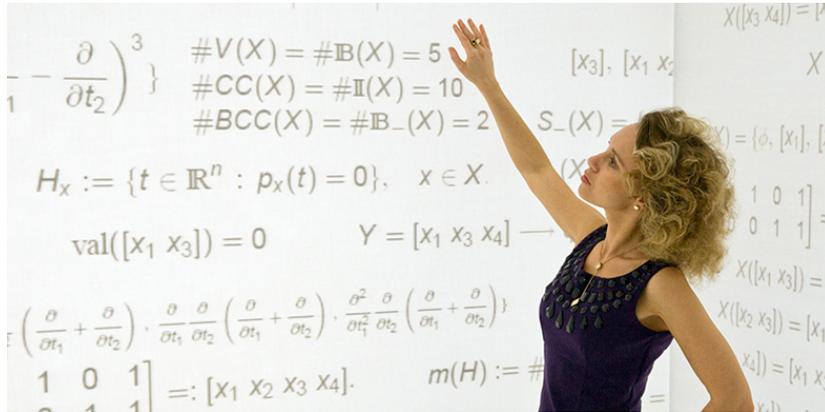


Peer recognition is not always gender blind

02.04.2014 | [In person](#)

Author: [Ursula Keller](#)

In academia success is highly dependent on peer recognition. Recognition, however, is not entirely free from gender bias. Columnist Ursula Keller sheds light on the issue.



More recognition for women in the STEM fields: Prof. Dr. Olga Holtz at the TU Institute for Mathematics in Berlin has garnered several honors. (Photo: © TU Berlin/Pressestelle/Dahl)

My last column highlighted the fact that two of the four preliminary candidates up for the ETH Rector position were women. As the candidacy continues for the ETH Rector position, I am proud to see that diversity has been maintained with one female professor and one male professor making it to the final round.

Returning to my personal experience, I would like to address the topic of peer recognition in the context of academic careers. I hope to illustrate the effects of peer recognition and how they can differ for men and women in STEM fields.

As I wrote in my first column, “I have an exciting, exhilarating and fulfilling job” as an ETH professor. My primary responsibilities on the job are education, research, innovation and knowledge transfer. I compare it to running a small high-tech company where I am both the CEO and CTO. My “products” are educated students at the Bachelor’s, Master’s and doctoral levels and the research results generated by my group, which includes students, post-doctoral researchers and senior scientists. My operation budget consists of base funding from ETH and of external funds acquired through competitive applications to the SNF, KTI, EU, industry etc. In essence, the better my “products” are, the more success I will have in the acquisition of external funding.

So, how does this differ from a commercial company? The success of a company depends on satisfied customers. In universities, however, success is largely judged by your peers who are often your direct competitors as well. Your results are shared in peer-reviewed journal publications, so that they can be repeated and reproduced by other groups. Furthermore, you typically have your “employees” for four years; they begin with very little experience and leave as soon as they are fully qualified.

To give up your qualified workforce so quickly would obviously not be in the best interest of a commercial company, but our mission here at ETH Zurich is to educate and develop our students. This benefits industry and other universities (from which, in turn, ETH recruits qualified post-docs).

Over an academic career, an individual develops name recognition first by working as a Ph.D. student and post-doc with well-known professors and then later by establishing an excellent track record of their own work. Eventually, as the senior author on publications, the professor (as CEO

and CTO) provides the stamp of quality and a “brand name”. This benefits both the professor and his or her research group in a fair, well-justified and efficient way.

I started my career in applied physics, making lasers. This had the advantage that nobody could really question the results when a laser sets a new standard for performance. I could publish my papers without too much trouble, and even my most competitive peers had to acknowledge my successful results. I am deeply satisfied to know that my invention of the SESAM device changed the field of ultrafast lasers, became the industry standard and enabled many new applications in both industry and basic science. I have satisfied customers.

In contrast to my earlier, applied work, I started a new basic research effort in attosecond science after about 8 years at ETH Zurich. In this context, I have experienced the more difficult side of peer recognition, where success is evaluated mainly by one’s competitors. Fortunately, I was more experienced by this time and benefitted from the reputation that I had established through my applied research. In addition, I maintained my applied research track so I had continuing success in that area and a diversified base for my funding applications.

But is there a difference for women and men, and if so, why? Peer recognition is challenging for all academics. There is, however, compelling evidence that the abilities and qualifications of women are judged more harshly than those of their male colleagues, and by men and women alike. In a study published in 2013 by [Corrine Moss-Racusin \(Yale\)](#), a CV that was identical except for a recognizably male or female name was circulated to academics who were asked to assess the level at which they would appoint the potential candidate. The salary offered to the female candidate was significantly lower.

These stereotypic reactions also affect how students judge their male and female professors. In 2010, [Amy Bug presented a study in the Physics Review](#), in which a team of trained female and male actors taught the same physics class using the same material in exactly the same manner. The students then evaluated their teaching skills, clearly ranking the male “professors” higher. Both women and men need to have a better understanding of such stereotypic reactions because they affect everything that we do and what we can achieve. We need to become more aware of our unconscious biases and learn to counteract them, learn to value talented women scientists and engineers and welcome female leadership. Because unconscious bias is still prevalent, additional measures must be taken to empower more women in the STEM fields. Since ETH Zurich educates future management for industry and future professors for academia, it has a responsibility to prepare the next generation to function effectively in a more diverse leadership culture.



About the Author

Ursula Keller was born 1959 in Zug. She has been a physics professor at ETH since 1993, and director of the NCCR MUST since 2010. She obtained her Masters at ETH Zurich in 1984, and her Ph.D. at Stanford University in 1989, and before returning to ETH she worked as an independent researcher at AT&T Bell Laboratories. Her current research group explores ultrafast science and laser technology, using this competitive know-how to understand and control fundamental charge and energy transport with atomic spatial and attosecond temporal resolution. Ursula has received several international prizes, as well as a European Research Council (ERC) Advanced Grant. She currently serves as the president of the ETH Women Professors Forum ([ETH WPF](#)).