

Call for Papers  
Second ACM SIGPLAN Workshop on  
MEchanized Reasoning about Languages with varIable biNding  
(MERλIN 2003)

Uppsala, Sweden, 26 August 2003

**Workshop Chair**

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**Program Committee**

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Ugo Montanari (U. Pisa, Italy)  
Tobias Nipkow (TUM, Germany)  
Andrew M. Pitts (U. Cambridge, UK)  
Carsten Schürmann (Yale U., USA)

**Topics (not exhaustive)**

Case studies of meta-programming and mechanizations of the meta-theory of descriptions of programming languages.  
The theory and implementations of induction & coinduction & recursion and corecursion on datatypes with variable binders.  
The theory and implementation of meta-logical calculi suitable for reasoning about languages with variable binders.  
Descriptions of working systems and tools.

**Invited Speaker**

Simon Peyton-Jones (Microsoft Res., UK)

**Important Dates**

Submission ..... 16 June 2003  
Notification ..... 14 July 2003  
Final Version ..... 31 July 2003  
Workshop ..... 26 August 2003

**Web Sites**

MERλIN 2003:  
<http://merlin.dimi.uniud.it/>  
PLI 2003:  
<http://www.it.uu.se/pli03/>  
PPDP 2003:  
<http://www.it.uu.se/ppdp03/>

**Previous MERλIN Workshop**

Siena (2001)

**Scope of the Workshop:** Currently, there is considerable interest in the use of computer-aided tools for reasoning formally about properties of programs and programming languages. To this end, the syntax, static semantics and dynamic semantics of the calculus under examination have to be represented within a meta-language, such as the one of a (possibly interactive) theorem prover. The encodings may need to address the use of variable binding constructs, inductive/coinductive definitions and associated schemata of recursion/corecursion, as well as higher-order judgment schemata. Recently, new meta-logical tools and methodologies have been proposed, making computer-aided formal reasoning in this field a reality.

The broad aim of this workshop is to run a highly focussed meeting, which will provide researchers and practitioners with a forum to review state-of-the-art results and techniques, and to present recent and new progress in:

- The automation of the (meta)theory of programming languages and related calculi, particularly work which involves variable binding and fresh name generation.
- The theoretical and practical issues concerning the encoding of systems and languages with variable binding, especially the representation of, and reasoning about, datatypes defined from binding signatures.

**Paper Submissions:** Three categories of papers are solicited:

**Category A** Detailed and technical accounts of new research: up to fifteen pages including bibliography and appendices.

**Category B** Shorter accounts of work in progress and proposed further directions, including discussion papers: up to ten pages including bibliography and appendices.

**Category C** System descriptions presenting an implemented tool and its novel features: up to five pages. A demonstration is expected to accompany the presentation.

Papers of categories A and B must describe original, previously unpublished work; simultaneous submission for publication in a journal or a major conference must be clearly indicated. Papers must include the postal address, an email address if possible, and telephone number, for at least one contact author. Further, the category (either A, B or C) must be noted. Authors are encouraged to use L<sup>A</sup>T<sub>E</sub>X; papers should be submitted electronically as a PostScript or PDF file to the email address [merlin03@dimi.uniud.it](mailto:merlin03@dimi.uniud.it). If necessary, authors may submit three hard copies to Alberto Momigliano at postal address: Department of Mathematics and Computer Science, University of Leicester, University Road, Leicester, LE1 7RH, United Kingdom.

**Workshop Venue and Related Events:** MERλIN 2003 is associated with the federation meeting *Principles, Logics and Implementations of high-level programming languages* (PLI 2003), including the ACM SIGPLAN *International Conference on Principles and Practice of Declarative Programming* (PPDP 2003) and the ACM SIGPLAN *International Conference on Functional Programming* (ICFP 2003). PLI'03 will run from 25 to 29 August 2003. The meetings will take place at the Uppsala University, in Sweden.