

Chandra Turpen

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EDUCATION

PhD Candidate-Post Oral comprehensives, Physics, *Present*
University of Colorado, Boulder CO (Anticipated graduation-Summer 2009)
B.S., Physics, 2004
University of California, Santa Cruz (with a minor in Chemistry)
H.S. Diploma, 1999
Battle Mountain High School, Avon CO (College preparatory coursework)

ACADEMIC APPOINTMENTS AND EMPLOYMENT

Research Associate, June '05 – present
Physics Education Research Group, University of Colorado, Boulder CO
Lead Graduate Teacher, Aug '05 – Aug '06
Department of Physics, University of Colorado, Boulder CO
Teaching Assistant, Aug '04 – May '06
Department of Physics, University of Colorado, Boulder CO
Undergraduate Research Assistant, July '01 – May '04
Schlesinger Condensed Matter Group, University of California, Santa Cruz CA
Teaching Assistant, Sept '03 – Dec '03
Department of Mathematics, University of California, Santa Cruz CA
One-on-one Classroom Teaching Assistant, Aug '00 – June '02
Easter Seals, Aptos, CA; Gault Elementary School, Santa Cruz, CA

HONORS / AWARDS / RECOGNITIONS

Honors in the Major, Physics Department, UC Santa Cruz, 2004
College Honors (Top ten percent), Cowell College, UC Santa Cruz, 2004
Vail-Eagle Valley Rotary Club Scholarship, (\$1,000), 2000
Vail Associates/Vail Resorts Scholarship, (\$10,000 over 4 yrs.), 1999
Vail Valley Foundation Scholarship, (\$20,000 over 4 yrs.), 1999
Vail-Eagle Valley Rotary Club Scholarship, (\$3,000), 1999

PROFESSIONAL SOCIETIES

Physics Education Research Topical Group of APS, June 2006 – Present
American Anthropological Association, Anthropology and Education Section, June 2005- Present
American Association of Physics Teachers (AAPT), June 2005- Present
American Physical Society (APS) 2003-2004 (Membership #: 60061217)

STUDENTS MENTORED

Research Experiences for Undergraduates (REUs)
Turhan Carroll (2006, NCSU)
Learning Assistants & Physics Majors-Undergraduate Prospective Teachers
Shrishti Yadav (Summer 2007, CU)
Emily Quinty (Summer 2006 & Summer 2007, CU)

COURSES TAUGHT AS A TEACHING ASSISTANT

Sp06: Physics 1110: Intro Phys 1, Calc-based, Mechanics & Waves, CU Boulder, 26 students, FCQ: A-
Fa05: Physics 1120: Intro Phys 2, Calc-based, E/M & Optics, CU Boulder, Teacher Preparation
Sp05: Physics 1020: Physics of Everyday Life, 2nd Semester, CU Boulder, 50 students, FCQ: A
Fa04: Physics 1140: Experimental Physics 1, CU Boulder, 34 students, FCQ: A-/B+
Fa03: Math 3: Precalculus, UC Santa Cruz, ~80 students

REFEREED JOURNAL ARTICLES

1. C. Turpen and N. Finkelstein, "Not all Interactive Engagement is the same: Variation in physics professors' implementation of Peer Instruction." *Physical Review Special Topics, Physics Education Research* (In preparation).
2. J.N. Hancock, C.A. Turpen, Z. Schlesinger, G.R. Kowach, & A.P. Ramirez, "Unusual low-energy phonon dynamics in the negative thermal expansion compound ZrW₂O₈." *Physical Review Letters*, **93**(22), 225501, (2004).

PAPERS IN REVIEWED CONFERENCE PROCEEDINGS

1. C. Turpen and N. Finkelstein, "Institutionalizing Change: Case studies & institutional analyses of pedagogical reform in introductory physics," *Proceedings of the 2008 Physics Education Research Conference*, AIP Press. Melville NY (submitted).
2. C. Turpen and N. Finkelstein, "Understanding How Physics Faculty Use Peer Instruction," *Proceedings of the 2007 Physics Education Research Conference*, AIP Press. Melville NY, **951**, 204-207, (2007).
3. C. Keller, N. Finkelstein, K. Perkins, S. Pollock, C. Turpen, and M. Dubson, "Research-based Practices For Effective Clicker Use," *Proceedings of the 2007 Physics Education Research Conference*, AIP Press. Melville NY, **951**, 128-131, (2007).
4. N. D. Finkelstein, C. Turpen, S. Pollock, M. Dubson, S. Iona, C. Keller, and V. Otero, "Evaluating a model of research-based practices for teacher preparation in a physics department: Colorado PhysTEC," *Proceedings of the 2005 Physics Education Research Conference*, AIP Press. Melville NY, **818**, 3-6, (2006).

INVITED & CONTRIBUTED PAPERS, POSTERS & TALKS AT NATIONAL CONFERENCES

1. C. Turpen and N. Finkelstein, "Institutionalizing Change: Case Studies and Institutional Analysis of Pedagogical Reform in Intro Phys." Physics Education Research Conference, Edmonton, Alberta Canada, July 2008. [poster]
2. C. Turpen and N. Finkelstein, "Effects of Variation of Faculty Practice on Student Perceptions," American Association of Physics Teachers National Meeting, Edmonton, Alberta Canada, July 2008. [talk]
3. C. Turpen and N. Finkelstein, "Case Studies and Institutional Analysis of the implementation of a pedagogical reform in introductory physics," Facilitating Change in Undergraduate STEM: An Invitational Symposium Integrating Multiple Perspectives, Augusta MI, June 2008. [invited: poster]
4. C. Turpen, N. Finkelstein, and C. Keller, "Understanding Faculty Use of Peer Instruction," Physics Education Research Conference, Greensboro NC, Aug 2007. [poster]
5. K. Perkins, C. Turpen, N. Finkelstein, and C. Keller, "Using Clickers in Upper-division Physics Courses: What do students think?" Physics Education Research Conference, Greensboro NC, Aug 2007. [poster]
6. C. Keller, N. Finkelstein, S. Pollock, and C. Turpen, "Research-based Practices For Effective Clicker Use," Physics Education Research Conference, Greensboro NC, Aug 2007. [poster]
7. C. Turpen and N. Finkelstein, "Not all Interactive Engagement is the Same: Variation in Faculty Use of Peer Instruction," American Association of Physics Teachers National Meeting, Greensboro NC, Aug 2007. [talk]
8. C. Keller, N. Finkelstein, S. Pollock, and C. Turpen, "Towards a set of research-based best practices for clicker use" American Association of Physics Teachers National Meeting, Greensboro NC, Aug 2007. [poster]

9. K. Perkins, C. Turpen, N. Finkelstein, and C. Keller, "Student opinions on the use of clickers in upper-division physics courses," American Association of Physics Teachers National Meeting, Greensboro NC, Aug 2007. [poster]
10. C. Turpen, C. Keller, and N. Finkelstein, "Understanding Faculty use of Peer Instruction," American Association of Physics Teachers National Meeting, Greensboro NC, Aug 2007. [talk & poster]
11. C. Turpen, E. Quilty, T. Carroll, and N. Finkelstein, "Engaging & Encouraging Children in Science and Assessing Success," American Association of Physics Teachers National Meeting, Greensboro NC, Aug 2007. [poster]
12. E J. Quilty, C. Turpen, and N. D. Finkelstein, "Engaging and Encouraging Children in Science: The Colorado Jr. Scientists League Summer Camp," Joint Meetings of the National Society of Black Physicists and National Society of Hispanic Physicists, Boston MA, Feb 2007. [poster]
13. C. Turpen, N.D. Finkelstein, and S.J. Pollock, "Sustaining Reform: A Qualitative Study of Professors' Beliefs and Classroom Practices," Physics Education Research Conference, Syracuse NY, Jul 2006. [poster]
14. C. Turpen and N.D. Finkelstein, "Professors' Views on the Difference Between Learning and Doing Physics" American Association of Physics Teachers National Meeting, Syracuse, NY, Jul 2006. [talk]
15. C. Turpen, N.D. Finkelstein, and S.J. Pollock, "Sustaining Reform: Professor's Beliefs and Classroom Practices," American Association of Physics Teachers National Meeting, Syracuse, NY, Jul 2006. [poster]
16. N.D. Finkelstein, S. Pollock, V. Otero, M. Dubson, S. Iona, C. Keller, and C. Turpen, "The Colorado PhysTEC Program: a model for increasing the number and preparation of future STEM educators," International Society for the Scholarship of Teaching and Learning Annual Conference, Vancouver Canada, Oct 2005.
17. N. D. Finkelstein, C. Turpen, S. Pollock, M. Dubson, S. Iona, C. Keller, and V. Otero, "Colorado PhysTEC: a model of research-based practices for teacher preparation," Physics Education Research Conference 2005, Aug 11-12, 2005. [invited-Targeted Poster Session]
18. C. Turpen, N.D. Finkelstein, M. Dubson, C. Keller, S. J. Pollock, S. Iona, V. Otero, "Overview and Research Results from the Colorado PhysTEC Program," American Association of Physics Teachers National Meeting, Salt Lake City UT, Aug 6-10, 2005. [poster]
19. S. Pollock, N. Finkelstein, C. Keller, and C. Turpen, "Reforms in Introductory Physics Education: Assessing Colorado PhysTEC Goals," PhysTEC National Conference, Muncie IN, Mar 2005. [poster]
20. C. Turpen, J. Hancock, and Z. Schlesinger, "Infrared Active Phonons in the Negative Thermal Expansion Compound ZrW₂O₈." March Meeting of American Physical Society, Austin TX, Mar 2003. [poster]