

Formal Methods for Open Object-based Distributed Systems

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IFIP was founded in 1960 under the auspices of UNESCO, following the First World Computer Congress held in Paris the previous year. An umbrella organization for societies working in information processing, IFIP's aim is two-fold: to support information processing within its member countries and to encourage technology transfer to developing nations. As its mission statement clearly states,

IFIP's mission is to be the leading, truly international, apolitical organization which encourages and assists in the development, exploitation and application of information technology for the benefit of all people.

IFIP is a non-profitmaking organization, run almost solely by 2500 volunteers. It operates through a number of technical committees, which organize events and publications. IFIP's events range from an international congress to local seminars, but the most important are:

- the IFIP World Computer Congress, held every second year;
- open conferences;
- working conferences.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is small and by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is less rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

Any national society whose primary activity is in information may apply to become a full member of IFIP, although full membership is restricted to one society per country. Full members are entitled to vote at the annual General Assembly, National societies preferring a less committed involvement may apply for associate or corresponding membership. Associate members enjoy the same benefits as full members, but without voting rights. Corresponding members are not represented in IFIP bodies. Affiliated membership is open to non-national societies, and individual and honorary membership schemes are also offered.

Formal Methods for Open Object-based Distributed Systems

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FOREWORD

IFIP's recent events - ICODP'95 (Brisbane, Australia), Forte'95 (Montréal, Canada) and ICDP'96 (Dresden, Germany) have covered the latest trends in the fields of architectures for distributed systems; object technology for distributed systems, and related methods and tools; formal approaches to software and protocol specification, design and development. The convergence of these related fields is now emerging as a new area of research, development and standardization. For example, the Reference Model for Open Distributed Processing uses and advocates the use of formal methods for the design of open distributed systems.

FMOODS'96 positions itself at this very convergence. Its goal is to be a forum where Formal Methods and their application to the design and construction of Open Object-based Distributed Systems can be presented and debated. The workshop papers and the three invited conferences cover this theme very well. The workshop features nine technical sessions encompassing the topics of object and process calculi, actors, object oriented Methods and their formalization, Open Distributed Processing, types and subtyping, specification and design of distributed systems. Three invited talks complete the programme of the workshop: "Processes, Types, and Observation" by Benjamin Pierce (Univ. Cambridge, UK); "Abstracting Interaction Patterns: A Programming Paradigm for Open Distributed Systems" by Gul Agha (Univ. Illinois); and "Formalizing Composable Software Systems — A Research Agenda" by Oscar Nierstrasz (Univ. Bern, Switzerland).

FMOODS'96 could not have taken place without the efforts of many people. We wish first to thank the authors, the invited speakers and the reviewers for their valuable contribution to the quality of the papers presented at this first edition of the workshop. We wish also to thank all those whose role was crucial in the creation of FMOODS'96: Otto Spaniol (Chairman TC6) and Harry Rudin (Chairman WG6.1) from IFIP, Michel Feneyrol (Director) and Jeanine Henaff (Director of scientific relations) of CNET, Alain Sirot (Director ENST) and Bernard Robinet (Scientific Director ENST and IFIP french representative). We wish finally to thank our sponsoring institutions: IFIP, ENST, CNET, CNRS, BDT and AFCET.

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