

Preface

It is now well accepted that the notion of object provides good foundations for new challenges of parallel, distributed, and open computing. The notions of objects and message passing help in structuring and encapsulation of software modules. At the same time these notions are flexible enough to match various granularities of software and hardware architectures.

A workshop, named “France-Japan Workshop on Object-Based Parallel and Distributed Computation” (OBPDC’95), was held in Tokyo, June 21–23, 1995. It provided a forum for researchers from conceptual, theoretical, implementational, and applicational backgrounds, to discuss, and compare their respective proposals and experiences, for developing next-generation (object-based) parallel and distributed computing systems.

Contribution of the Book

This volume represents the formal proceedings of this workshop. After the workshop, the participants were requested to submit full papers and a standard review process was taken for the submissions. The 18 selected papers compose a representative and balanced set of timely research contributions to the growing field of object-based parallel and distributed computation. They reflect various aspects, from programming language and operating system design, to application-oriented development, without forgetting the needs for formal foundations for specifying and proving properties of programs. They are organized into groups, according to their subjects:

- Massively parallel programming languages
- Distributed programming languages
- Formalisms
- Distributed operating systems
- Dependable distributed computing
- Software management

Organization of the Workshop

The OBPDC’95 workshop took place for three full days from June 21 to June 23, 1995, in the brand new building of the Maison Franco-Japonaise (Nichi Futsu Kaikan) in Tokyo. The participation was on an invitation basis. As well as providing a forum for discussing common research issues, this meeting was also intended to promote cooperations between French and Japanese research teams.

Twenty-one talks were scheduled during the workshop and over 40 participants attended. Each session, composed of two or three papers, included extensive time devoted for discussions. One conclusive panel was held at the end of the workshop.

We were fortunate to have Pr. Hiroyuki Yoshikawa, President of University of Tokyo, as the key person to formally open the workshop. His speech reminds us of the importance, in parallel to the development of computer technology, of developing a full scientific methodology. The transcript of his talk is included in the annex of this preface.

The organizers of the workshop were: Jean-Pierre Briot (University of Tokyo & CNRS) as the general coordinator, Jean-Marc Geib (LIFL-CNRS, University of Lille), François-Xavier Testard-Vaillant (Sc. & Tech. Dept., French Embassy in Japan), and Akinori Yonezawa (University of Tokyo).

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Last but not the least, we would like to thank the authors of the included papers for their invaluable contributions to the book and for their cooperation during the editing process.

Paris and Tokyo, April 1996

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