

# PHYSICS AND ASTRONOMY COLLOQUIUM

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Active Learning in Upper-Division Physics:  
Lessons from the Paradigms

The Paradigms in Physics program at Oregon State is a comprehensive reform of the upper-division Physics curriculum. I will share lessons we have learned through the process about how to teach upper-division Physics well, and how to go about reforming the curriculum. I will focus on two projects. First, I will discuss integrating computing into the curriculum, with the perspective that every physicist needs to be able to use programming effectively. Then I will discuss our work on improving student understanding of partial derivatives in the context of thermodynamics.



**THURSDAY, SEPTEMBER 26, 2013 | 4:00 PM | HAWKING AUDITORIUM**



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TEXAS A&M UNIVERSITY