

# Andrew Crouse

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## Education:

- Ph.D. in Physics. “Research on Student Understanding of Quantum Mechanics as a Guide for Improving Instruction.” *University of Washington, June 2007*
- Physics Ph.D. Program. *University of Washington, 2001–2007*
- M.S. in Physics. *University of Washington, Dec. 2003*
- Physics Ph.D. Program. *Brandeis University, 1997–1999*
- M.A. in Physics. *Brandeis University, May 1998*
- B.S. in Engineering Physics. *University of Illinois at Urbana–Champaign, May 1994*

## Teaching and Research Experience:

- Assistant Professor of Physics. Taught physics courses; conducted physics education research *Ithaca College, Aug 2008 – present*
- Postdoctoral Research Associate. Conducted physics education research; advised undergraduate and graduate students doing physics education research; trained, mentored, supervised, and evaluated TAs in introductory and quantum mechanics courses. *University of Washington, June 2007–July 2008*
- Substitute Physics Instructor. Taught lecture, laboratory, and small-group sessions of introductory mechanics. *North Seattle Community College, Oct. 2007*
- Graduate Student. Conducted research on student understanding of quantum mechanics. *University of Washington, Aug. 2001–June 2007*
- Lead Teaching Assistant. Organized the day-to-day operation of the introductory calculus-based physics sequence, assisted in training and mentoring TAs, supervised head TAs in preparing examination and research questions. *University of Washington, Aug. 2003–June 2007*
- Head Teaching Assistant. Organized the day-to-day operation of one component of the introductory calculus-based physics sequence, helped to train TAs, prepared examination questions. *University of Washington, Aug. 2001–Aug. 2003*
- Summer Institute and Continuation Class Instructor. Led teams of instructors in an intensive six-week NSF-funded summer institute as they trained K-12 teachers to teach as a process of inquiry, mentor these same teachers as part of an on-going academic-year continuation class. *University of Washington, Summers 2002–present*
- Physics and Mathematics Teacher. Taught physics and calculus to tenth, eleventh, and twelfth grade students. *Colegio Internacional de Caracas, Caracas, Venezuela, Aug. 1999–May 2001*
- Teaching Assistant. Taught laboratories and recitation sections in introductory physics courses, acted as a substitute lecturer. *Brandeis University, Waltham, Massachusetts, Aug. 1997–May 1999*
- U.S. Peace Corps Volunteer Physics and Mathematics Teacher. Taught physics and calculus to tenth, eleventh, twelfth, and thirteenth grade students *Sigatoka, Fiji, Oct. 1994–Dec. 1996*

## Service:

- H&S Assessment Committee. *Ithaca College, Spring 2010*
- Editorial board. *Research in Education Assessment and Learning, Feb. 2010–present*
- Vice-chair. *AAPT Committee on International Education, Feb. 2010–present*
- Departmental Assessment Committee. *Ithaca College, Jan 2009–present*

### Invited Talks:

- “An Introduction to Physics Education Research with Examples from Electric Circuits.,” *Binghamton University, Binghamton, NY, Oct. 2009*
- “111 Degrees Apart: Teaching Physics in Fiji and Venezuela,” *AAPT Summer meeting, Ann Arbor, MI, July 2009*
- “Assessment as Scholarship: The role of discipline based education research.,” *May Institute at Ithaca College, Ithaca, NY, May 2009*
- “Research as a guide for improving student understanding: An example from quantum mechanics,” *Ithaca College, Ithaca, NY, Apr. 2008*
- “Research as a Guide for Improving Student Understanding of Time Dependence in Quantum Mechanics,” *APS Northwest section meeting, Pocatello, ID, May 2007*
- “Student Understanding of Quantum Mechanics,” *Third Venezuelan Conference on the Teaching of Physics, Merida, Venezuela, Oct. 2004*

### Contributed Talks:

- “Student learning of electric circuits in the SCALE-UP/Studio environment.,” *AAPT Winter meeting, Washington, DC, Feb. 2010*
- “A controlled investigation of student learning in the SCALE-UP environment.,” *AAPT Winter meeting, Chicago, IL, Feb. 2009*
- “Research to improve student understanding of time-dependence in quantum mechanics .,” *AAPT Winter meeting, Baltimore, MD, Jan. 2008*
- “Examples from Research on the Learning and Teaching of Quantum Mechanics,” *AAPT Winter meeting, Seattle, WA, Jan. 2007*
- “Examples from Research on the Learning and Teaching of Quantum Mechanics,” *APS Northwest section meeting, Tacoma, WA, May 2006*
- “Student Difficulties in Applying Quantum Mechanical Principles to Superpositions of Stationary States,” *APS Northwest section meeting, Victoria, BC, May 2005*
- “Examining Student Understanding of Basic Topics in Quantum Mechanics,” *AAPT Summer meeting, Sacramento, CA, Aug. 2004*
- “Recent Results from an Investigation of Student Understanding of Basic Topics in Quantum Mechanics,” *APS April meeting, Denver, CO, May 2004*
- “Student Understanding of Basic Topics in Quantum Mechanics: Recent Results,” *AAPT Washington section annual meeting, Edmonds, WA, Oct. 2003*
- “Student Understanding of Basic Topics in Quantum Mechanics: Recent Results,” *AAPT Summer meeting, Madison, WI, Aug. 2003*

### Workshops Given:

- Workshop for conference participants. *AAPT Summer meeting, Ann Arbor, MI, July 2009*
- Workshops for in-service teachers. *Singapore, National Institute for Education, March 2008*
- Workshops for conference participants. *AAPT Winter meeting, Baltimore, MD, Jan. 2008*
- Workshops for in-service teachers. *Singapore, National Institute for Education, March 2007*
- Workshops for conference participants. *AAPT Winter meeting, Seattle, WA, Jan. 2007*
- Workshops on teaching introductory physics and on teaching quantum mechanics. *Third Venezuelan Conference on the Teaching of Physics, Merida, Venezuela, Oct. 2004*
- Workshop for pre-service teachers. *Seattle University, Seattle, WA, biannually 2004–2008*
- Workshops for conference participants. *AAPT Summer meeting, Sacramento, CA, Aug. 2004*
- Workshops for conference participants. *AAPT Summer meeting, Madison, WI, Aug. 2003*
- Faculty Development Workshop. *University of Washington, Seattle, WA, July 2003*
- Workshops for conference participants. *AAPT Summer meeting, Boise, ID, Aug. 2002*