What is PER@C?
The Physics Education Research Group at Colorado (PER@C) is one of the largest research programs in PER in the nation. Our research group develops and studies: uses of technology in physics education, assessments (conceptual, epistemological, and belief oriented), theoretical models of students learning physics, social and contextual foundations of student learning, examination of successful educational reforms and replication studies of such reforms, and student problem-solving in physics. We sponsor educational reforms in pre-college to post-doctoral physics. The research group includes faculty, staff, and students from the Department of Physics and the School of Education.

PER@C Successes:
- Faculty, researchers, and post-docs make PER@C the largest PER group in the nation.
- With tens of millions in external funding, PER@C is one of the best-funded programs of its kind in the nation.
- PER@C is one of the most published PER groups in the nation, with papers appearing in *Science, Nature: Physics, Physics Today, American Journal of Physics*, and *Physical Review*.
- PER@C faculty lead cornerstone efforts in science education at CU-Boulder, including nationally recognized programs.
- PER@C is leading the way in understanding how science is learned and transforming how science is taught.

PER@C is generously supported by:
The American Physics Society, PhysTEC, the Science and Mathematics Teacher Imperative, the University of Colorado Boulder, the National Science Foundation, the American Association of Physics Teachers, the William and Flora Hewlett Foundation, and the American Institute of Physics.

**For more information, visit:**
per.colorado.edu

PER@C Highlights:
The *PhET Interactive Simulations Project*: Developing, testing, and researching online simulations in physics, and now, chemistry, biology, geology and math.

*Lower-division Course Transformation*: Developing materials, implementing, evaluating and conducting research on transformation in Physics 1, 2 and 3.

*Upper-division Course Transformation*: Transforming junior Electricity and Magnetism, Quantum Mechanics, Classical Mechanics, Advanced Labs, and using PER-based tools in courses as advanced as the graduate level.

*Assessments*: The development of research-based instruments for evaluation of student learning including: attitudes and beliefs, quantum mechanics, and upper division E/M.

*The Learning Assistant Program*: Research on the nationally recognized effort that couples course transformation with teacher recruitment and preparation.

*Theoretical Work*: Developing theories of student learning in physics, including student use of representations, analogies, simulations; student development of epistemic and ontological commitments in physics; the development of future teachers, graduate students and faculty.

Areas of focus include institutional change in physics and science, gender studies, and informal science education.