

## PREFACE

The theme of the 2015 Physics Education Research Conference was “Critical examination of laboratory-centered instruction and experimental research in physics education.” This conference highlighted key areas of existing lab-focused research and established priorities for new PER related to laboratory and research experiences. The nearly 400 conference attendees were encouraged to gain a deeper understanding of how laboratory and research experiences influence student learning and to consider what PER can do to assist physics departments to incorporate these learning experiences into their curricula. This year’s conference presented 214 contributed posters over two sessions, six symposium sessions with 22 talks and 5 poster presentations, three workshops, and a “custom format” on Bridging Education Research and Practice: Supporting Undergraduate Research in Physics.

The AAPT/PERC Bridging Session highlighted work by Sandra Laursen on “Challenges and opportunities for measuring student outcomes of undergraduate research” and Natasha Holmes on “Developing quantitative critical thinking in the introductory physics laboratory.” The dinner presentation highlighted work of David Brookes on “The challenge of implementing education research: A holistic and dynamical systems perspective.” Dinner was also a time of celebration: Robert Beichner was honored for his contributions to the inception and 10-year success of the Physics Review Special Topics PER. The conference closed with Helen Quinn discussing “What does a vision for k-12 science education have to do with PER?” Many contributed papers in this volume also address this year’s theme with the remainder representing the diversity of directions within PER which help this volume fulfill its purpose of providing an annual snapshot of the field.

The Editors thank this year’s conference organizers Benjamin Zwickl, Bugenia Etkina, Heather Lewandowski, and MacKenzie Stetzer, the American Association of Physics Teachers (AAPT), and the Physics Education Research Leadership and Organizing Council (PERLOC). The eleventh-hour change in venue could have spelled disaster for this year’s conference, but they took it in stride and put together yet another successful and well-run meeting.

This marks the third year that the Proceedings will be published on-line through comPADRE with sponsorship by the American Association of Physics Teachers. The Proceedings’ online submission process for contributed papers and referee reports are supported each year by Lyle Barbato and Bruce Mason who work closely with the PERC Proceedings Editors to make improvements to the system and ensure that everything runs smoothly. We wish to thank Lyle and Bruce for their excellent work and ongoing commitment to the PER community and the PERC Proceedings.

Last but not least, this volume owes its existence to the referees, who volunteer their time and expertise to help improve the quality of the papers published in the Proceedings. This year we had 181 reviewers who reviewed the 128 papers submitted to the Peer Reviewed Section.

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See you next summer in Sacramento!

Alice D. Churukian  
Editor-in-Chief