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Programming and Languages
J.UCS Special Issue
with Extended Versions of Selected Papers from
PROLE 2005: The Fifth Spanish Conference on Programming and Languages

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Programming languages provide a conceptual framework which is necessary for the development, analysis, optimization and understanding of programs and programming tasks. The aim of the PROLE series of conferences is to serve as a meeting point for Spanish research groups which develop their work in the area of programming and programming languages. The organization of this series of events aims at fostering the exchange of ideas, experiences and results among these groups. Promoting further collaboration is also one of the main goals of PROLE.

The scope of PROLE includes both theoretical and practical works concerning the specification, design, implementation, analysis, and verification of programs and programming languages. More precisely, the topics of interest include, but are not restricted to:

- Programming paradigms (concurrent, functional, imperative, logic, object oriented, visual, ...)
- Integration of programming paradigms
- Specification and specification languages
- Type systems
- Compilation and programming language implementation (tools and techniques)
- Semantics of programming languages and applications
- Program analysis, transformation, optimization, debugging and verification
- Tools and techniques for supporting the development and connectivity of programs (modularity, generic programming, markup languages, ...)

- New programming paradigms (quantum computing, genetic programming, DNA and molecular computing, . . .)

In its 2005 edition PROLE was held in Granada, Spain, September 14-16 2005, as one of the 27 events integrated into the First Spanish Conference on Informatics (CEDI), a large multi-conference covering nearly all aspects of Spanish research in Computer Science, with more than 1500 participants.

The scientific program of PROLE 2005 consisted of 28 accepted papers and one invited talk, given by Peter Lee, who was the proposer, together with George Necula, of the well-known technique of *proof carrying code* for code certification. All the papers were subject of a careful review process, with at least three reviews for each paper and a subsequent in-depth discussion.

Among the 28 presentations, the Program Committee selected 9 papers and invited their authors to send a revised and extended version for considering its publication in this J.UCS special issue. After a new review phase resulting in additional requests and recommendations to authors, all these papers were finally accepted.

I must thank the Program Committee members for their careful work in all steps of the review process. I am also grateful to the J.UCS editorial team for their help and kindness while preparing this issue.

Francisco J. López-Fraguas
Madrid, Spain, November 15th, 2006

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