

# Contents

## Languages and Semantics

<b>A Design Space for Integrating Declarative Languages</b> <i>John Darlington, Yike Guo and Helen Pull</i> .....	3
<b>Introducing Constraint Functional Logic Programming</b> <i>John Darlington, Yike Guo and Helen Pull</i> .....	20
<b>How to Use Guarded Functional Programming</b> <i>Roland Dietrich</i> .....	35
<b>Enriching Prolog with S-Unification</b> <i>Andreas Kågedal and Feliks Kluźniak</i> .....	51
<b>A Tiny Functional Language with Logical Features</b> <i>Ross Paterson</i> .....	66

## Parallelism and Concurrency

<b>Temporal Constraint Functional Programming: A Declarative Framework for Concurrency and Interaction</b> <i>Nick Graham</i> .....	83
<b>Eight Queens Divided: an Experience in Parallel Functional Programming</b> <i>K.G. Langendoen and W.G. Vree</i> .....	101
<b>Intelligent Backtracking in And-Parallel Prolog</b> <i>Andrew Verden and Hugh Glaser</i> .....	116

## Modules and Types

<b>Parameterized Interfaces are Interfaces - AIAS</b> <i>Sophia Drossopoulou, Ross Paterson and Susan Eisenbach</i> .....	133
<b>Type Classes are Signatures of Abstract Types</b> <i>Konstantin Läufer and Martin Odersky</i> .....	148

<b>Syntactic and Semantic Inheritance in Logic Programming</b> <i>Luis Monteiro and António Porto</i> .....	163
<b>Implementation</b>	
<b>A Survey of the Implementations of Narrowing</b> <i>P. H. Cheong and Laurent Fribourg</i> .....	177
<b>A Systematic Method for Designing Abstract Narrowing Machines</b> <i>Hendrik C.R. Lock</i> .....	188
<b>Some Algorithms for Fast and Complete Execution of Logic Programs</b> <i>Roland Olsson</i> .....	204
<b>A Common Graphical Form</b> <i>David Parrott and Chris Clack</i> .....	224
<b>Generating Efficient Portable Code for a Strict Applicative Language</b> <i>Wolfram Schulte and Wolfgang Grieskamp</i> .....	239
<b>Bird-Meertens Formalism (Squiggol)</b>	
<b>More Advice on Proving a Compiler Correct: Improve a Correct Compiler</b> <i>Erik Meijer</i> .....	255
<b>Pers as Types, Inductive Types and Types with Laws</b> <i>Ed Voermans</i> .....	274
<b>Program Analysis</b>	
<b>Failure Analysis Based on Abstract Interpretation</b> <i>M.-M. Corsini and K. Musumbu</i> .....	295
<b>Sequentializing Parallel Programs</b> <i>Mark Korsloot and Evan Tick</i> .....	310
<b>Author Index</b> .....	325