Preface

The concept of CAST as Computer Aided Systems Theory, was introduced by F. Pichler in the late 1980s to include those computer theoretical and practical developments as tools to solve problems in System Science. It was considered as the third component (the other two being CAD and CAM) necessary to build the path from Computer and Systems Sciences to practical developments in Science and Engineering.

The University of Linz organized the first CAST workshop in April 1988, which demonstrated the acceptance of the concepts by the scientific and technical community. Next, the University of Las Palmas de Gran Canaria joined the University of Linz to organize the first international meeting on CAST, (Las Palmas, February 1989), under the name EUROCAST'89. This was a very successful gathering of systems theorists, computer scientists, and engineers from most European countries, North America, and Japan.

It was agreed that EUROCAST international conferences would be organized every two years, alternating between Las Palmas de Gran Canaria and a continental European location. Thus, successive EUROCAST meetings have taken place in Krems (1991), Las Palmas (1993), Innsbruck (1995), Las Palmas (1997), and Vienna (1999), in addition to an extra-European CAST Conference in Ottawa in 1994. Selected papers from those meetings were published by Springer-Verlag in the Lecture Notes in Computer Science series, as volumes 410, 585, 763, 1030, 1333, and 1728, and in several special issues of Cybernetics and Systems: an International Journal. EUROCAST and CAST meetings are definitely consolidated, as is demonstrated by the number and quality of the contributions over the years.

EUROCAST 2001 (Las Palmas, February 2001) presented a new approach to the conferences, which will be adopted for future meetings. Besides the classical core on generic CAST (Chaired by Pichler and Moreno-Díaz), in the form of a CAST workshop, there were three other specialized workshops devoted to Computer Algebra and Automated Theorem Proving (CAL, chaired by Buchberger from Linz), to Functional Programming and λ Calculus (FP, chaired by Freire from La Coruña), and to Abstract State Machines (ASM, chaired by Glässer from Paderborn and Börger from Pisa),

This volume contains selected full papers from the CAST, CAL, and FP workshops and two invited lectures. Papers form the ASM workshop will be published in a separate volume.

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