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| Soggetti                | Programming languages (Electronic computers)<br>Software engineering<br>Operating systems (Computers)<br>Computer logic<br>Logic, Symbolic and mathematical<br>Programming Languages, Compilers, Interpreters<br>Software Engineering<br>Operating Systems<br>Logics and Meanings of Programs<br>Mathematical Logic and Formal Languages   |
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| Nota di bibliografia    | Includes bibliographical references and index.   |
| Nota di contenuto       | Invited Talk 1 -- On a Method of Global Optimization -- Session 1 -- Observing Asymmetry and Mismatch -- Expressive Synchronization<br>Types for Inheritance in the Join Calculus -- Term Graph Rewriting for the ?-Calculus -- Useless-Code Elimination and Program Slicing for the Pi-Calculus -- Session 2 -- Constraint Functional Logic Programming for Origami Construction -- A Typeful and Tagless Representation for XML Documents -- Dataflow Pointcut in Aspect-Oriented Programming -- Session 3 -- Affine-Based Size-Change Termination -- Using Locality of Flow in Dataflow Analyses -- A Differential Fixpoint<br>Evaluation Framework for Non-distributive Systems -- Invited Talk 2 -- Model Checking: From Hardware to Software -- Session 4 -- Executing Verified Compiler Specification -- Controlling and Optimizing the |

Usage of One Resource -- Resource Usage Verification -- Automatic Construction of Hoare Proofs from Abstract Interpretation Results -- Session 5 -- A Program Inverter for a Functional Language with Equality and Constructors -- Rebuilding a Tree from Its Traversals: -- Type Inference with Structural Subtyping: A Faithful Formalization of an Efficient Constraint Solver -- Session 6 -- Continuation Semantics for Parallel Haskell Dialects -- Translating a Continuous-Time Temporal Logic into Timed Automata -- The Semantic Layers of Timber -- Invited Talk 3 -- Scrap Your Boilerplate -- Session 7 -- Correctness of a Higher-Order Removal Transformation through a Relational Reasoning -- Extensional Polymorphism by Flow Graph Dispatching -- Register Allocation Based on a Reference Flow Analysis -- Lazy Stack Copying and Stack Copy Sharing for the Efficient Implementation of Continuations.

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#### Sommario/riassunto

With warm-hearted and friendly promotion by our Japanese friends Prof. - sushi Ohori, Prof. Tetsuo Ida, and Prof. Zhenjiang Hu, and other distinguished professors and scholars from countries and regions such as Japan, South Korea, Singapore, and Taiwan, the 1st Asian Symposium on Programming Languages and Systems(APLAS2003) took place in Beijing. We received 76 papers, among which 24 were selected for the proceedings after serious evaluation, which fully demonstrates the high quality of the collected papers. I hereby, on behalf of the Program Committee and the Organization Committee of the symposium, would like to extend the warmest welcome and hearty thanks to all colleagues who attended the symposium, all scholars who generously contributed their papers, and all those who were actively dedicated to the organization of this symposium. Over the past decade, the Asian economy has undergone rapid development. Keeping pace with this accelerated economic growth, Asia has made great headway in software, integrated circuits, mobile communication and the Internet. All this has laid a firm material foundation for undertaking theoretical research on computer science and programming languages. Therefore, to meet the increasing demands of the IT market, great opportunities and challenges in advanced research in these fields. I strongly believe that in the coming future, with the persistent efforts of our colleagues, the Asian software industry and research on computer science will be important players in the world economy, on an equal footing with their counterparts in the United States and Europe.

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