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on Theory and Practice of Software Development
Barcelona, Spain, March 13–17, 1989

Volume 2:

Advanced Seminar on Foundations of
Innovative Software Development II and
Colloquium on Current Issues in
Programming Languages (CC IPL)



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Preface

TAPSOFT'89 is the Third International Joint Conference on Theory and Practice of Software Development.

TAPSOFT'89 is being held from March 13 to March 17, 1989 in Barcelona. TAPSOFT'89 has been organized by Departament de Llenguatges i Sistemes Informàtics (Universitat Politècnica Catalunya) and Associació de Tècnics d'Informàtica, and has been supported by EATCS and BCS.

TAPSOFT'89 consists of three parts:

Advanced Seminar on Foundations of Innovative Software Development

The aim of the Advanced Seminar is to bring together leading experts in the various fields which form the foundations of the Software development and to provide a forum to discuss the possible integration of available theories and methods in view of their applications.

The Advanced Seminar will consist of a number of invited talks and panel discussions.

Invited Speakers:

D. Bjørner (Lyngby)	G. Gonnet (Waterloo)
C.A.R. Hoare (Oxford)	B. Krieg-Brückner (Bremen)
J.L. Lassez (Yorktown Heights)	P. Lescanne (Nancy)
C.A. Vissers (Twente)	J. Wing (Pittsburgh)
M. Wirsing (Passau)	

Panels:

Software Environments and Factories. Chairman: H. Weber (Dortmund)
Effectiveness of EC Programs for Software Development. Chairman: J. Díaz (Barcelona)
Social Responsibility in Computer Science. Chairman: B. Mahr (Berlin)
Theory and Practice of Software Development. Chairman: H. Ehrig (Berlin)

Colloquium on Trees in Algebra and Programming

This is the sixteenth edition of these Colloquia. The preceding colloquia were held in France and Italy, except in 1985 in Berlin, where for the first time CAAP was integrated into TAPSOFT. This was repeated in 1987 in Pisa.

In keeping with the tradition of CAAP as well as with the overhall theme of TAPSOFT, the selected papers focus on the following topics:

- Algorithms
- Proving Techniques
- Algebraic Specifications
- Concurrency
- Foundations

The Program Committee for CAAP'89 is the following:

S. Abramsky (London)	A. Arnold (Bordeaux)*
A. Bertoni (Milano)*	M. Dauchet (Lille)*
P. Deagano (Pisa)*	J. Díaz (Barcelona)* (Chairman)
H. Ehrig (Berlin)*	N. Francez (Haifa)*
G. Gonnet (Waterloo)	U. Montanari (Pisa)
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M. Rodríguez-Artalejo (Madrid)*	G. Rozenberg (Leiden)*
U. Schöning (Koblenz)*	J.M. Steyaert (Palaiseau)*
M. Wirsing (Passau)*	

Thirteen of them (the ones with *) attended the final Program Committee meeting.

Colloquium on Current Issues in Programming Languages

In keeping with the overall theme of TAPSOFT conferences, CCIPL focuses on those aspects of programming which are most important for innovative software development. Integration of formal methods and practical aspects of software production are also stressed.

The selected papers cover the following topics:

- Programming Language Concepts
- Language Implementation
- Programming Paradigms
- Software Development

The Program Committee for CCIPL is the following:

E. Astesiano (Genova)*	D. Bjørner (Lyngby)*
H. Ganzinger (Dortmund)*	N. Jones (Copenhagen)*
G. Kahn (Sophia-Antipolis)*	J.L. Lassez (Yorktown Heights)
P. Lescanne (Nancy)*	G. Levi (Pisa)
B. Mahr (Berlin)*	T. Maibaum (London)*
J. Meseguer (Palo Alto)	F. Orejas (Barcelona)* (Chairman)
H. Weber (Dortmund)*	

Ten of them (the ones with *) attended the final Program Committee meeting.

The TAPSOFT'89 Conference Proceedings are published in two volumes. The first volume includes the papers from CAAP, plus the most theoretical invited papers. The second volume includes the papers from CCIPL and the invited papers more relevant to CCIPL.

We would like to thank all the Program Committee members as well as the referees listed on the next page for their care in reviewing and selecting the submitted papers.

We also wish to express our gratitude to the members of the Organizing Committee: C.Alvarez, F.Bach, P.Botella (Chairman), X.Burgués, X. Franch, T.Lozano, R.Nieuwenhuis, R.Peña and C.Roselló. Without their help, the Conference would not have been possible.

Barcelona, March 1989

J.Díaz

F.Orejás

Referees for TAPSOFT'89

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R. Weber	S. Wiebrock	T. Winkler	S. Wolf
S. Yoccoz	Zhou Chaochen	E. Zucca	

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