Lecture Notes in Computer Science

Edited by G. Goos and J. Hartmanis

312

J. van Leeuwen (Ed.)

Distributed Algorithms

2nd International Workshop
Amsterdam, The Netherlands, July 8–10, 1987
Proceedings

Springer-Verlag
Berlin Heidelberg New York London Paris Tokyo

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CR Subject Classification (1987): C.2, F.2

ISBN 3-540-19366-9 Springer-Verlag Berlin Heidelberg New York
ISBN 0-387-19366-9 Springer-Verlag New York Berlin Heidelberg

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Printed in Germany

Printing and binding: Druckhaus Beltz, Hemsbach/Bergstr.
2145/3140-543210

PREFACE

The 2nd International Workshop on Distributed Algorithms was held at the Centre for Mathematics and Computer Science (CWI) in Amsterdam, July 8-10, 1987. The workshop was intended to provide a forum for researchers and other interested parties to discuss the recent results and trends in the design and analysis of distributed algorithms on communication networks and graphs.

Papers were solicited describing original results in all areas of distributed algorithms and their applications including, e.g distributed combinatorial algorithms, distributed optimization algorithms, distributed algorithms on graphs, distributed algorithms for control and communication, routing algorithms, design of network protocols, distributed database techniques, algorithms for transaction management, fail-safe and fault-tolerant distributed algorithms and other related fields. The organizational committee for the Workshop consisted of

E. Gafni (UCLA, Los Angeles),
M. Raynal (IRISA, University of Rennes),
N. Santoro (Carleton University, Ottawa),
J. van Leeuwen (University of Utrecht),
S. Zaks (the Technion, Haifa).

Out of the submissions the organizational committee selected twenty-nine papers for presentation in the Workshop. The selection reflects several current directions of research that are representative for the area of distributed algorithms, although certainly not all aspects could be covered in the three-day Workshop. The participants received draft versions of all papers as part of their Workshop materials, by way of working proceedings for review.

The present volume contains the revised version of all papers presented in the Workshop, together with one additional paper (by Y.Afek et al.) that was presented as a general colloquium (by B. Awerbuch) at the Centre for Mathematics and Computer Science (CWI) outside of the Workshop program. The revised versions are based on the comments and suggestions received by the authors during and after the Workshop. Several papers are in the form of preliminary reports on continuing research, and it is expected that more elaborate versions will eventually appear in standard scientific journals. While the papers presented in this volume were primarily selected to serve the purposes of the Workshop, we hope that the papers give a good impression of the current work in distributed algorithms and stimulate further research.

The organizational committee is grateful to the Centre for Mathematics and Computer Science in Amsterdam for allowing the use of its excellent facilities for the Workshop, to the Departments of Computer Science at Carleton University, the University of Utrecht, the University of Rennes, the University of California at Los Angeles, and the Technion in Haifa for assisting in and supporting the organization of the Workshop, and to Geraldine Leebeek (Dept. of Computer Science, University of Utrecht) for her invaluable assistance in all matters related to the Workshop.

J. van Leeuwen (Organizational Chairman)

Utrecht, March 1988.

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