Despite some efforts to encourage women to pursue a career in physics, the percentage of women majoring in physics remains low. There are several frameworks that focus on the dearth of women in physics, which take into account motivational characteristics, e.g., interest in physics, self-efficacy, mindset about intelligence, sense of belonging, and identity as a physicist. We performed a longitudinal analysis of these motivational characteristics of female and male college students in large physics courses along with their performance in those courses. Among other findings, our data suggest that female students had lower physics self-efficacy than male students, even when controlling for performance. Moreover, this self-efficacy gap continued to grow throughout the college introductory physics course sequence. Based upon these findings, we implemented short in-class activities that were designed to improve the inclusivity in the physics courses and address issues related to students' sense of belonging, self-efficacy and intelligence mindset. We found that female students in physics classes who participated in these activities performed significantly better than those who did not, and they were also less likely to withdraw from the courses. These findings also have implications for mentoring a diverse group of students. This workshop will focus on the framework that underlies this type of intervention and participants will be asked to collaboratively consider how they may adapt this type of intervention in their own classroom.

Sponsored by the Department of Physics and Astronomy and TRIAD • Please RSVP: http://bit.ly/2SzePhh

Chandralekha will also be giving a Departmental Colloquium on Wednesday, February 20 at 10:30 am in the Physics Lecture Hall entitled “Facilitating thinking and learning in and beyond the physics classrooms”.