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**Quantitative Evaluation of Gender Bias in Astronomical Publications from Citation Counts**

**Abstract**

Diversity is essential to delivering excellence in science. However, gender inequality and biases seem to be persistent in the scientific community. I will present the study in which we tried to measure the role of gender on the number of citations that papers receive in astronomy. We gathered metadata on the large fraction of the papers published in astronomy and computed difference between citation counts between papers with female or male first author. To account for the fact that the properties of female and male first author papers differ intrinsically, we used a random forest algorithm to control for the non-gender specific properties of these papers. I will argue that the papers authored by females received  $10.4 \pm 0.9\%$  fewer citations than what would be expected if the papers with the same non-gender specific properties were written by the male authors.