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Are you a “physics person”? Understanding students’ experiences, identities, and beliefs¹

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For several years, there has been much attention paid to the dearth of women in physics. Discussion has centered on various explanatory frameworks as to why women do not pursue physics in college as a career and on their persistence in such pursuits. In this talk, I will summarize efforts by our group to investigate recruitment and persistence issues for women in high school and undergraduate physics. Viewed through the lens of identity, we have repeatedly seen the importance of high school students’ beliefs about the recognition they receive as a “physics person” to their identity development (especially so for women) and, ultimately, their physics-related career choices. Separately, we have studied the ways in which students evaluate their male and female physics teachers, which is an avenue to unravel students’ beliefs and (possible) gender biases towards competency in physics. We have found statistically significant and replicable bias (in repeated independent measurements) against female physics teachers, exhibited by both male and female students. Lastly, I will report on a series of interventions that we have implemented in introductory college physics classrooms as attempts to positively affect women’s attitudes towards physics, and their physics identities specifically.

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