



## SEAS Center for Women in Engineering

Winter 2020

Publishing Your Research

Taking Credit

A leading researcher from a major University published an article in Nature magazine. She sent a note to a listserv for women scientists, saying: “I was initially hesitant to send this because of the negative perception of women who “self promote.”

Mark Lerchenmueller (2017) noted women made up generally fewer than 20% of STEM faculty and in some disciplines much less; 21% are full professors and fewer still become Department Chairs. If half the awarded PhDs are going to women, then where are the women? One issue is the lack of advancement of women beyond assistant professor (only about 1/3 of associate professors are women), though research does show that women achieve early research success.

Why the drop-off in advancement for women? In his paper from 2016, Lerchenmueller reviewed changes in representation of women among first authors of original research published in high impact general medical journals from 1994 to 2014, and investigated differences between journals. In high impact general medical journals (37%) representation of first-author women has plateaued in recent years and has declined in some journals. A 2018 paper focusing on life science noted that women transition to principal investigator at about a 20% lower rate than men. Gender differences in publication records can explain about 60% of this lower rate. The remaining differential stems from women receiving less credit for their citations.

Why is there a credit difference? One article from the Washington Post (2019) cites a paper by Lerchenmueller (2019) suggesting that, again in life sciences, men and women differ in how positively they frame their research findings. Particularly in the highest impact journals men were found to be more likely to present research findings with strong words and positive titles and abstracts, compared with articles in which both the first and last author were women. Positive presentation of research findings was associated with higher downstream citations. One study (King, et al, 2019) noted that men self-cited 70 percent more than women.

Do factors of positive presentation and self-citation bring more attention to men’s work? Does these factors lead to further research funding and support? There is no research to verify those connections, but there is enough to suggest a few action items.

- Order of authorship matters! Women and underrepresented minorities should be encouraged and mentored to establish their research and generate ‘first author’ papers.
- Public presentations and strong acknowledgement of your work is important. Female faculty should take advantage of opportunities to present their work. Women often shrink back from credit and this is a trait to be abandoned (Scharf, 2014).

- As a SEAS faculty body, we should take opportunities to nominate women and underrepresented minority colleagues for awards and honors

## References

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