Foreword

Welcome to the 16th International Conference on Software Engineering Education and Training (CSEE&T 2003). The conference provides a forum for discussion of software engineering education and training by members of the academic, industry, and government communities. It continues a tradition of offering direction, promoting innovation and collaboration, and stimulating new instructional approaches. Attendance at past conferences has been drawn from many countries, and this year for the first time it is being held outside the USA, in the beautiful and historic city of Madrid, Spain. We hope that you will be able to sample some of the charms of this area in addition to enjoying the conference program.

CSEE&T 2003 includes a wide range of activities that promote new ideas and new synergies and provide for an exciting program.

Its principal theme is ‘Software Engineering in Industry and Education for the 21st Century’. Just as the 19th Century is sometimes described as the age of steam, and the 20th Century as the age of electricity, the 21st Century is likely to have software as a defining technology. The educational challenges involved in helping understand and develop this technology and apply it in a professional manner are clearly going to be of great importance in the years ahead.

The conference addresses these challenges in a number of ways.

Keynotes: Our four keynote speakers look at present and coming challenges in software engineering education and training. They draw on a wealth of experience, both academic and industrial, and are based in four different European countries. With the conference in Europe for the first time this year we felt it appropriate to try to capture a broad European viewpoint, and draw on as many European countries as possible. Our speakers are:

- Dr. Chris Horn, Chairman, Iona Technologies, Dublin, Ireland.
- Prof. Natalia Juristo, Universidad Politecnica de Madrid, Spain
- Prof. Jeff Kramer, Department of Computing, Imperial College, London, UK
- Prof. Dr. Dieter Rombach, Fraunhofer Institut Experimentelles Software Engineering, Germany

Abstracts of their talks and brief biographical sketches can be found later in these proceedings.

Papers: We received a total of 54 papers. All were subject to multiple blind reviews, and a total of 30 selected for inclusion in the conference. These can be grouped under five main headings:

- Software Engineering in Industry/Industry-University collaboration
- Software Engineering Curricula
- Software Engineering Methods
- Management/Process
- Other topics

In addition, there are four invited papers in commemoration of the late Norm Gibbs.

Panels: Three panels have been organized. “Certification for Software Professionals: The IEEE Computer Society’s CSDP Program” gives an opportunity to discuss this important certification program with some of those involved in its development. “Developing an Undergraduate Software Engineering Degree” provides an opportunity for discussion with panelists who have been involved in doing just that, and “Software Engineering Retraining: Different Perspectives” deals with industry/university collaboration in software engineering education and training.
Workshops: Six workshops, including an invited workshop on SWEBOK, are included. “IEEE-CS/ACM Computing Curriculum Software Engineering Volume Project” gives an authoritative account of the work being done jointly by these organizations. “Software Engineering Course Materials” deals with materials being prepared as part of a SWENET project. “Tools for Outcomes Assessment of Education and Training in Software Development Process” looks at an important aspect of the pedagogic problems involved, “Tailoring a Successful Project-Based Course…” draws on six years experience of teaching by developing software for real clients, and “Preparing for the 2004 IEEE Computer Society International Design Competition” should be of real assistance to those whose students wish to enter this competition. The invited SWEBOK workshop deals with the ongoing work to codify the body of knowledge associated with software engineering.

Tutorials: There are two tutorials, “Managing the Performance of Software Engineering Professionals” and “Training Experts in the Fundamentals: An Experience in Providing Software Engineers with the Basis for Software Process Improvement.” Both tutorials draw on extensive experience of software engineering in practice, and should be of particular interest to those involved with software development in industry.

Remembering Norm Gibbs: The program includes a special session in tribute to the late Norm Gibbs. The session includes four invited talks on Norm’s accomplishments and legacy, plus a special presentation. Norm Gibbs was a distinguished pioneer in the fields of Software Engineering and Software Engineering Education, and among many other things founder of this annual conference.

We hope we can be forgiven for our Eurocentric choice of keynote speakers. The other activities above draw on participants from all over the World, and we believe that the conference should be of interest to a broad international audience. In designing the program we have also kept the needs of both industry and academia in mind, and we hope that both communities will find it relevant and of benefit.

We would like to thank all those who submitted papers, or suggestions for panels, workshops or tutorials; the members of the Program Committee for their advice and work; the members of the Conference Steering Committee (chairman Don Bagert) for their help and guidance; the IEEE Computer Society, especially our proceedings production manager Bob Werner, for help in preparing these proceedings; our Financial Chair (Dawn C Ramsey) and Publicity Chairs (Fernando Naveda and Claes Wohlin); and finally the local arrangements committee (Oscar Dieste, Xavier Ferré and Sira Vegas) whose sterling work has been at the core of everything that has happened. Many thanks also to the organizations that have supported CSEE&T 2003: the IEEE Computer Society, The University of Alaska Fairbanks, The Universidad Politécnica de Madrid, Dublin City University and AEP Systems Ltd.

Michael Ryan, Program Chair
Ana Moreno, Conference Co-Chair
Pete Knoke, Conference Co-Chair