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SBLP 2008: XII Brazilian Symposium on Programming Languages

J.UCS Special Issue

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This special issue comprises a selection of the papers presented at XII Brazilian Symposium on Programming Languages. SBLP is a series of annual conferences promoted by the Brazilian Computer Society. The papers selected for this J.UCS special issue cover topics such as programming language design and implementation, formal semantics of programming languages, program transformations, and compilation and interpretation techniques.

The paper by Schrage and Swierstra describes the scanning and parsing algorithms employed by a structure editor suitable for a wide range of structured document types. The paper by Manzino and Pardo proposes an extension of shortcut fusion that is able to eliminate intermediate data structures generated in the presence of monadic effects. Passos, Bigonha, and Bigonha describe a LALR parser generator that automatically removes conflicts and supports a methodology to guide the process in cases of manual removal. The paper by Santos, Azevedo, and Araujo describes a new instruction scheduling algorithm based on subgraph isomorphism theory.

Two papers are related to the Lua programming language. Barros and Ierusalimschy present an approach to eliminate cycles in weak tables. Their approach has been validated in the context of the Lua garbage collector. Skyrme, Rodriguez, and Ierusalimschy present a library for concurrent programming in Lua based on message passing over channels.

Aspect-oriented programming was the central theme of three papers. Tanter analyzes the issue of aspect reentrancy, illustrates how current languages fail to properly support it, and defines a new linguistic construct to control aspect reentrancy. The paper by Toledo and Tanter proposes an extensible and

lightweight AspectJ implementation over a declarative intermediate language. Rubbo, Machado, Moreira, Ribeiro, and Nunes analyze the influence of raw types, i.e. parameterless instantiations of class types, over the semantics of an AspectJ-like language.

The paper by Gheyi, Massoni, and Borba proposes a set of sound algebraic laws for Feature Models. An algebraic law is a Feature Model refactoring that is guaranteed to preserve configurability. Tirelo, Bigonha, and Saraiva proposes an incremental approach for denotational semantic specifications. Yang, Michaelson, and Pooley presents a formal action semantics for a UML action language.

We would like to thank everyone, particularly the Program Committee members, who contributed to the evaluation and selection of the papers for this J.UCS special issue.

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