Re-activating the Intro Physics Classrooms at Smith
(or “Physics at Smith is 2-COOL”)

The past 20+ years has seen an explosion of innovation in pedagogy related to teaching Introductory Physics at the college level, and indeed has spawned a new field of research called Physics Education Research (PER). In the Physics department at Smith College, we recognized this revolution in teaching practice early on, and incorporated effective PER-based techniques in the traditional Lecture + Lab format as best we could, while simultaneously eyeing with some envy our colleagues who pursued an integrated lab & lecture approaches at other institutions. In 2012, the Physics department at Smith had an opportunity to integrate the lab and lecture in our introductory physics courses, due to newly availability space.

In this talk, I will tell the story of how we made the transition from a traditional format to an integrated lab and lecture. I will include some discussion of which elements of PER-based pedagogy we chose to adopt, and some discussion of the effectiveness of our implementation compared to the traditional format as assessed by the FCI. Concurrently, we started a Learning Assistant program to help train students as partners in the intro physics classrooms, and I will discuss their role in the new format, which is integral to the success of our approach.

Smith has also introduced a Physics Education track within the Physics major for students who are passionate about physics as well as teaching. This was met with enthusiasm by both STEM students and the Education department.