# Annals of Research on Engineering Education (AREE)

PROJECT SUMMARY
The National Academy of Engineering will, in partnership with several engineering journals (including the Journal on Engineering Education, Computer Science Education, and the Journal of Research on Science Teaching) published by professional societies and commercial publishers, host a web portal linking education research papers in engineering (including computer science) and related science (including mathematics) disciplines. This virtual Annals of Research on Engineering Education (AREE) will serve as

- An "annals", presenting, in a unitary fashion, the most rigorous research on engineering education in a manner that builds upon rather than competes with existing outlets within engineering disciplines;
- A forum for researchers on engineering education to discuss applicable standards for the evaluation of engineering education research;
- A reference site offering annotated bibliographies of the most recent research on engineering education research;
- A discussion forum through which engineering faculty and administrators with limited ability (or time) to perform research on engineering education can learn of research findings with immediate implications for improved classroom practice;
- A gateway to existing archives of relevant engineering education conference proceedings (e.g., the Frontiers of Education < http://fie.engrng.pitt.edu/>) and curricular materials (e.g., the National Engineering Education Delivery System <http://www.needs.org/needs/index.jhtml>); and
- A gateway to relevant education research in non-engineering disciplines.

INTELLECTUAL MERIT
The intellectual merit of the basic idea is the appeal of providing "one-stop" access to an array of engineering education research journals. Articles selected from participated journals for their exemplary research content will be grouped within broad research themes across the set of participating journals. An individual paper entry within AREE will display the title, author, and source citation. Readers will be able to click on individual entries and be transported to the article's abstract (if public) and thereon to the full article via the copyright holder's access control gateway (if any).

As part of an effort to encourage discussion and formation of consensus on quality standards, individual entries will also display readers' judgments of the adherence of the article to specific quality standards for education research (e.g., the six guidelines provided in the 2002 National Research Council report, *Scientific Research in Education*). In making their judgments, readers will reply to brief self-studies provided by the papers' authors. Thus, through its existence and operation, AREE will foster increased knowledge within the engineering and computer science communities on how to pursue, communicate, and review education research within these disciplines. Increasing such knowledge will advance the development and diffusion of practices that will advance student learning and practice.

Long-term sustainability of AREE will be provided via individual and institutional subscriptions and external sponsorships.

BROADER IMPACT
The broader impact of the AREE will be its contribution to improving the quality of discourse among engineering education researchers and to translating the results of engineering education research into practical information for faculty who desire to translate the latest pedagogic knowledge into their classroom practices.