# Table of Contents

1. My Early Education and Concurrent Objects .......................... 1
   *Akinori Yonezawa*

2. Object-Oriented Concurrent Programming in ABCL/1 .................. 18
   *Akinori Yonezawa, Jean-Pierre Briot, and Etsuya Shibayama*

3. Reflection in an Object-Oriented Concurrent Language ............. 44
   *Takuo Watanabe and Akinori Yonezawa*

4. Building Safe Concurrency Abstractions ............................. 66
   *Ole Lehrmann Madsen*

5. Structuring Communication with Session Types ....................... 105
   *Kohei Honda, Raymond Hu, Rumyana Neykova, Tzu-Chun Chen,
   Romain Demangeon, Pierre-Malo Denielou, and Nobuko Yoshida*

6. From Linear Types to Behavioural Types and Model Checking ...... 128
   *Naoki Kobayashi*

7. SALSA Lite: A Hash-Based Actor Runtime for Efficient Local Concurrency .................................................. 144
   *Travis Desell and Carlos A. Varela*

8. Past and Future Directions for Concurrent Task Scheduling ....... 167
   *Robert H. Halstead*

9. Controlling Concurrency and Expressing Synchronization in Charm++ Programs .................................................. 196
   *Laxmikant V. Kale and Jonathan Lifflander*

10. MassiveThreads: A Thread Library for High Productivity Languages ... 222
    *Jun Nakashima and Kenjiro Taura*

11. On Efficient Load Balancing for Irregular Applications ........... 239
    *Masahiro Yasugi*

12. Verifiable Object-Oriented Transactions ............................ 251
    *Suad Alagić and Adnan Fazeli*

    *YoungMin Kwon, Kirill Mechitov, and Gul Agha*
XXXVI Table of Contents

Objects in Space ................................................................. 317
  Wolfgang De Meuter, Andoni Lombide Carreton, Kevin Pinte,
  Stijn Mostinckx, and Tom Van Cutsem

Towards a Substrate Framework of Computation ......................... 341
  Kazunori Ueda

Event-Based Modularization of Reactive Systems ......................... 367
  Somayeh Malakuti and Mehmet Aksit

From Actors and Concurrent Objects to Agent-Oriented Programming
  in simpAL ................................................................. 408
  Alessandro Ricci and Andrea Santi

Author Index ................................................................. 447