

# Presentation by Prof. Olivier Espinosa from Chile

Date: Tuesday, February 23, 2010

Time: 11:00 AM

Place: CSMT, Room 263. Sci/Tech Bldg.

Professor Olivier Espinosa is visiting the Center for Science and Mathematics Teaching for a week from Universidad Tecnica Federico Santa Maria in Chile. Professor Espinosa will be giving a presentation at the Center which is in Room 263, Science and Technology Building at 11am on Tuesday, February 23. Come hear about the challenges and successes of improving physics instruction for engineering students.

Ron Thornton

## **Conceptual Learning from ILDs in an Engineering School in Chile**

In this talk I will report on the learning results obtained from the implementation of a subset of the Interactive Lecture Demonstrations, developed by D. Sokoloff and R. Thornton, in a standard introductory calculus-based mechanics course taken by first year engineering students at Universidad Técnica Federico Santa María, in Chile. I will describe both the institutional and educational contexts in which this implementation was carried out.

Last semester (second semester of the 2009 academic year) about 800 students enrolled in the referred course were taught in mostly traditional lectures, in 14 different sections. ILDs were used in 4 of these sections, reaching about 200 students. Additionally, about 200 students from all sections participated in University of Washington Tutorials in Introductory Physics, which were carried out in recitation sessions. The learning gain was measured through the FMCE (Force and Motion Conceptual Evaluation), taken as pre- and posttest. Significant differences were found for the normalized gains in the FMCE, depending on whether the students had done both ILD and Tutorials, one but not the other, or neither of the two.

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