



## **The impact of gender and nationality on winning a professional society award**

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Women are under-represented for science awards and fellow status in professional science societies (accounting for career stage) and are over-represented for teaching and service awards (Ball et al., 2015; Lincoln et al., 2012; Holmes et al., 2011). In addition, for the American Geophysical Union, non-U.S. members are under-represented among all awardees. Gender bias in evaluation processes are well-documented (e.g., Valian, 1999), and cultural differences are at play in the under-representation of non U.S. members. U.S. members are more likely to nominate their peers for awards, and to write effusive letters to support the nomination (Ball et al., 2015).

There are effective mechanisms to reduce bias in both nomination and evaluation processes, a few of which are: 1) separate the nomination and evaluation processes by creating nomination committees of a diverse group of people who actively seek potential nominees and promote their nominations; this expands the pool of nominees; 2) educate nomination and evaluation committees on the research that demonstrates the impact of implicit bias on nomination and selection processes (e.g., <http://www.enei.org.uk/pages/unconscious-bias.html>; <http://wiseli.engr.wisc.edu/bias.php>); 3) minimize use of simple bibliometric indices, which are known to exhibit gender bias (men self-cite more than women; Maliniak et al., 2013) and nationality bias (papers in English language journals are more likely to be cited than non-English journals (Bornmann et al., 2012; González-Alcaide et al., 2012)); 4) members of the selection committee should understand the effects of gender on the quality of letters written for women (Trix and Psenka, 2003); 5) establish and follow clear criteria for the award.

Professional societies can promote fairness and inclusion by self-study: find and compile the data on the gender, race, ethnicity and nationality of members who are nominated for and win awards, as well as on who is doing the nominating. Compare these data with membership demographics to reveal where in the awards process procedures could be improved. For the AGU, after working to enact the recommendations above for five years, we have begun to see an increase in the number of women nominated for and winning awards. Future efforts will include non-U.S. members as well.