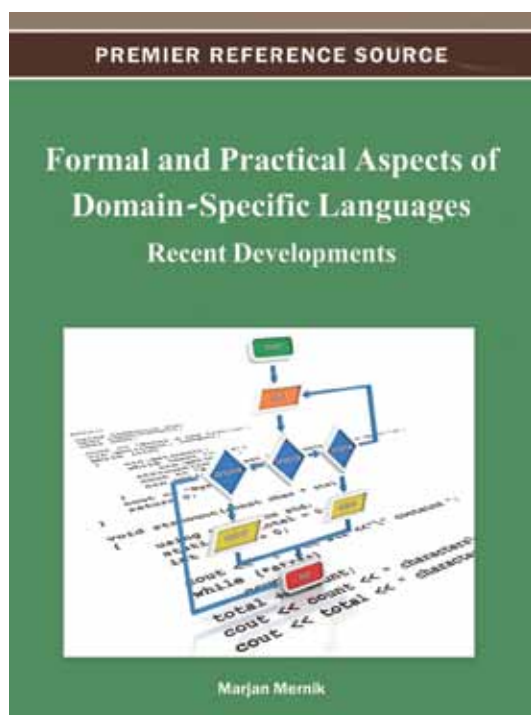


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## Formal and Practical Aspects of Domain-Specific Languages: Recent Developments



Marjan Mernik (University of Maribor, Slovenia)

Computer languages are a programmer's basic tool and they play an essential role in computer science in which they specify computations which need to be performed as well as intended behavior of a system. Domain-Specific Language (DSL) is a particular computer programming language used to address a particular problem domain, representation technique, and solution technique.

**Formal and Practical Aspects of Domain-Specific Languages: Recent Developments** is a collection of academic works containing current research on all aspects of domain-specific language. This book is a comprehensive overview in the computer language field and aims to be essential for scholars and practitioners in the software engineering fields by providing new results and answers to open problems in DSL research.

### Topics Covered:

- Domain Analysis Methodologies Suitable for DSL Development
- Comparison of DSL Domain Analysis Approaches
- Knowledge Capture and Knowledge Representation for DSL Development
- Tool Supports for DSL Domain Analysis
- Concepts of DSLs and their Comparison to GPL Concepts
- Principles for DSL Design
- Formal Approaches for DSL design
- Comparison of Internal and External DSL Design
- Comparison of Formal (and Informal) Approaches for DSL Design
- Comparison of Grammarware and Modelware Approaches for DSL Development

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**Mernik Marjan** received his M.Sc., and Ph.D. degrees in computer science from the University of Maribor in 1994 and 1998 respectively. He is currently a professor at the University of Maribor, Faculty of Electrical Engineering and Computer Science. He is also a visiting professor at the University of Alabama at Birmingham, Department of Computer and Information Sciences, and at the University of Novi Sad, Faculty of Technical Sciences. His research interests include programming languages, compilers, domain-specific (modeling) languages, grammar-based systems, grammatical inference, and evolutionary computations.

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