

Call for Applications
Post-doctoral Training Program in Interdisciplinary Education Research (PostPIER)
@ Carnegie Mellon University

Director:

David Klahr

Department of Psychology

klahr@cmu.edu

<http://www.psy.cmu.edu/people/klahr.html>

Co-Director

Kenneth Koedinger

Department of Psychology

& Human Computer Interaction Institute

koedinger@cmu.edu

<http://pact.cs.cmu.edu/koedinger.html>

Co-Director

Vincent Aleven

Human Computer Interaction

Institute

aleven@cs.cmu.edu

<http://www.cs.cmu.edu/~aleven/>

PostPIER is a post-doctoral training program to be funded by the Institute of Education Sciences that aims to train a “new breed” of learning scientists who will acquire the skills and experience necessary to advance our knowledge about human learning and to translate that knowledge into effective instruction. This program is built upon our successful pre-doctoral training program¹.

We seek applicants from strong doctoral programs in areas such as psychology, computer science, or STEM education. Selected trainees will work with faculty in CMU’s Department of Psychology, Human Computer Interaction Institute, or the Pittsburgh Science of Learning Center. Training will focus on cognitive, metacognitive, and/or motivational foundations for developing and implementing evidence-based instructional methods that can improve teaching and learning in authentic educational settings. Content emphasis will be closely related to the development and efficacy goals in IES programs in *Cognition and Student Learning*, *Math and Science Education*, and *Educational Technology*.

The PostPIER program is crafted to advance trainees’ knowledge about the concepts, methods and tools that will enable them to acquire and analyze rich data sets of potential mediating variables between instructional manipulations and final assessments of robust student learning. They will become well versed in emerging technologies, such as intelligent tutors, web-based instructional delivery systems, and educational data mining, that play a central role in this type of data collection and analysis. Our research projects, many of which are supported by IES or involve IES pre-doctoral fellows, have demonstrated how such technologies can not only profoundly enhance robust student learning outcomes, but also significantly increase the specificity, accuracy, and breadth of assessment.

More specifically, the post-docs under this grant would be involved in one or more the following areas of research and training:

- Intelligent tutors in core scientific procedures (Klahr, Koedinger)
- Intelligent tutors in middle-school mathematics (Aleven, Koedinger)
- Educational data mining (Koedinger)
- New forms of assessment and cognitive diagnosis. (Koedinger, Aleven, Klahr)

The fellowship carries a stipend of \$50,000²/yr, full-time benefits including health insurance, as well as funds for professional travel and research costs (computer, software, books, etc.). Only US citizens or permanent residents are eligible for this fellowship. Successful applicants could expect up to two years of support. For the 2011-12 Academic Year, there are two openings. The anticipated start date could be as early as June 1, 2011.

To apply, send vita, 1 or 2 publications, and a brief (1 page) summary of your research interests and professional goals for this training program. In addition, please ask two people who are familiar with your work to send letters of support. **Applications and inquiries should be sent to Audrey Russo**, Program Coordinator: ar3v@andrew.cmu.edu. Review of applications will begin February 15 and will continue until the positions are filled.

¹ <http://www.cmu.edu/pier/>

² This amount could be augmented under appropriate circumstances.