

Benjamin T. Spike

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Education

Ph.D. Physics, May 2014, University of Colorado, Boulder, CO.

Dissertation: “An Investigation of the Knowledge, Beliefs, and Practices of Physics Teaching Assistants, with Implications for TA Preparation.”

Committee: N. Finkelstein (chair), S. Pollock, M. Dubson, T. Schibli, J. Hertzberg.

M.S. Physics, December 2010, University of Colorado, Boulder, CO.

B.S. Physics and Mathematics, May 2007, University of Wisconsin, Madison, WI.

Experience

University of Wisconsin–Madison, Department of Physics, Madison, WI.

Director of Active Learning, January 2017–present.

University of California–Berkeley, Department of Physics, Berkeley, CA.

Academic Coordinator & Lecturer, August 2013–December 2016.

University of Colorado–Boulder, Department of Physics, Boulder, CO.

Research Assistant, May 2008–August 2013.

Lead Graduate Teacher, May 2008–August 2013.

Teaching Assistant, August 2007–May 2009.

Research

Peer-Reviewed Journal Articles

1. B. T. Spike and N. D. Finkelstein. “Design and application of a framework for examining the beliefs and practices of physics teaching assistants,” *Physical Review Physics Education Research* **12**, 010114 (2016).
2. B. T. Spike and N. D. Finkelstein. “Preparing Tutorial and Recitation Instructors: A Pedagogical Approach to Focusing Attention on Content & Student Reasoning,” *American Journal of Physics* **80**(11), 1020-1026 (2012).
3. B. T. Spike and N. D. Finkelstein, “Applying a Framework for Characterizing Physics Teaching Assistants’ Beliefs and Practices,” *Proceedings of the 2012 Physics Education Research Conference*, AIP Press. Melville NY, **1513**, 394-397 (2012).
4. B. T. Spike and N. D. Finkelstein, “Toward an Analytic Framework of Physics Teaching Assistants’ Pedagogical Knowledge,” *Proceedings of the 2011 Physics Education Research Conference*, AIP Press. Melville NY, **1413**, 363-366 (2011).
5. B. T. Spike and N. D. Finkelstein, “Examining the Beliefs and Practice of Teaching Assistants: Two Case Studies,” *Proceedings of the 2010 Physics Education Research Conference*, AIP Press. Melville NY, **1289**, 309-312 (2010).
6. B. T. Spike and N. D. Finkelstein, “Tracking Recitation Instructors’ Awareness of Student Conceptual Difficulties,” *Proceedings of the 2009 Physics Education Research Conference*, AIP Press. Melville NY, **1179**, 281-284 (2009).

Grants, Fellowships, & Awards

Blended Learning Fellowship on Learning Spaces, University of Wisconsin, 2017-18.

Presidential Chair Fellows Curriculum Enrichment Grant (Co-lead), University of California, August 2014.

Chancellor's Award for Excellence in STEM Education, University of Colorado, August 2009.

Best Should Teach Silver Award, University of Colorado, 2008 & 2009.

Honors Senior Thesis Summer Research Grant, University of Wisconsin, 2006.

L. R. Ingersoll Award for Distinguished Achievement in Undergraduate Physics, University of Wisconsin, May 2004.

Invited Talks, Seminars, & Presentations

Michigan State University, Physics Education Seminar Series, February 2020.

San Jose State University, Science Education Seminar Series, March 2015.

University of California, Berkeley, Compass Project Lecture Series, November 2013.

Foundations & Frontiers of Physics Education Research conference, Bar Harbor, ME, June 2011. [invited poster]

Conference Presentations

American Association of Physics Teachers Summer Meeting, Provo, UT, July 2019. [talk]

American Association of Physics Teachers Summer Meeting, Washington, DC, July 2018. [talk]

2013 Physics Education Research Conference, Portland, OR, July 2013. [poster]

American Association of Physics Teachers Summer Meeting, Portland, OR, July 2013. [talk]

2012 Physics Education Research Conference, Philadelphia, PA, August 2012. [poster]

American Association of Physics Teachers Summer Meeting, Philadelphia, PA, August 2012. [talk]

2011 Physics Education Research Conference, Omaha, NE, August 2011. [poster]

American Association of Physics Teachers Summer Meeting, Omaha, NE, August 2011. [talk]

2010 Physics Education Research Conference, Portland, OR, July 2010. [poster]

American Association of Physics Teachers Summer Meeting, Portland, OR, July 2010. [talk]

2009 Physics Education Research Conference, Ann Arbor, MI, July 2009. [poster]

American Association of Physics Teachers Summer Meeting, Ann Arbor, MI, July 2009. [talk]

Professional Activities

Science Curriculum Writer, United States Academic Decathlon 2016-17

Reviewer for *American Journal of Physics*, *Physical Review Physics Education Research*, and *The Physics Teacher*.

Departmental service:

Service Courses Committee (2013-14, 2014-15 (*Co-chair*), 2015-16 (*Co-chair*), 2016-17 (*Co-chair*)).

Major Curriculum Committee (2014-15, 2015-16, 2016-17).

Member, American Association of Physics Teachers, 2009-present.

Committee on Graduate Education, 2017-present

Teaching

University of Wisconsin

Physics 104, General Physics II: Fall 2018, Fall 2019, Fall 2020

Physics 103, General Physics I: Spring 2019, Summer 2019, Spring 2020, Summer 2020

University of California

Physics 375, Supervised Teaching of Physics: Fall 2013, Fall 2014, Fall 2015, Fall 2016.

Physics 198, Physics Education Reading Course: Spring 2014, Spring 2015.

Physics 7C, Modern Physics for Scientists and Engineers: Spring 2014 (voluntary teaching assistant)

University of Colorado

ASPIRE Summer Bridge Program (Physics Lead Instructor): July 2012.

Physics 1120, General Physics II:

Spring 2009, teaching assistant for M. Holland & D. Anderson.

Physics 1110, General Physics I:

Fall 2008, teaching assistant for K. Stenson & K. Perkins.

Spring 2008, teaching assistant for K. Stenson & K. Dessau.

Fall 2007, teaching assistant for C. Rogers & H. Lewandowski

Last updated: April 15, 2021