

**PHYSICS & ASTRONOMY COLLOQUIUM
UNIVERSITY OF WISCONSIN – STEVENS POINT**

FRIDAY, OCT 4, 2013

2:00 PM

Room A106 SCI

Dr. Jennifer Docktor

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**Eye movements while interpreting graphical
representations of motion**



Dr. Jennifer Docktor is an Assistant Professor in the Physics Department at the University of Wisconsin – La Crosse. She received her Ph.D. in Physics in 2009 from the University of Minnesota, specializing in Physics Education Research. She spent two years as a postdoctoral fellow in Cognitive Science at the University of Illinois at Urbana-Champaign before coming to La Crosse in 2011. In addition to her work on secondary teacher education, she studies physics learning and cognition with applications to problem solving. Her recent focus has been on using eye tracking technology to investigate multiple representations and the design of instructional materials.

ABSTRACT: Multiple representations are important for learning physics concepts and solving problems (e.g. interpreting text, equations, pictures, diagrams, and graphs), yet students often struggle to make sense of these representations. This study investigates how introductory students and graduate students view and interpret motion graphs. Participants viewed several graphs of position, velocity, or acceleration on a computer screen and were asked to match a region of the graph with a description of the object's motion. I will compare performance on the questions with eye movements recorded using an eye tracker.

*Faculty, staff and students are cordially invited to attend.
Refreshments will be served beginning at 1:45 pm*