



Physics Guest Speaker – Eugenia Etkina

Department of Science Education – Rutgers University

DATE: Thursday, October 10th

TIME: 11:30 AM

LOCATION: SCP 317

Using physics to help students develop scientific habits of mind

Abstract: Interactive engagement curricula are successful in helping students develop conceptual understanding of physics principles and solve problems. However, another benefit of actively engaging students in the construction of their physics knowledge is providing them with an opportunity to engage in habitual “thinking like physicists”. Some examples of such thinking are: drawing a sketch before solving any physics problem, subjecting normative statements to experimental testing, evaluating assumptions, or treating each experimental result as an interval. We can help students develop these “habits of mind” if we purposefully and systematically engage them in the processes that mirror the processes in which physicists engage when they construct and apply knowledge. For such engagement to occur, we need to deeply re-conceptualize the role of experiments in physics instruction and their interaction with the theory. However, most importantly, we need to rethink the role of the instructor in the classroom.

