

Welcome from the General Chair

In a landmark article published in 1987, Fred Brooks states that the “hardest single part” of building a software system is deciding what the system requirements are [1]. In Brooks’ view, “No other part of the conceptual work is as difficult as establishing the detailed technical requirements...No other part of the work so cripples the resulting system if done wrong. No other part is as difficult to rectify later.” In these few words, Brooks tells us a lot about requirements: not only are they of fundamental importance in software development, they are difficult to produce and hard to fix later on.

Although producing a precise, unambiguous statement of the requirements is difficult, the process of doing so can have tremendous payoff. Focusing on requirements is an effective means of managing the inherent and arbitrary complexity of software systems [2]. Brooks refers to the system requirements as the “essence” of the system to be built [1]. Concentrating on this essence omits layers of complexity. In capturing the essential characteristics of the system to be built, developers can ignore the many details (about algorithms, data representations, etc.) that are needed to produce a running version of the system.

To develop both a solid conceptual foundation and an engineering discipline for constructing requirements, a new series of symposia was initiated in 1993 when the first International Symposium on Requirements Engineering (RE '93) took place in San Diego. Two years later, a second symposium (RE '95) was held in York, England. This year’s symposium, RE '97, will feature many of the same events that proved successful during the preceding symposia—the strong technical program, the popular tools exhibit and doctoral consortium, an educational minitutorial, stimulating keynote talks and panel discussions, and two lively workshops.

RE '97 will also feature several new events. One of the most important is an industrial program, the goal of which is to encourage greater industry participation. Stuart Faulk, who has had considerable experience transferring advanced requirements methods to the aerospace industry, is the RE '97 Industrial Chair. He has organized two technical sessions entitled Applications and Tools 1 and 2, which feature presentations (1) by industry representatives and (2) by tool vendors and developers. Industry representatives will describe results and lessons learned applying advanced requirements technology in industry and current problem areas in requirements that are not adequately addressed by available technology. Tool vendors and developers will give short presentations to introduce their tools. Attendees interested in learning more about a given tool are encouraged to visit the RE '97 Tools Exhibit for a tool demonstration. Another significant component of the industrial program is a panel discussing how to transfer the results of research into practice. To make the overall program attractive to both researchers and attendees from industry, the industrial program has been carefully integrated with the rest of the RE '97 technical program.

Also new this year is a preconference tutorial program. The program features tutorials on measurable requirements, object-oriented requirements methods, the SCR approach to requirements, requirements and traceability, and requirements and safety. Taken together, the tutorial program and the RE '97 technical program should offer many events of interest to both researchers and software practitioners.

In previous years, the research papers presented at the RE symposia were largely focused on requirements acquisition, AI techniques, and business applications. To achieve a broader technical program and to attract a wider audience, we extended a special invitation this year to researchers and developers working on formal methods and safety-critical systems. The result is a technical program which contains research papers in the more traditional areas of requirements as well as new work on formal methods and safety-critical systems.

I extend my sincerest thanks to all members of the organizing committee for their efforts. Moreover, I hope that you enjoy and benefit from the RE '97 program.

Connie Heitmeyer
General Chair

References

- [1] Frederick P. Brooks, Jr. No Silver Bullet: Essence and Accidents of Software Engineering. *IEEE Computer*, April 1987, Vol. 20, No. 4, pp. 10-19.
- [2] Frederick P. Brooks, Jr. The Computer Scientist as Toolsmith II. *CACM*. March 1996, Vol. 39, No. 3, pp. 61-68.