, and value of the work of laboratory women fosters confidence in and participation by every staff member." Unlike public-relations announcements, which outwardly promote the institution that issues them, applauds messages work within, inspiring individuals and strengthening the professional environment.

Conclusion

In her recent short *Science* article on enhancing social and economic development worldwide, Melinda Gates (2014) repeatedly stresses the impact of GEWE (gender equality and women's empowerment):

"change requires innovative thinking to help women...overcome the structural barriers to equality" (p. 1274). In a professional, institutional context, LLLWA's applauds project illustrates the possible reach and benefits of such basic yet innovative thinking. Indeed, plans are now underway to carry this effort forward as a service of LLNL's Diversity office.

One Sentence Teaser

An innovative, inexpensive project to salute professional accomplishments at work.

About the Author

T. R. Girill is a Visiting Scientist at Lawrence Livermore National Laboratory and recipient of the 2001 Outstanding Contribution Award from ACM's Special Interest Group on Design of Communication (formerly, Documentation).

References

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