Abstract

The practice of engineering is changing rapidly. Engineering education, however, despite many interesting experiments and a few shining examples, has changed hardly at all in the last forty years. Recognizing that the pace of the change of engineering practice will likely increase, and that the engineer we are educating today will still be practicing forty years from now, it’s imperative that we improve both the curriculum and pedagogy of engineering now!
Biographical Sketch

Dr. Wm. A. Wulf is on leave from the University of Virginia, where he is a University Professor and AT&T Professor of Engineering in the Computer Science Dept., to serve as President of the National Academy of Engineering (NAE). Together with its sibling, the National Academy of Sciences, the NAE is both an honorific organization and an independent, authoritative advisor to the government on issues involving science and technology. Prior to joining the University of Virginia, Dr. Wulf was an Assistant Director of the National Science Foundation, responsible for computing research, the national supercomputer centers, and the NSFnet (predecessor to the Internet as we know it now). Prior to NSF, Dr. Wulf founded and was CEO of Tartan Laboratories, a software company in Pittsburgh. Tartan was based on research Dr. Wulf did while on the faculty of Carnegie-Mellon University. Dr. Wulf holds a BS in Engineering Physics and an MS in Electrical Engineering from the University of Illinois and a PhD in Computer Science from the University of Virginia. He has conducted research in computer architecture, programming languages, optimizing compilers and computer security. He is a Fellow of the IEEE, ACM, AAAS, AWIS, and the American Academy of Arts and Sciences, and is a member of the National Academy of Engineering.

NAE Mission

The National Academy of Engineering’s (NAE) mission is to promote the technological welfare of the nation by marshaling the knowledge and insights of eminent members of the engineering profession. The NAE is the portal for all engineering activities at the National Academies which along with the NAE include the National Academy of Science, the Institute of Medicine, and the National Research Council.

LITEE, Auburn University

The mission of LITEE is to develop and disseminate integrative, interactive, and innovative instructional materials that bring real-world issues into classrooms using multimedia information technologies and cross-disciplinary teams. In the classrooms where these instructional materials are used, students learn to apply theories from engineering, business and other disciplines to solve the problems presented that are based on “real-world” situations encountered in a variety of actual businesses and industries. Rather than confining students to linear process, the methodology enables students to pursue solutions through a constantly changing series of options, each of which carries additional options, and none of which is ideal. The LITEE team consists of students and faculty members from the Colleges of Engineering, Business, and Education.

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