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Fault-Tolerant Computing Systems

Tests, Diagnosis, Fault Treatment

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Nürnberg, September 25-27, 1991

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Preface

The 5th International Conference on Fault-Tolerant Computing Systems was held September 25-27, 1991 in Nürnberg, FRG. The event took place within the medieval walls of the city. It was jointly organized by the technical groups

- "Fehlertolerierende Rechensysteme"
- "Testmethoden und Zuverlässigkeit von Schaltungen und Systemen" of the German professional associations GI, ITG and GMA
- "Institut für Mathematische Maschinen und Datenverarbeitung (IMMD III)" of the Friedrich-Alexander-Universität Erlangen-Nürnberg.

According to the common interest of both technical groups, Tests, Diagnosis and Fault Treatment were chosen as the guiding themes of the conference. However, the scope of the conference included reliability, availability, safety and security issues in software and hardware systems as well.

In three invited talks outstanding experts presented their views on the most important issues of fault tolerant real time computing, circuit testing and system safety. The following sessions were organized for the conference which was completed by an industrial presentation:

- | | |
|--------------------------------|-------------------------------------|
| - Keynote Address | - Array Testing |
| - Reconfiguration and Recovery | - Modelling |
| - System Level Diagnosis | - Applied Fault Tolerance |
| - Voting and Agreement | - Fault-Tolerant Arrays and Systems |
| - Testing | - Interconnection Networks |
| - Fault-Tolerant Circuits | - Fault-Tolerant Software |

A tutorial on "Testing and Fault Tolerance of Digital Hardware Systems" preceded the conference.

Altogether 70 papers were submitted to the conference, 35 of them from outside Germany. Out of these papers the 32 most relevant were selected by the Program Committee. The selection of the papers was based on originality and relevance to the conference. Quite a few papers of good quality and merit could not be included in the program, due to a necessary restriction on the number of talks.

The conference could not have been successful without the coordinated efforts of many individuals: the referees, the Program Committee members, the members of the Organizing Committee, the chairpersons, the conference secretaries Susanne Ledertheil and Christine Cetin and last but not least the authors of this volume. We would like to thank them all for their continuous assistance in preparing and running the conference. We extend our thanks to the sponsors, in particular to Siemens AG for financial support, and to Springer-Verlag for cooperation with respect to the publication of the proceedings.

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