



Physics Colloquium



Tuesday, October 1, 2019, 3:30PM in SC 10

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Investigative Science Learning Environment: Can students learn science by practicing it?

Success in the 21st century is determined by one's ability to pose problems and seek multiple solutions, to evaluate assumptions, and to cope with uncertainty in the answer.

Around the world the knowledge of content (conceptual and quantitative) stops being the only goal of education. The engagement in the processes of science emerges as another equally important goal. How do we help our students achieve both? In this talk I will describe a learning system that naturally and seamlessly engages students in the above practices, helps them develop the 21st century abilities, and can be implemented without major revisions to the infrastructure.

The learning system, called Investigative Science Learning Environment (ISLE), helps students learn physics by systematically engaging them in the processes that mirror the practice of physics. It is also consistent with the Universal Design framework that focuses on giving access to education to all students. ISLE is based on the findings of brain research, history of physics, and physics education research and is supported by a set of comprehensive curriculum materials and numerous studies of student learning. In this talk I will discuss elements of ISLE and show how to apply ISLE framework to re-design physics courses.

Refreshments at 3:00PM in SC 103