Call for Papers
QAPL 2004

2nd Workshop on Quantitative Aspects of Programming Languages
27–28 March 2004, Barcelona, Spain
Satellite Event of ETAPS 2004

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Invited Speakers:
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Scope: Quantitative aspects of computation are important and sometimes essential in characterising the behaviour and determining the properties of systems. They are related to the use of physical quantities (storage space, time, bandwidth, etc.) as well as mathematical quantities (e.g. probability and measures for reliability, risk and trust). Such quantities play a central role in defining both the model of systems (architecture, language design, semantics) and the methodologies and tools for the analysis and verification of system properties.

The aim of this workshop is to discuss the explicit use of quantitative information such as time and probabilities either directly in the model or as a tool for the analysis of systems. In particular, the workshop focuses on

- the design of probabilistic and real-time languages and the definition of semantical models for such languages ;
- the discussion of methodologies for the analysis of probabilistic and timing properties (e.g. security, safety, schedulability) and of other quantifiable properties such as reliability (for hardware components), trustworthiness (in information security) and resource usage (e.g., worst-case memory/stack/cache requirements);
- the probabilistic analysis of systems which do not explicitly incorporate quantitative aspects (e.g. performance, reliability and risk analysis);
- applications to safety-critical systems, communication protocols, control systems, asynchronous hardware, and to any other domain involving quantitative issues.

Topics: Topics include (but are not limited to) probabilistic, timing and general quantitative aspects in

Language design	Time-critical systems	Asynchronous hardware analysis
Language extension	Embedded systems	Automated reasoning
Language expressiveness	Information systems	Model-checking
Hardware description languages	Multi-tasking systems	Testing
Logic	Performance analysis	Safety
Semantics	Program analysis	Risk and Hazard Analysis
Coordination models	Refinement	Scheduling theory
Distributed systems	Verification	Security

Submission: Authors are invited to submit papers up to 15 pages long in the ENTCS style format. Papers should clearly state the topics covered.

Electronic submission is *highly recommended.* Detailed information is available on the web site `http://qapl04.di.unipi.it`.

In case of problems with access to internet, it is possible to submit 3 copies of the paper to one co-chairperson of the program committee.

Important dates:

Deadline for submission:	15 December, 2003
Notification to authors:	13 January, 2004
Final version:	13 February, 2004
Workshop:	27–28 March, 2004

Proceedings: Accepted papers will be published in Elsevier's ENTCS (Electronic Notes in Theoretical Computer Science). Publication of a selection of the papers in a special issue of Theoretical Computer Science is currently under negotiation.