

Shelly Belleau

PEER Physics
University of Colorado Boulder

970.231.7567
Shelly.Belleau@PEERphysics.org

Professional Summary

Educational leader and physics curriculum developer with 15+ years transforming K-12 science education through research-based, inclusive pedagogical approaches. Co-founder and Program Director of PEER Physics, serving districts nationwide.

Professional Preparation

University of Denver - Denver, Colorado

M.A. in Urban Education, GPA 4.0 June 2010

- Boettcher Teaching Scholar

Colorado Department of Education

Teaching Certification June 2009

- Secondary Science

University of Colorado - Boulder, Colorado

B.A. in Biochemistry with minor in Chemistry, GPA 3.64 May 2008

- National Science Foundation Robert Noyce Scholar
- Dean's Scholar
- Hach Scholar

Professional Experience

PEER Physics, University of Colorado Boulder

Program Director 2024-Present

- Serve as Principal Investigator and Quotation Authority** for PEER Physics Rate Based Service Activity (RBSA), holding official university responsibility for program oversight and contract authorization
- Co-lead Business Leadership Team** with Emily Quinty, holding long-term organizational vision while managing finances, personnel, structure, and strategic goals for PEER Physics
- Direct organizational growth** from startup to \$1.2M revenue in FY25 with \$1.8M target for FY26, achieving 100% pilot program conversion rate through strategic partnership development
- Cultivate lasting partnerships** with district leaders and educators, conducting needs assessments and developing responsive solutions from initial engagement through multi-year implementation
- Manage comprehensive operations** including financial oversight, contract fulfillment, and team development while building scalable systems for continued organizational growth

Chief Editor 2018-Present

- Provide strategic vision** and final editorial oversight for curriculum development team creating inclusive physics resources informed by design principles and practitioner input
- Champion inclusive science education** through three-dimensional and inquiry-based pedagogical approaches

Co-Founder 2013-Present

- Co-founded PEER Physics**, a Rate Based Service Activity (RBSA) at CU Boulder, developing research-based curriculum serving K-12 districts nationwide
- Published evidence-based curriculum materials.** Since its inception, PEER Physics has partnered with 753 teachers, reaching 192,112 students across 161 schools.

School of Education, University of Colorado Boulder

Course Instructor, Energy and Interactions

2013-2020

- Taught EDUC/PHYS 1580

Mapleton Public Schools

Secondary Science Teacher

2009-2013

- Taught Chemistry, Physics, and Astronomy

Additional Service

- Planned the chemistry scope and sequence and wrote district chemistry assessments
- Provided feedback about teacher support and coaching protocols (Danielson Framework)

National Science Foundation Master Teaching Fellowship

Streamline to Mastery, University of Colorado

2009-2019

- Create and implement professional development for science teachers
- Conduct and disseminate science education research

American Chemical Society

Working Group to Evaluate ACS Professional Development Activities

2012-2017

- Evaluated current ACS professional development activities
- Developed new professional learning materials

Task Force for the Formation of a Chemistry Teachers Association

2011-2016

- Provided direction regarding for the formation of a national chemistry teacher organization
- Assisted with writing a funding request for the creation of a chemistry teacher association

ChemMatters Magazine Policy Board

2011-2016

- Evaluated the progress and direction of the ACS high school chemistry magazine, ChemMatters
- Chair of the policy board (2013-2016)

Liaison Group on High School Chemistry Teaching

2010-2015

- Provided recommendations to the Society Committee on Education (SOCED) and the ACS Division of Chemical Education on current issues in high school chemistry teaching

Published Curricular Materials

Research-based PEER Physics curriculum materials published in both print and eBook formats, used by K-12 districts nationwide:

Belleau, S., Otero, V., & Quinty, E. PEER Physics Student Guides (6-chapter series: Charge, Magnetism, Energy, Force, Gravitation, Waves). 2019.

Quinty, E., **Belleau, S.**, & Otero, V. PEER Physics Teacher's Guides (7-chapter series: Charge, Magnetism, Energy, Force, Gravitation, Waves, and Teacher's Guide Introduction). 2019.

Referred Publications

Martins, J., **Belleau, S.** & Otero, V. (2021). PEER Physics: An evidence-based framework for inclusive physics curricula, in *The Physics Teacher* 59, 730

Lindsay, W., **Belleau, S.** & Otero, V. (2018). PEER Suite: a holistic approach to supporting inductive pedagogy implementation, in A. Traxler, Y. Cao, and S. Wolf (Eds.) 2018 Physics Education Research Conference Proceedings. Washington DC.

Belleau, S. & Otero, V. (2013). Scientific Practices: Equalizing Opportunities for Linguistically Diverse Students, in S. Rabelo, C. Singh, & P. Engelhardt (Eds.) 2013 Physics Education Research Conference Proceedings. Melville, NY: AIP Press.

Belleau, S. (2012). Critical Classroom Structures for Empowering Students to Participate in Science, in S. Rabelo, C. Singh, & P. Engelhardt (Eds.) 2012 Physics Education Research Conference Proceedings. Melville, NY: AIP Press.

Belleau, S., Ross, M., & Otero, V. (2011). Implementation of Physics and Everyday Thinking in a High School Classroom: Concepts and Argumentation, in S. Rabelo, C. Singh, & P. Engelhardt (Eds.) 2011 Physics Education Research Conference Proceedings. Melville, NY: AIP Press.

Presentations, Workshops, and Plenary Presentations

Martins, J., & **Belleau, S.** (2025). Physics Teacher Breakfast, Facilitated at the STANYS Conference, Syracuse, NY November 8, 2025

Belleau, S. PEER Physics Exhibitor Workshop (2025). Inclusivity through Evidence in High School Physics, Presented at the CASE Conference, Palm Springs, CA, October 18, 2025

Quinty, E. & **Belleau, S.**, PEER Physics Exhibitor Workshop (2024). Materials for Supporting Model Building, Presented at the National Science Teachers Association Conference, Denver, CO, March 21, 2024

Quinty, E. & **Belleau, S.**, PEER Physics Exhibitor Workshop (2024). Foster Collaboration and Inclusion using Science Practices, Presented at the National Science Teachers Association Conference, Kansas City, MO, October 28, 2024

Quinty, E. & **Belleau, S.**, PEER Physics Exhibitor Workshop (2024). Engage Students in Rich Discourse, Presented at the National Science Teachers Association Conference, Kansas City, MO, October 28, 2024

Quinty, E. & **Belleau, S.**, PEER Physics Exhibitor Workshop (2023). Foster Collaboration and Inclusion using Science Practices, Presented at the National Science Teachers Association Conference, Atlanta, GA, March 24, 2023

Quinty, E. & **Belleau, S.**, PEER Physics Exhibitor Workshop (2023). Engage Students in Rich Discourse, Presented at the National Science Teachers Association Conference, Atlanta, GA, March 23, 2023

Belleau, S. (2022). Inclusivity through Evidence in High School Physics, Presented at the National Science Teachers Association Regional Conference, Chicago, IL July 23, 2022

Belleau, S. & Quinty, E. (2022). Inclusivity through Evidence, Self-advocacy through Disciplinary Practices, Presented at the Regional AAPT Conference, Virtual, April 9, 2022

Belleau, S. & Quinty, E. (2021). Teaching Waves with PEER Physics Open Source Resources for General Physics, Presented at the Regional AAPT Conference, Virtual, April 10, 2021

- Otero, V., **Belleau, S.** & Quinty, E. (2020). Supporting Teachers in Their Instruction and in Meeting Longer-Term Professional Goals with the PEER Physics Suite, Presented at the 2020 PhysTEC Conference, Denver, CO, February 29-March 1, 2020.
- Belleau, S.** (2018). Three Dimensional Assessment in High School Physics, Presented at the summer meeting of the American Association of Physics Teachers, Washington, DC, July 28-August 1, 2018.
- Otero, V. & **Belleau, S.** (2018). PEER Suite: Transforming Courses, Engaging Teachers, and Assessing Multiple Dimensions, Presented at the summer meeting of the American Association of Physics Teachers, Washington, DC, July 28-August 1, 2018.
- Gmurczyk, M., **Belleau, S.**, Keil, J., Bridle, C., & Stober, R. (2016). Energy in Chemistry: A Macroscopic View, American Chemical Society sponsored workshop presented at the National Science Teachers Association Regional Conference, Portland, OR, November 11, 2016.
- Gmurczyk, M., **Belleau, S.**, Keil, J., Bridle, C., & Stober, R. (2016). A Particulate View, American Chemical Society sponsored workshop presented at the National Science Teachers Association Regional Conference, Portland, OR, November 11, 2016.
- Gmurczyk, M., **Belleau, S.**, Keil, J., Bridle, C., & Stober, R. (2016). Energy in Chemistry: An Atomic View, American Chemical Society sponsored workshop presented at the National Science Teachers Association Regional Conference, Portland, OR, November 11, 2016.
- Belleau, S.** (2016). Student Positioning in an Inquiry-based Physics Content and Methods Course, Presented at the summer meeting of the American Association of Physics Teachers, Sacramento, CA, July 16-20, 2016.
- Belleau, S.** & Quinty, E. (2016). Noyce Scholar and MTF Experiences in Teacher Research Teams, Presented at the summer meeting of the American Association of Physics Teachers, Sacramento, CA, July 16-20, 2016.
- Belleau, S.** (2015). Student Interactions and Substantive Contributions in Whole Class Consensus Discussions, Invited presentation at the winter meeting of the American Association of Physics Teachers, San Diego, CA, January 3-6, 2015.
- Andrew, J., **Belleau, S.**, Tinnasand, M., & Gmurczyk, M. (2014). Energy in Chemistry: A Macroscopic View, American Chemical Society sponsored workshop presented at the National Science Teachers Association Regional Conference, Long Beach, CA, December 4-6, 2014.
- Andrew, J., **Belleau, S.**, Tinnasand, M., & Gmurczyk, M. (2014). Energy in Chemistry: A Particulate View, American Chemical Society sponsored workshop presented at the National Science Teachers Association Regional Conference, Long Beach, CA, December 4-6, 2014.
- Andrew, J., **Belleau, S.**, Tinnasand, M., & Gmurczyk, M. (2014). Energy in Chemistry: An Atomic View, American Chemical Society sponsored workshop presented at the National Science Teachers Association Regional Conference, Long Beach, CA, December 4-6, 2014.
- Andrew, J., Bloom, B., **Belleau, S.**, Bridle, C., Puttie, A., Talanquer, V., Tinnasand, M., & Gmurczyk, M. (2014). Energy in Chemistry: From the Macroscopic through the Particulate to the Atomic Levels, American Chemical Society sponsored workshop presented at the Biennial Conference on Chemical Education, Grand Valley, MI, August 3-7, 2014.
- Belleau, S.**, (2014). Gaining a voice in local and national education policy issues through collaborative relationships. In Debbie Herrington (Presider), High School Teaching as a Profession. Invited Symposium presented at the Biennial Conference on Chemical Education, Grand Valley, MI, August 3-7, 2014.
- Belleau, S.** & Knapp, E. (2014). Teacher Research and Professional Development: Streamline to Mastery, Presented at the Regional AAPT Conference, Boulder, CO, April 4, 2014
- Belleau, S.**, Knapp, E., & Ross, M. (2013) Addressing the NGSS with Classroom Scientific Induction, Presented at the Regional NSTA Conference, Denver, CO, December 13, 2013
- Belleau, S.** (2013). Inductive Reasoning: Equalizing Opportunities for Linguistically Diverse Students, Presented at the bi-annual meeting of the American Association of Physics Teachers, Portland, OR, July 13-17, 2013.
- Belleau, S.** & Otero, V. (2013). Scientific Practices: Equalizing Opportunities for Linguistically Diverse Students. Presented at the 5th Annual Symposium on STEM Education, Boulder, CO, September 23, 2013.
- Otero, V., **Belleau, S.** & Baber, A. (2013) History of Rewards for Faculty Participation in LA Programs, Invited Plenary at the 5th Annual International Learning Assistant Workshop, Boulder, CO, October 11, 2013

- Belleau, S.** & Levine, J. (2013). Teacher Perspective: The need for a national association for teachers of chemistry, Invited Presentation at the ACS National Meeting, Indianapolis, IN, September 6, 2013
- Ross, M., & **Belleau, S.** (2012). Challenging Traditional Assumptions of High School Science through the Physics and Everyday Thinking Curriculum, Presented at the bi-annual meeting of the American Association of Physics Teachers, Philadelphia, PA, July 28-August 1, 2012.
- Samuels, N., **Belleau, S.**, Sabella, M., Corbo, J., Dounas-Frazer, D., Zaniewski, A. & Van Duzor, A. (2012). Cultural Influences on Physics Teaching: Identifying Factors, Implementing Change. Invited Symposium presented at the Physics Education Research Conference, Philadelphia, PA, August 1-2, 2012.
- Sherman, S., Dykstra, S., Quinty, E., Severance, S., **Belleau, S.**, Ross, M., Van Dusen, B., & Otero, V. (2011). Streamline to Mastery: Teacher Driven Professional Development Program. Presented at the bi-annual meeting of the American Association of Physics Teachers, Omaha, NE, August 1-5, 2011.
- Belleau, S.**, Severance, S., Dykstra, S., Quinty, E. (2011). Inquiry Science Instruction. Presented at the Robert Noyce Western Regional Conference, Costa Mesa, CA, March 25-27, 2011.
- Severance, S., **Belleau, S.**, Dykstra, S., Quinty, E. (2011). Streamline to Mastery: Teacher Driven Professional Development Program. Presented at the Robert Noyce Western Regional Conference, Costa Mesa, CA, March 25-27, 2011.
- Stachurski, S.** & Otero, V. (2010). Essential Components of Student-Centered Physics Curricula, presented at the annual Noyce PI Conference, Arlington, VA.
- Otero, V. & **Stachurski, S.** (2010). Experiential Learning Model for STEM Education, Faculty Development, and Teacher Preparation, presented at the annual Noyce PI Conference, Arlington, VA.
- Stachurski, S.** (2010). Beyond Content: An analysis of student growth in their attitudes toward learning science and scientific thinking within an inquiry physics classroom, presented at the Boettcher Teaching Symposium, Thornton, CO, May 22, 2010.
- Otero, V., **Stachurski, S.**, Lyman, V. (2010). Urban Teachers' Views of the Colorado Learning Assistant Program, presented at the Spring Colloquium Series, University of Colorado, Boulder.
- Otero, V., Finkelstein, N., **Stachurski, S.**, & Lyman, V. (2009). Introduction to the Colorado Learning Assistant Program, presented at the annual conference of the Physics Teacher's Education Coalition, Washington, D.C.
- Otero, V., **Stachurski, S.**, & Finkelstein, N. (2008). The Learning Assistant/Noyce Fellowship Teacher Preparation Program, presented at the annually Noyce PI Conference, Arlington, VA.