Contents

Part I  E-Science, Applications, and Optimization

1  Leveraging the Grid for e-Science: The Remote Instrumentation Infrastructure .................................................. 3
   Alexey Cheptsov

2  Supporting e-Science Applications on e-Infrastructures: Some Use Cases from Latin America .......................... 33
   Roberto Barbera, Francisco Brasileiro, Riccardo Bruno, Leandro Ciuffo, and Diego Scardaci

3  GEMS: User Control for Cooperative Scientific Repositories .................. 57
   Justin M. Wozniak, Paul Brenner, Santanu Chatterjee, Douglas Thain, Aaron Striegel, and Jesús Izaguirre

4  Performance Analysis and Optimization of Linear Workflows in Heterogeneous Network Environments .......... 89
   Qishi Wu and Yi Gu

Part II  Resource Management, Allocation, and Monitoring

5  Resource Management and Service Deployment in Grids .................. 123
   Christos Chrysoulas and Nicolas Sklavos

6  Social Grid Agents .................................................................................. 145
   Gabriele Pierantoni, Brian Coghlan, and Eamonn Kenny

7  Monitoring and Controlling Grid Systems ........................................... 171
   Ciprian Dobre
Part III  Grid Services and Middleware

8 Service Level Agreements for Job Control in Grid and High-Performance Computing ....................................................... 205
   Roland Kübert

9 Composable Services Architecture for Grids ......................................................... 223
   Vassiliki Pouli, Yuri Demchenko, Constantinos Marinos,
   Diego R. Lopez, and Mary Grammatikou

10 Phoenix: Employing Smart Logic to a New Generation of Semantically Driven Information Systems ................................. 249
    Aggelos Liapis, Nasos Mixas, and Nikitas Tsopelas

Part IV  Grid Computing and Scientific Problems

11 State-of-Art with PhyloGrid: Grid Computing Phylogenetic Studies on the EELA-2 Project Infrastructure ............................. 277
    Raul Isea, Esther Montes, Antonio Juan Rubio-Montero,
    and Rafael Mayo

12 The Usage of the Grid in the Simulation of the Comet Oort-Cloud Formation ................................................................. 293
    Giuseppe Leto, Ján Astaloš, Marián Jakubík, Luboš Neslušan,
    and Piotr A. Dybczyński

Index .................................................................................................................. 307
Grid Computing
Towards a Global Interconnected Infrastructure
Preve, N.P. (Ed.)
2011, XVI, 312 p., Hardcover
ISBN: 978-0-85729-675-7