

Abstract Submitted
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Gender differences in collaboration patterns¹ XIAOHAN ZENG, Northwestern University, JORDI DUCH, MARTA SALES-PARDO, Universitat Rovira i Virgili, FILIPPO RADICCHI, Indiana University, HAROLDO V. RIBEIRO, Universidade Estadual de Maringa, TERESA K. WOODRUFF, Northwestern University, LUIS A.N. AMARAL, Northwestern University, Howard Hughes Medical Institute — Collaboration plays an increasingly important role in research productivity and impact. However, it remains unclear whether female and male researchers in science, technology, engineering and mathematical (STEM) disciplines differ significantly from each other in their collaboration propensity. Here, we report on an empirical analysis of the complete publication records of 3,920 faculty members in six STEM disciplines at selected top U.S. research universities. We find that while female faculty have significantly fewer co-authors over their careers, this can be fully explained by their lower number of publications. Indeed, we also find that females tend to distribute their co-authoring opportunities among their co-authors more evenly than males do. Our results suggest that females have had a greater propensity to collaborate, in order to succeed in a historically men-dominated academic world. Surprisingly, we find evidence that in molecular biology there has been a gender segregation within sub-disciplines. Female faculty in molecular biology departments tend to collaborate with smaller teams and publish in journals and fields where typical team size is smaller. Our results identify gender-specific collaborative behaviors as well as disciplines with distinct patterns.

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