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Foreword

TACS'91 is the first International Conference on Theoretical Aspects of Computer Software held at Tohoku University, Sendai, Japan, September 24–27, 1991. This volume contains thirty-seven papers and an abstract for talks presented at the conference.

TACS'91 focused on theoretical foundations of programming, and theoretical aspects of the design, analysis and implementation of programming languages and systems. The following topics were mentioned in the call for papers:

- Logic, proof, specification and semantics of programs and languages
- Theories and models of concurrent, parallel and distributed computation
- Constructive logic, category theory, and type theory in computer science
- Theory-based systems for specifying, synthesizing, transforming, testing, and verifying software

The Program Committee members were

Robert Constable (Cornell U.)	Masami Hagiya (Kyoto U.)
Susumu Hayashi (Ryukoku U.)	Takayasu Ito, Co-Chair (Tohoku U.)
J.-L. Lassez (IBM, Yorktown)	Albert R. Meyer, Co-Chair (MIT)
Gordon D. Plotkin (Edinburgh U.)	Amir Pnueli (Weizmann Inst.)
Masahiko Sato (Tohoku U.)	Dana S. Scott (Carnegie-Mellon U.)

The Program Committee received 65 draft papers and accepted 28. The number of worthwhile papers received considerably exceeded the capacity of the conference, and the Program Committee was therefore unable to accept many high-quality submissions. On behalf of the Program Committee, we express our sincere gratitude to all the authors of submitted papers.

Professor Rod Burstall of Edinburgh University accepted our invitation to become the banquet speaker of TACS'91. An evening technical session for demos and informal presentations was included in the program. Other activities included several receptions and a post-conference bus tour to Hiraizumi and Matsushima aimed at promoting discussions and informal contacts among the participants.

Masahiko Sato, Masami Hagiya, Susumu Hayashi and their colleagues helped organize TACS'91 from its beginnings. D. M. Jones (MIT), Y. Kameyama (Tohoku U.), S. Kawamoto (Tohoku U.), M. Ohtomo (Tohoku U.), T. Seino (Tohoku U.), and M. Tatsuta (Tohoku U.) lent their valuable assistance in preparing these Proceedings and in managing the conference. In addition to the Program Committee members, the following people served as reviewers of submitted papers:

Krzysztof R. Apt, Luca Cardelli, Steve German, Carl Gunter, Lalita Jategaonkar, Yuki Yoshi Kameyama, A. J. Kfoury, Satoshi Kobayashi, John Mitchell, Hiroshi Nakano, Rishiyur Nikhil, Atsushi Ohori, Phil Pfeiffer, John Reynolds, Jon Riecke, Arie Rudich,

Etsuya Shibayama, Makoto Tatsuta, Boris Trakhtenbrot, Frits Vaandrager, David Wald.

We are very grateful to all those above, as well as the members of the Program Committee and the Invited Speakers for their efforts on behalf of TACS'91.

We gratefully acknowledge the generous sponsorship provided by Tohoku University. We also thank the following organizations for their cooperation:

Information Processing Society of Japan,
Japan Society for Software Science and Technology,
Association for Symbolic Logic,
Association for Computing Machinery--SIGACT,
IEEE TC on Mathematical Foundations of Computing.

The papers at TACS'91 offer an outstanding representation of active concerns in the theory of programming by a distinguished international group of researchers. We are happy to have played a role in bringing this group together and in making their work available to the readers of this volume.

June 1991

Takayasu Ito
Albert R. Meyer
Conference Co-Chairs
TACS'91

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