

Contents

Reflection and Software Engineering Foundations

- Shifting Up Reflection from the Implementation to the Analysis Level** 1
*Walter Cazzola, Andrea Sosio, and Francesco Tisato
(DISCo - University of Milano Bicocca, Italy).*
- Towards a True Reflective Modeling Scheme** 21
*Jean Bézivin (LRSG, University of Nantes, France), and Richard Lemesle
(Société Soft-Maint, France).*

Reflective Software Adaptability and Evolution

- Declarable Modifiers: A Proposal to Increase the Efficacy of Metaclasses** (*Invited Contribution*) 39
Ira R. Forman (IBM Austin, TX).
- Managing Evolution Using Cooperative Designs and a Reflective Architecture** 59
*Emiliano Tramontana (Department of Computing Science,
University of Newcastle upon Tyne, UK).*

Reflective Middleware

- The Role of Reflective Middleware in Supporting the Engineering of Dynamic Applications** 79
*Fábio M. Costa, Hector A. Duran, Nikos Parlavantzas, Katia B. Saikoski,
Gordon Blair, and Geoff Coulson (Distributed Multimedia Research
Group, Department of Computing, Lancaster University, Lancaster,
UK).*
- Active Network Service Management Based on Meta-level Architectures** 99
*Alex Villazón and Jarle Hulaas (CUI, University of Geneva,
Switzerland).*
-

Engineering Java-Based Reflective Languages

- OpenJava: A Class-Based Macro System for Java**
(Invited Contribution) 117
Michiaki Tatsubori, Shigeru Chiba, Kozo Itano (University of Tsukuba, Japan), and Marc-Olivier Killijian (LAAS-CNRS, France).
- OpenJIT Frontend System: An Implementation of the Reflective JIT Compiler Frontend** *(Invited Contribution)* 135
Hiroataka Ogawa, Satoshi Matsuoka, Fuyuhiko Maruyama, Yukihiro Sohda (Tokyo Institute of Technology, Japan), Kouya Shimura, and Yasunori Kimura (Fujitsu Laboratories Limited, Japan).
- Kava - A Reflective Java Based on Bytecode Rewriting**
(Invited Contribution) 155
Ian Welch and Robert J. Stroud (University of Newcastle upon Tyne, UK).

Dynamic Reconfiguration through Reflection

- Using Reflection to Support Dynamic Adaptation of System Software: A Case Study Driven Evaluation** 169
Jim Dowling, Tilman Schäfer, Vinny Cahill, Peter Haraszti, and Barry Redmond (Department of Computer Science, Trinity College Dublin, Ireland).
- On the Integration of Configuration and Meta-level Programming Approaches** 189
Orlando Loques, Julius Leite, Marcelo Lobosco (Instituto de Computação, Universidade Federal Fluminense, Niterói, RJ, Brazil), and Alexandre Sztajnberg (Instituto de Matemática e Estatística/UERJ, RJ, Brazil).
- CARP@ – A Reflection Based Tool for Observing Jini Services** 209
Michael Fahrmaier, Chris Salzmann and Maurice Schoenmakers (Technische Universität München, Germany).

-
- Author Index** 229