

## Education

- 2012 Ph.D. University of Maryland, College Park. Curriculum & Instruction. (May, anticipated)  
2000 B.S. Tufts University. Astrophysics. High thesis honors.

## Professional Work Experience

- *Science Teacher*, Manchester-Essex Regional High School; Courses Taught: AP, Honors, and College Prep Physics, Astronomy, Oceanography, Algebra I 2002-2006
- *Physics Teacher*, Wakefield Memorial High School; Courses Taught: AP and Honors Physics 2000-2001
- *Research Assistant & Curriculum Developer*, Dudley H. Wright Center for Science Education 1998-2000

## Research Experience

- Minority Student Pipeline Mathematics & Science Partnership (MSP)<sup>2</sup>* 2009-present
- Co-plan and facilitate 2-week professional development workshops on inquiry teaching & learning, including leading inquiry lessons, mentoring teachers, and guiding discussions of student reasoning in video data.
  - Run bi-weekly meetings with teachers, guiding them in attending to the substance of student thinking in their own classrooms and in video from classroom discussions, planning inquiry lessons, assessing student work, and engaging teachers in inquiry discussions.
  - Regularly visit classrooms of several teachers to consult, observe and co-teach inquiry lessons while taking video data for subsequent professional development and data analysis.
  - Individually and collaboratively analyze video data from classrooms, workshops, and meetings for productive scientific inquiry teaching and learning and the effects of inquiry learning and teaching on teacher and student epistemologies.
- Open-Source Tutorials Integrated with Professional Development Materials* 2008-2009
- Facilitated participants' discussions of science content and the substance of students' thinking at professional workshops at national conferences, providing guidance on the implementation of introductory physics tutorials.
  - Conducted video analysis of clips of students working on tutorials, selecting for appropriate clips to include in professional development materials.
  - Designed project logo and DVD cover for wide distribution.
  - Coordinated distribution of curricular and professional development materials.
- Toward a New Conceptualization of What Constitutes Progress in Learning Physics, K-16* 2006-2008
- Analyzed video data and transcripts according to coding schemes for student behaviors and mechanistic reasoning during introductory physics tutorials.
  - Established correlation between cluster of behaviors and quality of evidence

of mechanistic reasoning and explored various causes of this correlation.

- Disseminated findings by publishing in peer-reviewed proceedings of a national conference, and by presenting findings at national conferences and in front of an advisory board review.

## Publications

- Conlin, L.D., Gupta, A., & Hammer, D. (2010). Framing and resource activation: Bridging the cognitive-situative divide using a dynamic unit of cognitive analysis. *The Proceedings of 32<sup>nd</sup> Annual Meeting of the Cognitive Science Society*.
- Conlin, L.D., Gupta, A., & Hammer, D. (2010). Where to find the mind: Identifying the scale of cognitive dynamics. *The Proceedings of the International Conference of the Learning Sciences*.
- Conlin, L.D. (February 2009). For the new teacher: Finding methods in madness. *The Physics Teacher*, 125-126.
- Conlin, L.D., Gupta, A., Scherr, R.E., & Hammer, D. (2007). The dynamics of students' behaviors and reasoning during collaborative physics tutorial sessions. *The Proceedings of the Physics Education Research Conference*, 24(15), 4-8.

## Conference Presentations

- Conlin, L.D., Powell, K., & Elby, A. (2011, June 4). De-emphasizing science vocabulary with English language learners. *Poster presented at the 2011 Meeting of the Jean Piaget Society*.
- Jaber, L., Conlin, L.D., & Hammer, D. (2011, June 3). The coupling of emotion, epistemology, and substance of students' reasoning in physics. *Paper presented at the 2011 Meeting of the Jean Piaget Society*.
- Jaber, L., Richards, J., Conlin, L.D., & Hammer, D. (2011, April 4). Fostering generative inquiry in the science class: The role of affect. *Paper presented at the 2011 Meeting of the National Association of Research on Science Teaching*.
- Conlin, L.D., Gupta, A., & Hammer, D. (2011, January 12). The coupling of emotion, epistemology, and substance of students' reasoning in physics. *Poster presented at the 2011 Winter Meeting of the American Association of Physics Teachers*.
- Conlin, L.D., Gupta, A., & Hammer, D. (August 12, 2010). Framing and resource activation: Bridging the cognitive-situative divide using a dynamic unit of cognitive analysis. *Paper presented at the 32<sup>nd</sup> Annual Meeting of the Cognitive Science Society*.
- Conlin, L.D., Gupta, A., & Hammer, D. (2010). Where to find the mind: Identifying the scale of cognitive dynamics. *Paper presented at the International Conference of the Learning Sciences*.
- Conlin, L.D., Gupta, A., & Hammer, D. (2010, March 23). Bridging the cognitive and situative accounts of cognition with a resources framework. *Poster presented at the 2010 Annual Conference of the National Association for Research in Science Teaching*.
- Conlin, L.D. (2010). The use of causal warrants in physics: Causation as more than 'folk science'. *Talk given at the 2010 Winter Meeting of the American Association of Physics Teachers*.

- Conlin, L.D., Gupta, A., & Hammer, D. (2010). What sorts of conflict are productive for scientific inquiry? *Poster presented at the 2010 Winter Meeting of the American Association of Physics Teachers.*
- Conlin, L.D. (2008, January 20). Framing and reasoning in tutorials over the course of a semester. *Poster presented at the 2008 Winter Meeting of the American Association of Physics Teachers.*
- Conlin, L.D., Gupta, A., Scherr, R.E., & Hammer, D. (2007). The dynamics of students' behaviors and reasoning during collaborative physics tutorial sessions. *Paper presented at the 2007 Physics Education Research Conference.*
- Conlin, L.D., Gupta, A., Scherr, R.E., & Hammer, D. (2007, August 1). Students' behavior and reasoning during physics tutorials. *Poster presented at the 2007 Summer Meeting of the American Association of Physics Teachers.*

### **Professional Affiliations**

- American Association of Physics Teachers
- Philosophy of Science Association
- Cognitive Science Society

### **Professional Service**

- Coordinate the Science Teaching Center's weekly seminar to disseminate research and increase communication across various research groups and between departments, scheduling speakers as well as creating and maintaining seminar wiki.
- Co-founder and Coordinator of a bi-weekly video analysis work group, to collaboratively learn about methodological and theoretical issues in doing video analysis.

### **Interests**

- Using discourse analysis to trace dynamics of how people build shared conceptual and epistemological understandings in science classrooms.
- Investigating ways in which teachers and students use humor as a productive resource in the learning, teaching, and doing of science.
- Establishing methodological principles for using humor to assess conceptual and epistemological understandings in science classrooms and beyond.
- Extending the study of personal epistemology to include social dimensions, such as stances towards the knowledge created by groups and the prospects of learning from group work.
- Utilizing Web 2.0 to facilitate online scientific inquiry learning, for example by crowd-sourcing explanations of everyday physical phenomena to generate productive discourse and argumentation.
- Exploring the role of aesthetics in the creative and evaluative practices of science.

**References**

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- Andy Elby, 2226N Benjamin Hall, University of Maryland, College Park, MD 20740  
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- Janet Coffey, 2226A Benjamin Hall, University of Maryland, College Park, MD 20740  
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