

A Panel Proposal on
Computer Science Education Research as a Scientific Endeavor

What are the objectives of this panel?

The objectives are to:

- Motivate education-based research as a valid scientific endeavor among faculty
- Show how scientific research methods can be applied to classroom situations and learning in general
- Show how published education-based research can inform and help make participants better teachers
- Make participants aware of journals and conferences that publish education-based research
- Make participants aware of funding programs that support education-based research

Who should attend?

All attendees at the conference are invited to contribute to the discussion. The primary target audience is teaching faculty at colleges and universities. We also strongly encourage attendance by students who are considering whether to pursue academic or industry positions after graduation.

What is the format of the panel?

The presenters will each cover general topics related to the objectives. Each will relate how they have managed to work education-based research into their own teaching environments. (Almstrum and Westbrook are non-tenure track teaching faculty members in research-oriented departments. McCauley is a tenure-track faculty member in a teaching-oriented department.)

What are the topics that will be covered?

Topics will include:

- How to apply principles of scientific research to education.
- How to use the classroom labs at your fingertips to generate research results that can inform our field.
- Becoming part of a community of CS education researchers
- Trade-offs between choosing a tenure-track position at a teaching-oriented department versus a non-tenure track teaching position at a research-oriented department.
- How CS education research is regarded for promotion and tenure

What is the proposed session length?

90 minutes.

Will there be written materials, and if so, what are they?

We expect to provide:

- Handouts / copies of slides.
- A list of recommended resources and "how to get started" tips pages.

What competing points of view will be addressed?

The competing points of view are based on the different perspectives of the presenters who belong to very different types of departments and thus have different commitments and support for accomplishing their teaching and their research.

What knowledge can attendees expect to gain?

Attendees will become aware of how they can pursue scientific research in their classrooms. They will be given numerous pointers to important references (journals, papers, websites, funding opportunities) that will be useful in establishing an education-based research project.

What are the number, name and affiliations of the speakers?

There will be three presenters:

- Vicki Almstrum, Lecturer, Department of Computer Sciences, University of Texas at Austin
- Renee McCauley, Associate Professor, Computer Science Department, College of Charleston
- Suzanne Westbrook, Senior Lecturer, Department of Computer Science, University of Arizona

What are the educational, technical, and professional background/qualifications of the speaker(s)?

All panelists are teachers and researchers, who have chosen to focus their research efforts in education.

Almstrum, Ph.D. Computer Science Education 1994, University of Texas at Austin.

She is involved in many education-based research projects at UT and elsewhere; she is moderator of the Computer Science Education as an Academic Field web site

McCauley, Ph.D. Computer Science, 1992, University of Louisiana at Lafayette.

She is co-editor-in-chief (with Sally Fincher) of the scholarly journal *Computer Science Education*.

Westbrook, Ph.D. in Computer Science, 1998, University of Louisiana at Lafayette.

She is a participant of the NSF-supported Bootstrapping Computer Science Education Research project (directed by Sally Fincher & Marian Petre).