

## W04: Interactive Methods for Large Classes

**Sponsor:** Committee on Research in Physics Education

**Time:** 8 a.m. – 12 p.m.

**Room:** Margaret B. Parker Chapel 106

*David E. Meltzer, Iowa State Univ., Ames, IA;  
515-294-9358; dem@iastate.edu*

*Kandiah Manivannan, Southeastern Louisiana Univ.,  
Hammond, LA; mani@selu.edu*

Maintaining high levels of instructor-student interaction in large-enrollment classes is a long-standing problem. This workshop will explore methods for promoting interactivity that are extremely low-cost, low-tech, and easy to implement (in contrast, for instance, to electronic systems).<sup>1</sup> We use the flash-card response system, in which sets of six large cards labeled “A” through “F” are supplied to all students in a class. The cards are used to signal responses to multiple-choice questions, allowing instantaneous feedback from all students simultaneously. Workshop participants will view videotapes of flash-card classes and will work step-by-step through a typical class. They will create flash-card problems, including: (1) linked conceptual sequences, (2) “dissections” of complex problems, and (3) interactive lecture demonstration questions. They will practice creating such problems “on the fly” during class discussions. Assessment methods making use of flash-card responses will be discussed, and participants will work through samples of non-multiple-choice in-class exercises from a forthcoming workbook.

1. David E. Meltzer and Kandiah Manivannan, “Promoting Interactivity in Physics Lecture Classes,” *Phys. Teach.* **34**, 72 (1996).

**Members \$48**

**Nonmembers \$73**