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**Excellence in Physics Education Award Talk: Revitalizing Introductory Physics at Community Colleges and More<sup>1</sup>**

CURTIS HIEGGELKE, Joliet Junior College

This project started because many community college physics instructors wanted to improve the learning and understanding of their students in physics. However, these teachers, at that time, were isolated from many of the emerging developments in physics education research and computer technology such as MBL (microcomputer based laboratories). While there were some opportunities within the American Association of Physics Teachers to learn about recent educational developments, there was nothing targeted directly to the unique needs of the two-year college physics community; nor did many of the curriculum developers have much knowledge about this group. The initial goal of this project was to design and provide hands-on workshops to introduce new computer technology, software, curricular materials and approaches arising from physics education research to community college physics teachers. They would then have the background to decide if these new ideas were worthy of adoption and feasible at their institutions. NSF's Division of Undergraduate Education supported these workshop efforts by funding seven different grants from three different programs. These grants have led to 61 workshops with 52 workshop leaders, which were held at 23 community colleges in 14 states for over 1300 participants. This presentation will provide more details about these workshops, and about the subsequent development of the Conceptual Survey on Electricity and Magnetism, and a book on Ranking Tasks edited by us, but written by many participants in the early workshops. In addition, grants were received from NSF for the acquisition and development of computer lab technology that was later featured in some of the workshops. Finally, three NSF grants were received for the development of new educational materials called TIPERs (Tasks Inspired by Physics Education Research) that will be described.

<sup>1</sup>National Science Foundation Division of Undergraduate Education