

## Appendix F

### Ph.D.s in Physics Education Research

*An alphabetical compilation of PER Ph.D.s reported by each school.*

- Adrian, Brian W., 1997, Using Multimedia to Teach College Students the Concepts of Electricity and Magnetism, University of Nebraska-Lincoln, Fuller, Physics. Now at Bethany College, Lindsborg, Kansas.
- Allen, Sue, 1994, Transparent detector models: promoting conceptual change in geometrical optics, Univ. of California, Berkeley, DiSessa, SESAME.
- Ambrose, Bradley S., "Investigation of student understanding of the wave properties of light and matter," (1999). University of Washington, Physics. Dept. of Physics, University of Washington
- Brunschwig, Fernand, 1972, Experiments that walk: four self-study units with portable kits for introductory physics, Univ. of California, Berkeley, Karplus, SESAME
- Campbell, Thomas C., 1977, An Evaluation of a Learning Cycle Intervention Strategy for Enhancing the Use of Formal Operational Thought by Beginning College Physics Students, University of Nebraska-Lincoln, Fuller, Education. Now at Illinois Central College.
- Chien, Cheng-Chih, June 1997 (Ph.D. in Education), "The Effectiveness of Interactive Computer Simulations on College Engineering Student Conceptual Understanding and Problem Solving Ability Related to Circular Motion", Ohio State University, presently an assistant professor in the Department of Educational Technology, Tamkang University, Tamsui, Taiwan.
- Eylon, Bat-Sheva, 1979, Effects of knowledge organization on task performance , Univ. of California, Berkeley, Reif, SESAME.
- Engelhardt, Paula V., under advisement 1993-97, defended dissertation May 1997, "Examining students' understanding of direct current electrical circuits through multiple choice testing and interviews." North Carolina State University, Physics. Now in Japan.
- Erickson, Timothy Eric, 1987, Sex differences in student attitudes towards computers, Univ. of California, Berkeley, Stage, SESAME.
- Escalada, Larry (Lawrence.Escalada@uni.edu) Ph.D. 1996, Kansas State University, now Assistant Prof. of Physics University of Northern Iowa.
- Evans, James, "History and practice of ancient astronomy" (1983). University of Washington, Physics. Dept. of Physics, University of Puget Sound, Tacoma, WA

- Grayson, Diane, "Use of the computer for research on instruction and student understanding in physics" (1990). University of Washington, Physics. MASTEC, Pietersburg, S. Africa
- Gruner, Heidi (GrunerH.dfp@usafa.af.mil) Ph.D. 1996, Kansas State University, now Assistant Prof. of Physics, US Air Force Academy
- Halloun, Ibrahim, 1984, The Use of Models in Teaching Mechanics, Arizona State University, Hestenes. Now at Lebanese University.
- Hammer, David Morris, 1991, Defying common sense : epistemological beliefs in an introductory physics course, Univ. of California, Berkeley, DiSessa, SESAME. Now at the University of Maryland.
- Hammon, Henry George, III, 1975, The use of ideas from early research papers to help clarify concepts in electricity and magnetism, Univ. of Washington, Arons, Doctor of Arts.
- Harrington, Randal, "An investigation of student understanding of electric concepts in the introductory university physics course" (1995). University of Washington, Physics. Dept. of Physics, University of Maine, Orono
- Harvey, Wayne, 1981, Success and failure in problem solving : an investigation of mental processing , Univ. of California, Berkeley, Reif, SESAME.
- Teresa Hein (thein@american.edu) Ph.D. 1996, Kansas State University, now Assistant Prof. of Physics, American University
- Jaafar Jantan (jjnita@ksmk.itm.edu.my) Ph.D. 1992, Kansas State University, now Prof. of Physics Malaysian Institute of Technology
- Kanim, Stephen E., "Investigation of student difficulties in relating qualitative understanding of electrical phenomena to quantitative problem-solving in physics" (1999). University of Washington, Physics. Dept. of Physics, New Mexico State University, Las Cruces
- Kraus, Pamela, "Promoting active learning in lecture-based courses: Demonstrations, tutorials, and interactive tutorial lectures" (1997). University of Washington, Physics. Pacific Science Center, Seattle
- Kurtz, Barry Lloyd, 1976, A study of teaching for proportional reasoning, Univ. of California, Berkeley, Karplus, SESAME.
- Larkin, Jill Huston, 1975, Understanding relations in physics : a model and teaching materials for the development of a learning skill, Univ. of California, Berkeley, Reif, SESAME. Now at Carnegie Mellon University.
- Lawson, Ronald, "Student understanding of single particle dynamics" (1984). University of Washington, Physics. Shell E & P Technology Co., Houston
- Lewis, Eileen Lob, 1991, The process of scientific knowledge acquisition among middle school students learning thermodynamics, Univ. of California, Berkeley, Reif, SESAME.

- Loverude, Michael E., "Investigation of student understanding of hydrostatics and thermal physics and of the underlying concepts from mechanics," (1999). University of Washington, Physics. Department of Physics, University of Washington
- Mallack, Michael, Ph.D. 1998, Rensselaer Polytechnic Institute, current address: Anderson Center of Innovation in Undergraduate Education, Rensselaer Polytechnic Institute, Troy, New York 12180
- Marx, Jeffry D., Ph.D. 1998, Rensselaer Polytechnic Institute, current address: Dept of Physics, University of Oregon, Eugene, Oregon
- Pride, Tara O'Brien, "Investigating student difficulties with reference frames and multibody systems in introductory mechanics" (1997). University of Washington, Physics. Self-employed
- Rosenquist, Mark, "Improving preparation for college physics of minority students aspiring to science-related careers" (1982). University of Washington, Physics. Shell E & P Technology Co., Houston
- St. John, Harry Mark, 1978, Thinking like a physicist : new goals and methods for the introductory laboratory, Univ. of California, Berkeley, Reif, SESAME. Now at Inverness Research Associates.
- Saul, J. M., Beyond Problem Solving, Evaluating Introductory Physics Courses Through the Hidden Curriculum, Ph.D. Dissertation, University of Maryland, Physics, January 1998
- Shaffer, Peter, "The use of research as a guide for instruction in physics" (1993). University of Washington, Physics. Dept. of Physics, University of Washington
- Sherin, Bruce Lawrence, 1996, The symbolic basis of physical intuition: a study of two symbol systems in physics , Univ. of California, Berkeley, DiSessa, SESAME.
- Songer, Nancy Butler, 1989, Promoting integration of instructed and natural world knowledge in thermodynamics, Univ. of California, Berkeley, Reif, SESAME.
- Stevens, Scott Michael, 1984, Surrogate Laboratory Experiments: Interactive Computer/Videodisc Lessons and their Effect on Students' Understanding of Science, University of Nebraska-Lincoln, Fuller, Education. Now at Carnegie Mellon University.
- Theil, Edward Hiram, 1972, Structure and strategy: the development of a course in mathematical physics, Univ. of California, Berkeley, Karplus, SESAME.
- Titus, Aaron P., under advisement 1994-1998, defended dissertation July 1998, "Effectiveness of web-based delivery of animations and videos." North Carolina State University, Physics. Now Assistant Professor of Physics, North Carolina Agricultural and Technical University
- Tourniaire, Françoise, 1984, Proportional reasoning in grades three, four, and five, Univ. of California, Berkeley, Karplus(?), SESAME.

- Trowbridge, David, "An investigation of understanding of kinematical concepts among introductory physics students" (1979). University of Washington, Physics. Microsoft Corp., Redmond, WA (Retired)
- Wells, Malcolm, 1987, Modeling Instruction in High School Physics, Arizona State University, Hestenes. Now deceased.
- Wittmann, Michael, Making sense of how students come to an understanding of physics: An example from mechanical waves, Ph.D. Dissertation, University of Maryland, Physics, December 1998
- Wosilait, Karen, "Research as a guide for the development of tutorials to improve student understanding of geometrical and physical optics" (1996). University of Washington, Physics. University Preparatory School, Seattle
- Zhang, Weijia, 1996, Using Multimedia to Teach Optics to College Students, University of Nebraska-Lincoln, Fuller, Physics. Now at Flomerics, Austin, Texas.