Joel C. Corbo

Contact Information

Ethnography and Evaluation Research
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Professional Appointments

2024 **Senior Research Associate**, Ethnography and Evaluation Research, CU Boulder (2024–present)

2024 **Visiting Professor**, Physics Department, Drexel University (2024–present)

2017 **Senior Research Associate**, Center for STEM Learning, CU Boulder (2017–2024)

2013 **Research Associate**, Center for STEM Learning, CU Boulder (2013–2017)

Education

2013 Ph.D., Physics, University of California, Berkeley
Thesis Title: Quantum Monte Carlo Simulations of Trapped Cold Atoms
Advisor: K. Birgitta Whaley

2006 M.A., Physics, University of California, Berkeley

2004 B.S., Physics, Massachusetts Institute of Technology

Grants ($7.98M)

2024 Collaborative Research: Developing and Testing the Equity Departmental Action Team Model of Racial Equity Focused Departmental Change. **$2,744,366**, 5 years (prematurely terminated), PI. (NSF awards 2411640, 2411641, 2411642, 2411643, and 2411644).

2024 Collaborative Research: Evaluating Access: How a Multi-Institutional Network Promotes Equity and Cultural Change through Expanding Student Voice. **$889,305**, 3 years (prematurely terminated), PI. (NSF awards 2309307, 2309308, 2309309, 2309310, and 2309311).

2023 Collaborative Research: Characterizing the emerging field of departmental change and empowering an inclusive network of practitioners. **$395,564**, 2 years, Co-PI. (NSF awards 2315405, 2315406, and 2315407).

2022 Workshop: Exploring Academic Unit Change at Two-Year Colleges. **$211,261**, 1.5 years, Co-PI. (NSF award 2230271).

2021 Collaborative Research: Access Expansion: Growing a Network of Equity-Focused Programs in the Physical Sciences. **$385,802**, 3 years, PI. (NSF awards 2011895, 2011972, 2011953, 2011877, 2011892, and 2011780).

2020 Enabling Department Transformation though the Departmental Action Leadership Institute. **$106,196**, 2 years, PI. (American Physical Society Innovation Fund).

2020 Understanding the Impacts of Departmental Action Teams on Sustainable Departmental Culture Change and on Undergraduate Student Experiences, Success, and Outcomes. **$299,986**, 2 years, PI. (NSF award 2021110).

2018 Expanding Access: Furthering a Network of Diversity-Focused Programs in the Physical Sciences. **$400,367** ($27,686 as a supplement), 3 years, PI. (NSF awards 1806516, 1806709, 1806668, 1806566, and 1806585).

2017 What Do Physicists From Majority Groups Know and Believe about Race and Gender? **$299,209**, 3 years, Former co-PI. (NSF award 1712436).

2016 Departmental Action Teams: Sustaining Improvements in Undergraduate STEM Education Through Faculty Engagement. **$1,919,515**, 4 years, PI. (NSF award 1626565).

2015 The Access Network: Supporting Retention and Representation in Physics Through an Alliance of Campus-Based Diversity Programs. **$330,000**, 3 years, PI. (NSF awards 1506129, 1506190, and 1506235).

Awards and Fellowships

2017 Notable Paper Award, 2016 Physics Education Research Conference Proceedings (awarded to 4 out of 98 peer-reviewed papers)

2013 Student Service Award, UC Berkeley Physics Department

2012 APS Award for Improving Undergraduate Physics Education
(awarded to the Compass Project, which I co-founded)

2007 Outstanding Graduate Student Instructor, UC Berkeley Physics Department

2006 UC Berkeley's Everyday Heroes

2004 Graduate Opportunity Program Fellowship, UC Berkeley

Publications

Books

2020 C. Ngai, **J. C. Corbo**, K. Falkenberg, C. Geanious, A. Pawlak, M. E. Pilgrim, G. M. Quan, D. L. Reinholz, C. Smith, and S. B. Wise. *Facilitating Change in Higher Education" The Departmental Action Team Model*. Glitter Cannon Press.

Refereed Articles

2026 S. B. Wise, C. Ngai, and **J. C. Corbo**. Impacts, supports, and constraints on sustained departmental change catalyzed by Departmental Action Teams. Physical Review Physics Education Research **22**, 010120.
doi:10.1103/fwt3-zn1l

2025 B. Gutmann, C. Turpen, R. Dalka, M. Carlson, **J. C. Corbo**, G. Jones-Hall, M. Smith, and D. Shafer. The Access Assembly: sharing ideas and enabling informed adaptations, in *Physics Education Research Conference 2025* (Washington, DC, 2025).
doi:10.1119/perc.2025.pr.Gutmann

2025 C. Turpen, B. Gutmann, R. Dalka, G. Quan, M. Carlson, **J. C. Corbo**, G. Jones-Hall, M. Smith, and D. Shafer. The Assembly: Learning together, building friendships, and strengthening our leadership capacities, in *Physics Education Research Conference 2025* (Washington, DC, 2025).
doi:10.1119/perc.2025.pr.Turpen

2025 S. B. Wise, A. Christopher, M. Rodriguez Rivera, H. Zimbler-DeLorenzo, C. Patrum, A. Bohn, C. Ngai, **J. C. Corbo**, and T. J. Holmberg. Collaboratively exploring STEM departmental change in community colleges. Community College Journal of Research and Practice, 1–11.
doi:10.1080/10668926.2025.2540792

2024 R. P. Dalka, C. Turpen, D. A. Craig, and **J. C. Corbo**. Investigating outcomes for physics faculty in a change leadership institute and characterizing the physics programs that participate, in *Physics Education Research Conference 2024* (Boston, MA, 2024).
doi:10.1119/perc.2024.pr.Dalka

2024 N. S. Martinez Garcia, C. Turpen, R. P. Dalka, and **J. C. Corbo**. Investigation of physics departments' assessment and change practices, in *Physics Education Research Conference 2024* (Boston, MA, 2024).
doi:10.1119/perc.2024.pr.Martinez_Garcia

2023 R. P. Dalka, C. Turpen, D. Sachmpazidi, F. N. Abdurrahman, D. A. Craig, and **J. C. Corbo**. Considering the Departmental Action Leadership Institute as a Community of Transformation: What's highlighted and what's missed?, in *Physics Education Research Conference 2023* (Sacramento, CA, 2023).
doi:10.1119/perc.2023.pr.Dalka

2023 C. Ngai, M. E. Pilgrim, D. L. Reinholz, K. Falkenberg, C. Geanious, **J. C. Corbo**, S. B. Wise, C. Smith, A. Stone-Johnstone. Guiding principles for change in undergraduate education: An analysis of a departmental team's change effort. Physical Review Physics Education Research **19**, 020107.
doi:10.1103/PhysRevPhysEducRes.19.020107

2022 **J. C. Corbo**, D. A. Craig, R. P. Dalka, and C. Turpen. Introducing the Departmental Action Leadership Institute and its preliminary outcomes, in *Physics Education Research Conference 2022* (Grand Rapids, MI, 2022).
doi:10.1119/perc.2022.pr.Corbo

2022 R. P. Dalka, C. Turpen, **J. C. Corbo**, and D. A. Craig. Exploring faculty's explanations of enrollment issues: where does responsibility and control reside?, in *Physics Education Research Conference 2022* (Grand Rapids, MI, 2022).
doi:10.1119/perc.2022.pr.Dalka

2022 S. B. Wise, C. Ngai, **J. C. Corbo**, M. A. Gammon, J. K. Rivard, and C. E. Smith. Toward institutionalizing successful innovations in the Academy. To Improve the Academy: A Journal of Educational Development **41** (1).
doi:10.3998/tia.481

2021 D. L. Reinholz, M. E. Pilgrim, A. Stone-Johnstone, K. Falkenberg, C. Geanious, C. Ngai, **J. C. Corbo**, and S. B. Wise. Focus on outcomes: Fostering systemic departmental improvements. To Improve the Academy: A Journal of Educational Development **40** (2).
doi:10.3998/tia.154

2021 G. M. Quan, **J. C. Corbo**, S. Wise, and C. Ngai. Unpacking challenges in student-faculty partnerships on Departmental Action Teams, in *Physics Education Research Conference 2021* (Virtual, 2021).
doi:10.1119/perc.2021.pr.Quan

2020 C. Ngai, M. E. Pilgrim, D. L. Reinholz, **J. C. Corbo**, and G. M. Quan. Developing the DELTA: Capturing cultural changes in undergraduate departments. CBE: Life Sciences Education **19** (2), 1–14.
doi:10.1187/cbe.19-09-0180

2019 G. M. Quan, B. Gutmann, **J. C. Corbo**, B. Pollard, C. Turpen, and The Access Network. The Access Network: Cultivating equity and student leadership in STEM, in *Physics Education Research Conference 2019* (Provo, UT, 2019). doi:10.1119/perc.2019.pr.Quan

2019 G. M. Quan, **J. C. Corbo**, N. D. Finkelstein, A. Pawlak, K. Falkenberg, C. Geanious, C. Ngai, C. Smith, S. Wise, M. E. Pilgrim, and D. L. Reinholz. Designing for institutional transformation: Six principles for department-level interventions. Physical Review Physics Education Research **15**, 010114. doi:10.1103/PhysRevPhysEducRes.15.010141

2019 D. L. Reinholz, C. Ngai, G. M. Quan, M. E. Pilgrim, **J. C. Corbo**, and N. Finkelstein. Fostering sustainable improvements in science education: An analysis through four frames. Science Education **103** (5), 1125–1150. doi:10.1002/sce.21526

2018 **J. C. Corbo**, G. M. Quan, K. Falkenberg, C. Geanious, C. Ngai, M. E. Pilgrim, D. L. Reinholz, and S. Wise. Externalizing the core principles of the Departmental Action Team (DAT) model, in *Physics Education Research Conference 2018* (Washington, DC, 2018). doi:10.1119/perc.2018.pr.Corbo

2018 G. M. Quan, **J. C. Corbo**, C. Ngai, D. Reinholz, and M. E. Pilgrim. Research on university faculty member's reasoning about how departments change, in *Physics Education Research Conference 2018* (Washington, DC, 2018). doi:10.1119/perc.2018.pr.Quan

2018 A. Lau, M. H. Dancy, **J. C. Corbo**, C. Henderson, and A. Rundquist. An analysis of community formation in Faculty Online Learning Communities, in *Physics Education Research Conference 2017* (Cincinnati, OH, 2017). doi:10.1119/perc.2017.pr.053

2018 M. H. Dancy, A. Lau, **J. C. Corbo**, C. Henderson, and A. Rundquist. Participants' perceptions of the Faculty Online Learning Community (FOLC) experience, in *Physics Education Research Conference 2017* (Cincinnati, OH, 2017). doi:10.1119/perc.2017.pr.020

2017 D. L. Reinholz, **J. C. Corbo**, M. H. Dancy, and N. Finkelstein. Departmental Action Teams: Supporting faculty learning through departmental change. Learning Communities Journal **9**, 1. http://celt.miamioh.edu/lcj/issue.php?v=9&n=1

2017 **J. C. Corbo**, J. L. DuBois, and K. B. Whaley. Number-squeezed and fragmented states of strongly interacting bosons in a double well. Physical Review A **96**, 053627. doi:10.1103/PhysRevA.96.053627

2016 **J. C. Corbo**, A. Rundquist, C. Henderson, and M. H. Dancy. Using asynchronous communication to support virtual faculty learning communities, in *Physics Education Research Conference 2016* (Sacramento, CA, 2016). PERC 2016 **Notable Paper** (awarded to 4 out of 98 peer-reviewed papers) doi:10.1119/perc.2016.pr.016

2016 K. Rainey, **J. C. Corbo**, D. L. Reinholz, and M. Betterton. Improving representation in physical sciences using a Departmental Action Team, in *Physics Education Research Conference 2016* (Sacramento, CA, 2016). doi:10.1119/perc.2016.pr.061

2016 **J. C. Corbo**, D. L. Reinholz, M. H. Dancy, S. Deetz, and N. Finkelstein. Framework for transforming departmental culture to support educational innovation. Physical Review Physics Education Research **12**, 010113. doi:10.1103/PhysRevPhysEducRes.12.010113

2015 A. Rundquist, **J. C. Corbo**, M. S. Martinuk, S. Chasteen, C. Henderson, and M. H. Dancy. Faculty Online Learning Communities to support physics teaching, in *Physics Education Research Conference 2015* (College Park, MD, 2015). doi:10.1119/perc.2015.pr.065

2015 **J. C. Corbo**, D. L. Reinholz, M. H. Dancy, and N. Finkelstein. Departmental Action Teams: Empowering faculty to make sustainable change, in *Physics Education Research Conference 2015* (College Park, MD, 2015). doi:10.1119/perc.2015.pr.018

2002 B. B. Back, *et al.* (PHOBOS Collaboration). Centrality dependence of the charged particle multiplicity near midrapidity in Au+Au collisions at $\sqrt{s_{NN}} = 130$ and 200 GeV, Physical Review C. **65**, 061901(R). doi:10.1103/PhysRevC.65.061901

2002 A. Olszewski, *et al.* (PHOBOS Collaboration). Overview of results from PHOBOS experiment at RHIC, Journal of Physics G: Nuclear and Particle Physics. **28**, 1801. doi:10.1088/0954-3899/28/7/334

2001 B. B. Back, *et al.* (PHOBOS Collaboration). Energy dependence of particle multiplicities in central Au+Au collisions, Physical Review Letters **88**, 022302. doi:10.1103/PhysRevLett.88.022302

Book Chapters and Non-refereed Articles

2025 E. J. Griffith, G. Lee, **J. C. Corbo**, G. Huckabee, H. I. Shamloo, G. Quan, A. Zaniewski, N. Charles, B. Gutmann, G. Jones-Hall, M. Z. Nakib, B. Pollard, M. Romanelli, D. Shafer, M. M. Smith, and C. Turpen. A Starter Kit for Diversity-Oriented Communities for Undergraduates: Near-Peer Mentorship Programs. arXiv:2501.05524 [physics.ed-ph]. doi:10.48550/arXiv.2501.05524

2020 C. Ngai, **J. C. Corbo**, G. M. Quan, K. Falkenberg, C. Geanious, A. Pawlak, M. E. Pilgrim, D. L. Reinholz, C. Smith, and S. Wise. Developing the DAT Theory of Change. In K. White, A. Beach, N. Finkelstein, C. Henderson, S. Simkins, L. Slakey, M. Stains, G. Weaver, and L. Whitehead (Eds.). *Transforming Institutions: Accelerating Systemic Change in Higher Education*. Pressbooks. http://openbooks.library.umass.edu/ascnti2020/chapter/ngai-etal/

2020 S. E. Andrews, J. Keating, **J. C. Corbo**, M. Gammon, D. L. Reinholz, and N. Finkelstein. Transforming Teaching Evaluation in Disciplines: A Model and Case Study of Departmental Change. In K. White, A. Beach, N. Finkelstein, C. Henderson, S. Simkins, L. Slakey, M. Stains, G. Weaver, and L. Whitehead (Eds.). *Transforming Institutions: Accelerating Systemic Change in Higher Education*. Pressbooks. http://openbooks.library.umass.edu/ascnti2020/chapter/andrews-etal/

2019 D. L. Reinholz, M. E. Pilgrim, **J. C. Corbo**, and N. Finkelstein. Transforming Undergraduate Education From the Middle Out With Departmental Action Teams, Change: The Magazine of Higher Learning, **51** (5), 64-70. doi:10.1080/00091383.2019.1652078

2019 D. L. Reinholz, **J. C. Corbo**, D. J. Bernstein, and N. Finkelstein. Evaluating Scholarly Teaching: A Model and Call for an Evidence-Based Approach. In J. Lester, C. Klein, A. Johri, and H. Rungwala (Eds.), *Learning Analytics in Higher Education: Current Innovations, Future Potential, and Practical Applications*. New York, NY: Routledge.

2019 D. L. Reinholz, M. E. Pilgrim, K. Falkenberg, C. Ngai, G. M. Quan, S. Wise, C. Geanious, **J. C. Corbo**, and N. Finkelstein. Departmental Action Teams: A five-year update on a model for sustainable change, in *RC20/20* (the 2018 Reinvention Collaborative Biennial National Conference digital volume). https://www.rc-2020.org/falkenberg

2015 D. L. Reinholz, **J. C. Corbo**, M. H. Dancy, S. Deetz, and N. Finkelstein. Towards a model of systemic change in university STEM education, in *Transforming Institutions: Undergraduate STEM Education for the 21st Century*, edited by G. C. Weaver, W. D. Burgess, A. L. Childress, and L. Slakey (Purdue University Press, West Lafayette, IN, 2015).

2013 B. F. Albanna, **J. C. Corbo**, D. R. Dounas-Frazer, A. Little, A. M. Zaniewski. Building Classroom and Organizational Structure around Positive Cultural Values, AIP Conf. Proc. 1513, pp. 7-10. doi:10.1063/1.4789638

Other Publications

2025 C. Ngai, **J. C. Corbo**, and S. B. Wise. "Characterizing Student Perspectives on Departmental Culture: The Student DELTA Survey," AAAS IUSE Blog, Jan 5.

2021 **J. C. Corbo**, C. Ngai, G. M. Quan, and S. B. Wise. "Departmental Change: Sustaining Impacts," ASCN Blog, Apr 30.

2021 **J. C. Corbo**, C. Ngai, G. M. Quan, and S. B. Wise. "Departmental Change: Engaging in a Change Initiative," ASCN Blog, Mar 17.

2021 **J. C. Corbo**, C. Ngai, G. M. Quan, and S. B. Wise. "Departmental Change: Starting an Initiative," ASCN Blog, Feb 9.

2021 **J. C. Corbo**, C. Ngai, G. M. Quan, and S. B. Wise. "Using project principles to anchor changing departments," ASCN Blog, Jan 8.

2020 **J. C. Corbo** and J. T. Laverty. "AAPT Game Night: Reflections and Future Directions," PERC 20/20 Blog, Feb 12.

2018 **J. C. Corbo**. "Focusing on Principles and Commitments at FFPER: Puget Sound 2018", in *APS Forum on Education Fall 2018 Newsletter*, edited by R. Steinberg. https://www.aps.org/units/fed/newsletters/fall2018/principles.cfm

2013 N. Roth, P. Gandhi, G. Lee, and **J. C. Corbo**. "The Compass Project: Charting a New Course in Physics Education," Physics Today Online, Points of View section, Jan 8. doi:10.1063/PT.4.0003

2008 **J. C. Corbo**. "On Graduate School and Teaching," guest post, Discover Magazine's Cosmic Variance Blog, Jun 12.

Conference Activity and Seminars

Invited Talks

2024 "Supporting Physics Departments for Planning and Implementing Transformational Change," APS March Meeting, Minneapolis, MN, Mar 4.

2024 "Supporting Physics Departments for Planning and Implementing Transformational Change," West Virginia University Physics Department Colloquium, Virtual, Feb 14.

2024 "Supporting Physics Departments for Planning and Implementing Transformational Change," Two-Year College Chemistry Consortium Meeting, Virtual, Feb 9.

2022 "Departmental Action Leadership Institute (DALI) Roundtable," Meeting of the APS Eastern Great Lake Section and the Michigan Section of AAPT, Southfield, MI, Nov 22.

2022 "Creating Effective Change in Higher Education," Compass Seminar, Berkeley, CA, Nov 13.

2022 "Supporting Departmental Change Efforts with Departmental Action Leadership Institutes (DALIs)," APS April Meeting, New York City, April 12.

2021 "Departmental Action Teams as a Mechanism for Change," Kansas State University Physics Colloquium, Oct 4.

2021 "Supporting Departmental Change Efforts with Departmental Action Leadership Institutes (DALIs)," AAPT Summer Meeting, Online, Aug 1.

2021 "EP3 Departmental Action Leadership Institutes (DALIs): Supporting Departments in Using the EP3 Guide to Undertake Significant, Sustainable Change Efforts," APS/AAPT Physics Department Chairs Conference, Online, Jun 4.

2021 "Departmental Action Teams as a Mechanism for Change," University of Oregon Physics Colloquium, Mar 4.

2020 "Student Ownership and Departmental Change: Building a Better Academia Together," Yale Astronomy Virtual Colloquium, Sept 10.

2020 "Supporting Program Improvement with a Departmental Action Leadership Institute," AAPT Summer Meeting, Online, Jul 19.

2019 "Departmental Action Teams as a Mechanism for Improving Equity and Inclusion," Physics Department Equity and Inclusion Committee Lecture, Stanford University, May 6.

2019 "Improving STEM Education through Departmental Action Teams," Office of STEM Education Symposium Series, Rutgers University, Apr 3.

2018 "Envisioning a Better Academia: Principles and Commitments," Foundations and Frontiers of Physics Education Research: Puget Sound Conference, Diablo, WA, Jun 17.

2018 "Improving STEM Education through Departmental Action Teams," Physics Education Research Lab (PERL) Seminar, Michigan State University, Apr 18.

2018 "Improving STEM Education through Departmental Action Teams," Texas Institute for Discovery Education in Science (TIDES), UT Austin, Mar 23.

2018 "Improving STEM Education through Departmental Action Teams," ACS Annual Meeting, New Orleans, LA, Mar 19.

2017 "Equity in Physics Education: Organizing for Change as a Graduate Student," AAPT Winter Meeting, Atlanta, GA, Feb 21.

2016 "Overview of Education Research and Teacher Preparation at the University of Colorado," Engineering Education Research Group, Oslo and Akershus University College, Oct 11.

2015 "Institutional Change: Planning an Effort and Making a Difference," APS Four Corners Section meeting, Tempe, AZ, Oct 16.

2015 "Department Action Teams: A New Model for Empowering Faculty to Make Sustainable Change," Engineering Education Research Group, University of Maryland College Park, Oct 1.

2014 "Professionalizing Educational Practice through Measurement, Assessment, and Culture," AAU Undergraduate STEM Education Initiative Project Site Workshop, Washington, DC, May 13.

2013 "Building Modeling Skills and Developing Science Identity in Physics Freshmen," Sheridan Center for Teaching and Learning, Brown University, Sept 16.

2013 "BEC's & QMC: Simulating Systems of Ultracold Atomic Gases," Berkeley Compass Project Lecture Series, UC Berkeley, May 7.

2012 "Progress through Predicament: How Collaborating on Tough Problems Cultivates a Successful, Supportive Community," APS April Meeting, Atlanta, April 1.

2010 "The Compass Project: An Interactive Workshop," Physics Undergraduate Reform Network Alliance (PURNA) Workshop, UC Berkeley, May 6.

2010 "Compass at Berkeley: Underrepresented Student Retention," Physics Teacher Education Coalition (PTEC) Conference, Washington D.C., Feb 13.

Workshops and Webinars

2022 "Departmental Action Leadership Institutes (DALIs): A Scalable Model for Supporting Departmental Change Efforts," webinar hosted by ASCN, Feb 24.

2021 "Utilizing a Principles-Focused Approach Workshop," AAAS-IUSE Summer Labs, June 17.

2021 "Facilitating Change Through the Departmental Action Team (DAT) Model," virtual workshop hosted by ASCN, Mar 30.

2020 "Facilitating Change Through the Departmental Action Team (DAT) Model," webinar hosted by AAPT and SEA Change, Oct 26.

2019 "DATs: Facilitated Teams Supporting Change in Departmental Structures and Culture," POD Network Conference, Pittsburgh, PA, Nov 14.

2019 "Creating Sustainable Change in University Departments: Theory and Practice," AAPT Summer Meeting, Provo, UT, July 21.

Invited Panels

2023 "APS Webinar: Potential Research Areas," Physics Undergraduates Learning and Sharing Experiences (PULSE) Webinar Series, Sept 27.

2017 "Supporting Faculty Members' Efforts to Improve Undergraduate STEM Education," AAU Undergraduate STEM Education Initiative Network Conference, Washington, DC, Oct 2.

2016 "Learning to Listen: Graduate Student Leaders on Graduate Student Climate Change," Diversity and Inclusion Summit, Boulder, CO, Nov 9.

Invited Posters

2018 "The Access Network: Bringing Together Student Leaders to Support Equity Programs," Physics Education Research Conference (PERC), Washington, DC, Aug 2.

2012 "Building Classroom and Organizational Structure around Positive Cultural Values," Physics Education Research Conference (PERC), Philadelphia, PA, Aug 2.

Sessions Organized

2017 "Bridging Research and Practice in the Access Network," Physics Education Research Conference (PERC), Cincinnati, OH, July 27.

Contributed Talks

2023 "Sustained Department-Wide Changes Achieved by Departmental Action Teams," ASCN Transforming Institutions Conference, Minneapolis, MN, June 12.

2019 "Connecting Facilitation to Outcomes in the Departmental Action Team Model," AAPT Summer Meeting, Provo, UT, July 22.

2018 "Externalizing the Core Principles of the Departmental Action Team (DAT) model," AAPT Summer Meeting, Washington, DC, July 30.

2017 "Access Assemble! Bringing Together Student Leaders to Support Equity Programs," AAPT Summer Meeting, Cincinnati, OH, July 24.

2017 "Effective Facilitation of Teams to Enact Departmental Change," AAPT Winter Meeting, Atlanta, GA, February 19.

2016 "Using Asynchronous Communication To Support Virtual Faculty Learning Communities," AAPT Summer Meeting, Sacramento, CA, July 18.

2015 "Departmental Action Teams: Empowering Faculty to Make Sustainable Change," AAPT Summer Meeting, College Park, MD, July 29.

2014 "Towards a Model of Systemic Change in University STEM Education," Discipline-Based Educational Research Seminar Series, CU Boulder, November 19.

2014 "Fostering Positive Cultural Changes in STEM Departments: Two Models of Institutional Change," AAPT Summer Meeting, Minneapolis, July 30.

2013 "Building Modeling Skills and Developing Science Identity in Physics Freshmen," AAPT Summer Meeting, Portland, OR, July 17.

2012 "Condensate Properties for Strongly Repulsive Bosons in a Double Well," APS March Meeting, Boston, March 1.

Contributed Posters

2022 "Understanding the Impacts of Departmental Action Teams on Departmental Change and Undergraduate Success," 2022 IUSE Summit, Jun 1.

2021 "Supporting Departmental Change Efforts in Physics with Departmental Action Leadership Institutes (DALIs)," Transforming Institutions Conference 2021, Jun 9.

2019 "Sustainable, complex departmental change requires a multifaceted approach that attends to the mechanics of implementation, the capacity of the change agents, their relationships with the department, and structures to support these components.," Physics Education Research Conference, Provo, UT, Jul 25.

2018 "Externalizing the Core Principles of the Departmental Action Team (DAT) model," Physics Education Research Conference, Washington, DC, Aug 2.

2017 "Departmental Action Teams as a Mechanism for Promoting Departmental Change," Physics Education Research Conference, Cincinnati, OH, July 27.

2017 "Departmental Action Teams as a Mechanism for Promoting Departmental Change," Transforming Research in Undergraduate STEM Education Conference, St. Paul, MN, July 6.

2016 "Using Asynchronous Communication to Support Virtual Faculty Learning Communities," Physics Education Research Conference, Sacramento, CA, July 21.

2016 "Improving Retention in the Physical Sciences with a Departmental Action Team," Physics Education Research Conference, Sacramento, CA, July 19.

2015 "Departmental Action Teams: Empowering Faculty to Make Sustainable Change," AAU STEM Network Conference, St. Louis, MO, Oct 13.

2015 "Departmental Action Teams: Empowering Faculty to Make Sustainable Change," CU Boulder STEM Education Symposium, Boulder, CO, Sept 21.

2015 "Departmental Action Teams: Empowering Faculty to Make Sustainable Change," Physics Education Research Conference, College Park, MD, July 30.

2015 "Faculty Online Learning Communities to Support Physics Teaching," Physics Education Research Conference, College Park, MD, July 30.

2014 "Two Models of Institutional Change in STEM Departments," Physics Education Research Conference, Minneapolis, July 31.

2014 "Systemic Efforts for Promoting Cultural Change to Improve STEM Education," AAU Undergraduate STEM Education Initiative Conference, Washington, D.C., July 21.

2013 "Building Modeling Skills and Developing Science Identity in Physics Freshmen," Physics Education Research Conference, Portland, July 17.

Teaching Experience

Course Instructor, UC Berkeley

2012 Introduction to Modeling, Fall semester
Co-designed and taught a course in which students learned about the role of modeling in science and developed physical models in the context of the ray model of light and their own final project of choice. Students also performed weekly self-evaluations to improve their abilities as students and researchers by honing skills such as persistence, scepticism, and collaboration.

2011 Introduction to Modeling, Fall semester
See above.

2007 Conceptual Physics, Compass Project Summer Program, Aug 6–17
Co-designed and taught a course that focused on building models, conducting experiments, and analyzing real-world data to understand earthquakes and the Earth's interior.

Teaching Workshop Leader, UC Berkeley

2012 Compass Teacher Training Workshop, Summer
Ran a series of weekly workshops to introduce instructors to the Compass Project's teaching philosophy and methods and to help them design the curricula for the courses they were teaching.

2011 Facilitating Discussions in STEM, Aug 9
As part of the Teaching Conference for Graduate Student Instructors, ran a workshop to familiarize first-time GSIs with the importance of active learning and with techniques that they could implement in their classrooms.

Guest Lecturer, CU Boulder

2015 Teaching and Learning Physics, Nov 5
"Promoting Equity in Physics through Student-Driven Programs"

Teaching Assistant, UC Berkeley (with student evaluation rating, out of 7)

S 12 Honors Introductory Modern Physics (6.5)
F 08 Honors Introductory Mechanics (6.9)
S 08 Honors Introductory Modern Physics (6.7)
F 07 Honors Introductory Mechanics (6.8)
S 07 Quantum Mechanics I (6.3)
F 06 Honors Introductory Mechanics (6.6)
S 06 Honors Introductory Thermodynamics and E & M (5.9)
F 05 Honors Introductory Modern Physics (6.2)
S 05 Introductory Thermodynamics and E & M (5.9)
F 04 Algebra-based Mechanics and Thermodynamics (6.6)

University & Professional Service

Physics Education Research Leadership Organizing Council, AAPT, 2016–2019
Elected council member, chair of the Physics Education Research Conference (PERC) Organizing Committee.

The Access Network, 2014–present
Co-founder and co-organizer. Access is a national network of student-driven equity programs in the physical sciences inspired by the Berkeley Compass Project.

The Berkeley Compass Project, 2007–2013
Co-founder, co-coordinator, teacher, and mentor. Compass is a student-run program that supports diversity and community in the physical sciences. Responsibilities included: coordinating summer program in 2008 and 2009, hiring summer program teachers, reading applications for incoming students, organizing leadership retreats, fundraising, and formalizing Compass's consensus-based decision making model and leadership structure.

Graduate Recruitment Committee, UC Berkeley physics department, 2005–2007
Assisted in the coordination of the physics department's open house for prospective

graduate students.

Related Work Experience

Consultant, Florida International University, April 2012.
Advised the FIU College of Engineering and Computing on the development of a summer program for incoming engineering freshmen.

Community Outreach

Milken Scholars Program, 2000–present
Inducted in 2000; admissions committee member in 2007, 2011, and 2016; Alumni Association Bay Area co-chair 2009–2011; mentor and speaker at annual Summits for new and current scholars. The Milken Scholars Program "honors exceptional young men and women based on their academic performance, community service, leadership activities and triumphs over obstacles" with a scholarship and professional development opportunities.

Professional Development

UC Berkeley

2011 Designing Courses and Course Syllabi to Enhance Student Motivation
2011 Summer Institute for Preparing Future Faculty
2010 Mentoring in Higher Education
2004 Professional Preparation: Supervised Teaching of Physics
2004 Teaching Conference for First-Time GSIs

Memberships

American Physical Society
American Association of Physics Teachers
Professional and Organizational Development Network