

Preface

The Conference on Fundamental Approaches to Software Engineering (FASE), as its name indicates, is a pure software engineering conference. However, being part of the ETAPS event, it has a particular profile. It focuses on the application of theoretically founded techniques in practical software engineering and on approaches aiming towards a proper theory of software engineering. In the past, FASE was sometimes mistaken for a Formal Methods conference. However, FASE covers Formal Methods as just a small part of its profile, and even then it only covers application-oriented work on Formal Methods.

As the chairman of the program committee for FASE 2001, I am very happy that this instance of FASE fully coincides with this intended profile of the conference. I am also happy that FASE is an increasingly popular event, as can be seen from the increasing number of submissions. FASE 2001 attracted a record number of 74 submissions. The scope of these submissions was very broad, covering many different areas of software engineering. The program committee had a difficult task in selecting just 22 papers out of the submissions. I am grateful to my colleagues in the program committee that this process went smoothly and led to a well-balanced program of very good scientific quality. The members of the FASE 2001 program committee were:

Egidio Astesiano (Università di Genova, Italy)
Michel Bidoit (ENS Cachan, France)
Dan Craigen (ORA Ottawa, Canada)
José Fiadeiro (Universidade de Lisboa, Portugal)
Carlo Ghezzi (Politecnico di Milano, Italy)
Heinrich Hussmann (Technische Universität Dresden, Germany)
Cliff Jones (University of Newcastle, UK)
Tom Maibaum (King's College London, UK)
Bernhard Rumpe (Technische Universität München, Germany)
Doug Smith (Kestrel Institute, USA)
Martin Wirsing (Universität München, Germany)

When comparing the program with earlier FASE programs, it is obvious that the section on Formal Methods has decreased in size, but still keeps a prominent position, and puts strong emphasis on practical aspects, like real-world case studies. Some other software engineering topics, such as component-based development, distributed systems, and testing, are included. The biggest group of papers deals with a specification and modeling language which was not even touched upon at the first FASE (1998) and just superficially covered at FASE 1999 and FASE 2000. More than two thirds of the papers explicitly deal with the Unified Modeling Language (UML), in particular with its theoretical foundations and possible extensions. Of course, it is quite controversial whether this language is a scientific achievement in itself, since the evolution of UML is clearly driven by industry and much of UML was defined essentially by establishing a compromise between divergent opinions. Nevertheless, the UML seems to have established itself as one of the major transmission mechanisms between scientific

research and practical application. It is a big step forward that nowadays many fundamental research activities use the UML as a basis and therefore make their results easily accessible for practioners who are knowledgeable of UML. Therefore, I am also very happy with the high percentage of UML-related papers and hope that FASE (and ETAPS in general) will establish itself as a forum for those people who are interested in a seriously scientific approach to UML.

It is also not just by coincidence that our invited speaker for FASE, Bran Selic, comes from a company which is closely related to the invention of UML. His talk, which is summarized in this volume by a short abstract, points out an important challenge to software engineering, that is the integration of physical and quantitative aspects, besides the purely functional view which prevails today.

A scientific event like FASE is always the result of the co-operation of a large group of people. Therefore, I would like to thank the members of the program committee and the additional referees, as listed below, for the enormous amount of work they invested in the selection process. Special thanks go to Ansgar Konermann for his reliable support, in particular by providing and maintaining the Web site on which the virtual program committee meeting was carried out. Many thanks also to Don Sannella, Egidio Astesiano, and the whole ETAPS 2001 team for providing the well-organized framework for this conference.

January 2001

Heinrich Hussmann
FASE 2001 Program Committee chairman

Referees

R. Amadio
L. Andrade
H. Baumeister
M. Becker
D. Bert
B. Blanc
M. Cerioli
D. Clark
T. Clark
P. R. D'Argenio
A. De Lucia
B. Demuth
Th. Dimitrakos
C. Duarte
L. Errington
M. Fischer
S. Fitzpatrick
C. Fox
F. Fünfstück
J.-M. Geib
J. Goubault-Larrecq
A. Haeberer
R. Hennicker
S. Kent
A. Knapp
P. Kosiuczenko
S. Kromodimoeljo
F.-U. Kumichel
K. Lano
A. Lopes
P. Magillo
B. Marre
S. Merz
B. Möller
T. Nipkow
I. Nunes
L. Petrucci
A. Pretschner
G. Reggio
B. Reus
J.-C. Reynaud
M. Saaltink
R. Sandner
Ph. Schnoebelen
J. Thierry
A. Thomas
V. Vasconcelos
F. Voisin
M. Wermelinger
S. Westfold
G. Wimmel
J. Zappe
E. Zucca