

FDL'02

Forum on
specification &
Design
Language

September 24 - 27, 2002 – Marseille, France

An *ECSI* event

co-sponsored by *ESIM*

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CALL FOR CONTRIBUTIONS

DEADLINE March 29, 2002

FDL is the European forum to exchange experiences and learn of new trends in the application of languages and their associated design methods and tools for the design of electronic systems. By offering several co-located events, this multi-faceted forum gives an excellent opportunity to gain up-to-date knowledge across a wide field.

The forum is organized around four interrelated workshops with tutorials, panels, working sessions, poster sessions and technical discussions within standardization and user group meetings.

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1 • AMS: Languages for Analog & Mixed-Signal System Design

Analog and mixed signal (AMS) components are already a necessity in the strongly growing market of embedded devices in electronic as well as non-electronic applications. The new methodological approaches address areas like AMS behavioral specification, analog synthesis, mixed-signal simulation, AMS reuse, library development, MEMS, RF, etc. New modeling languages like VHDL-AMS, Verilog-AMS, and Modelica may build the basis for AMS specification, modeling, and simulation. The aim of this workshop is to present new research activities as well as practical experiences, and to exchange ideas in these areas.

Keywords: AMS, analog and mixed-signal, specification languages, VHDL-AMS, Modelica, AMS reuse, modeling languages, analog synthesis, mixed-signal simulation, RF, MEMS.

2 • CSD: C/C++-Based System Design

C/C++ for hardware/software systems design is entering standard industrial design flows. Especially SystemC is becoming a de facto standard. This workshop presents and discusses C/C++ based design methods and tools. Topics include hardware and software synthesis, RTOS aspects, simulation, as well as performance evaluation and analysis. An overview of different standardization activities and their status will be given. Roadmaps for the future development of existing approaches will be presented and discussed.

Keywords: specification languages, C/C++ based design, synthesis and simulation, standardization.

3 • UML: UML-Based System Specification & Design

UML is the de-facto standard for the development of SW with broad application ranges, covering the early development stages of requirements analysis and specification and with strong support for design and implementation. UML-2.0 improves its suitability for real-time systems, allowing for standardized interpretations and analysis as relevant for embedded systems. Together with its stereotyping features, UML has the potential to unify the still rather distinct communities of HW and SW design, enabling true system design.

The aim of this workshop is to present experiences on UML-based methods for embedded system design, to explore the applicability and required support, and to stimulate the exchange of ideas between communities.

Keywords: specification languages, architecture description languages, RT UML, X-OML, Ada, object-oriented design, system design, HW/SW co-design, formal semantics, analysis.

4 • SFP: Specification Formalisms for Proven Design

This workshop aims at developing an industry-wide consensus on problems met by the designers of predominantly electronic systems and systems-on-chip, namely: system level specification formalisms, proven verification/refinement, translation of informal or graphical specifications into formal ones (e.g. UML to B), task/resources allocation, temporal specifications, architecture languages, hardware/software co-design and co-synthesis, functional and implementation constraints, design patterns and design flow, EDA tool support, inclusion of sensors, MEMs, embedded software and optical components in design. Moreover electronic sub-systems encompassing several SoCs are invading several domains of application like the two leading sectors of the European industry: telecom and automotive. Special sessions will be devoted to them.

SFP02 will also address the specification of protocols for re-configurable nomadic systems, graceful degradation of functionality in safety critical systems (like ECUs in the automotive) and robustness

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against catastrophic scenarios. Finally, interface based design of multi-level communication through “VSIA SLIF” is welcome.

Keywords: SLDL, formal system specifications, proven system verification/refinement, constraint propagation, interface specification, functional specification languages, OOD, UML, B, Z, CSP, SPIN, etc., models of computation, distributed system, dynamically re-configurable systems.

REQUIREMENTS FOR SUBMISSION:

Interested authors are invited to send the requested information in electronic format to the general chair and to the appropriate workshop chairs. All FDL submissions must be made electronically. Format should be as close as possible to the final format: not to exceed 10 pages including all figures tables & references, single spaced, A4, times or equivalent font, size 11, one column.

Extended abstracts of at least 2 pages, describing a work in progress, can be proposed.

Short papers can also be submitted: they will not be candidates for publication in the post-conference book.

The following information will be needed when submitting your paper:

- Paper title, name, affiliation, and e-mail address for each author
- A designated contact person including his/her phone & fax number, email address
- The following statement: “All appropriate organizational approvals for the publication of this paper have been obtained. If accepted, the author(s) will prepare the final manuscript in time for inclusion in the Forum Proceedings and will present the paper at the Forum.”
- Registration of the presenter at the conference is a prerequisite to the insertion of the paper in the program and in the proceedings
- Authors of accepted papers must sign a copyright release form for their paper.

IMPORTANT NOTE: In case of acceptance the deliverables for submissions include both a final version of the paper AND a poster, the latter being expected to be ready at the conference time. The original submitted paper will be provided both in electronic (CD-ROM) and in printed form to the participants. The best papers may be published in an edited book.

Late contributions can be submitted until July 12. Only outstanding contributions will be accepted and, in any case, will not exceed 20% of all accepted contributions.

TUTORIALS:

Proposals for half-day tutorials on specific topics around any of the four workshops will be accepted depending on topic relevance and evidence of a 4-hour comprehensive agenda. A one page description of the tutorial including title, presenters and contents should be sent to the corresponding workshop chair.

PANELS, SPECIAL SESSIONS, WORKING GROUPS, EUROPEAN PROJECT MEETINGS:

Proposal for special sessions (panels, working sessions, standardization or user group meetings, embedded tutorials, etc.) around any of the four workshops will be accepted depending on their relevance and interest to the audience. They will be embedded in regular workshops. A one page description including title, participants and contents should be sent to the corresponding workshop chair.

DEMONSTRATIONS:

Companies providing innovative tools and environments for the topics described above will find in FDL an opportunity to make demonstration of them to the SFP attendees. Proposals should go ASAP to the chair. Free space will be offered to these companies inside regular conference registration.

FORM OF SUBMISSIONS	DEADLINE DATES IN 2002	
Authors are invited to send all information in electronic format to both the FDL general chair and the concerned workshop chair. Accepted electronic formats are in preference order: PDF, RTF, Postscript. Compressed submissions are also accepted: GNU gzip, Unix Compress, PKZip	Paper or abstract contribution due	March 29
	Panel session & tutorials proposals due	April 30
	Notification of acceptance	May 31
	Late contribution	July 12
	Corrected accepted paper	July 31
	Proposal for on-site meetings	August 31
	FDL2002 Workshops	September 24-27