

Michael L. Scott

CAMPUS:
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EDUCATION:

Ph.D. Physics, Fall 2007
University of Illinois at Urbana-Champaign

M.S. Physics, May 2002
University of Illinois at Urbana-Champaign

B.S. Physics and Mathematics, May 2000
University of Indianapolis

RESEARCH EXPERIENCE:

Research Assistant, 2002-Present
Department of Physics, University of Illinois at Urbana-Champaign

- Investigated the reliability and validity of multiple-choice exams used in large, introductory physics courses.
- Examined categorization differences, conceptual change, and class performance of students receiving a treatment of reflective activities that supplemented their weekly in-class problem sets.
- Created, analyzed, and revised Interactive Examples used in online homework.
- Examined the efficiency, purity, and discriminatory power of a test instrument used to identify potential at-risk students entering the engineering physics sequence.

TEACHING EXPERIENCE:

Teaching Assistant, 2000-2006
Department of Physics, University of Illinois at Urbana-Champaign

- Led cooperative group learning sessions and graded quizzes in algebra- and calculus-based introductory physics courses.
- Developed curricula and led discussion sections for a class with under-prepared engineering students before they entered the introductory physics sequence.
- Developed curricula and led discussion sections for a class with under-prepared engineering students who were concurrently enrolled in the introductory physics sequence.

TA Facilitator, Fall 2003
Center for Teaching Excellence, University of Illinois

- Facilitated small group sessions for campus-wide orientation for new teaching assistants.

Mentor Teaching Assistant, Fall 2001

Department of Physics, University of Illinois at Urbana-Champaign

- Assisted TAs in developing and improving their teaching skills.
- Observed TA instruction and gave formative feedback.

AWARDS AND SCHOLARSHIPS:

University of Illinois at Urbana-Champaign Department of Physics Excellence in Teaching Award.

- Fall 2000, Spring 2001, Summer 2001, Fall 2001, Spring 2002, Spring 2003, Spring 2004, Spring 2005, Fall 2005, Spring 2006, Fall 2006

AAPT Outstanding Teaching Assistant Award, Department of Physics, University of Illinois at Urbana-Champaign, 2003.

Scott Anderson Award, Department of Physics, University of Illinois at Urbana-Champaign, Fall 2002.

Eugene C. Eads Award for Excellence in Physics, Department of Physics and Earth-Space Sciences, University of Indianapolis, 1999.

Dean's Scholarship, University of Indianapolis, 1996-2000.

PUBLICATIONS:

M. Scott, T. Stelzer, and G. Gladding, "Explicit Reflection in an Introductory Physics Course," Physics Education Research Conference, AIP Conference Proceedings, (submitted).

M. Scott, T. Stelzer, G. Gladding, "Evaluating Multiple-choice Exams in Large Introductory Physics Courses," *Phys. Rev. ST Phys. Educ. Res.* **2**, 020102 (2006).

CONFERENCE PRESENTATIONS:

"Explicit Reflection in Introductory Physics," American Association of Physics Teachers Summer Meeting, Greensboro, NC, 2007.

"Correlating Student Use of Follow-up Questions with Course Performance," American Association of Physics Teachers Summer Meeting, Sacramento, CA, 2004.

"Evaluating Multiple-choice Exams in Large Introductory Physics Courses," Illinois Section of the American Association of Physics Teachers Spring Meeting, Urbana, IL, 2004.

"The Reliability and Validity of Multiple-choice Exams in Large Introductory Courses," American Association of Physics Teachers Summer Meeting, Madison, WI, 2003.