Foreword

Welcome to Software Technology and Engineering Practice (STEP'97), the first event to have that name, but the eighth international workshop in the series that includes the International Workshops on Computer-Aided Software Engineering. And welcome to the exciting city of London!

STEP'97 is the premier world event and working meeting for the field of software engineering in practice, drawing together practitioners and researchers concerned with software engineering's role in software and systems development, evolution, and management. The programme of workshops, refereed papers, presentations, and tutorials allows participants to explore and report on the most important and current practical, applied, experimental, and theoretical work that affects software engineering in practice.

The programme will again include the presentation of the Wayne Stevens Lecture on Software Development Methods, sponsored by the IWCASE Board. This year's honoree is Michael Jackson of MAJ Consulting, who will speak on "The Place and Value of Method in Software Development." There will also be two distinguished keynote speakers: Robert Glass of Computing Trends (USA) and Lawrence Regan of Barclays Bank (UK).

A major theme that runs through STEP'97 is creativity and innovation in software development. Increasing demands are and will continue to be placed upon software developers to produce a wide range of software systems and support that provide creative solutions to the needs of industry, commerce, and society.

With many existing approaches to software development failing to meet this demand, there is a need to expand the repertoire of innovative methods, techniques and tools for software production. Balanced against this is the need to perform proper evaluation of new techniques to understand their cost and benefits. STEP'97 seeks to present both the new ideas and a proper evaluation through experience reports. Indeed, the conference programme contains a number of papers reporting on the introduction of software best practice within a variety of organizations. Many of those reports reflect projects funded as part of the European Commission's European Systems and Software Initiative (ESSI) programme.

Software and systems development, evolution, and management are undergoing dramatic change as we approach the 21st century. Economic pressures require systems to be built better, cheaper, and faster. Increased IT awareness and the use of technologies such as object orientation are creating a new generation of system builders who do not necessarily have a traditional software development background. New communication technologies and co-operative working are forcing changes to working practices leading to distributed, 24 hour, and global software development. The result is that the processes, skills and
tools that support all aspects of software development will undergo dramatic change during the next few years. STEP'97 prepares participants for that future.

The STEP'97 Programme Committee refereed 107 and selected 47 excellent papers for inclusion in the proceedings and presentations. In the spirit of this series of conferences, those papers serve as launching platforms for the ten workshops created by the Program Committee. The workshops are intended to explore in depth the current and future technologies underlying each subject, expand communication between the development and research communities for each subject, and prepare a summary of the state-of-the-art and the state-of-the-practice for inclusion in a post-conference report. There are also ten tutorials available on a variety of topics of interest to software practitioners.

The final programme of 1997 Software Technology and Engineering Practice is the result of a great deal of effort by many people, world wide. First and foremost, we thank our sponsors. Second, we thank the authors who offered their work for consideration. Third, we are indebted to the members of the Conference Committee for their valuable ideas, generous help, and tireless support throughout the creation of this event. We are, of course, particularly indebted to the members of the Programme Committee, who refereed papers (three or more reviews per paper), came from all over the world to the Programme Committee meeting at UMIST (University of Manchester Institute of Science and Technology) in Manchester, UK, and are serving as session and workshop chairs. And thanks to all the many other volunteers who made STEP'97 possible, and to the staff at the IEEE Computer Society who made these proceedings possible.

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