

# Table of Contents

Effect of Job Size Characteristics on Job Scheduling Performance .....	1
<i>Kento Aida</i>	
Improving Parallel Job Scheduling Using Runtime Measurements .....	18
<i>Fabricio A.B. da Silva and Isaac D. Scherson</i>	
Valuation of Ultra-scale Computing Systems .....	39
<i>Larry Rudolph and Paul H. Smith</i>	
System Utilization Benchmark on the Cray T3E and IBM SP .....	56
<i>Adrian Wong, Leonid Oliker, William Kramer, Teresa Kaltz, and David Bailey</i>	
A Critique of ESP .....	68
<i>Dror G. Feitelson</i>	
Resource Allocation Schemes for Gang Scheduling .....	74
<i>Bing Bing Zhou, David Walsh, and Richard P. Brent</i>	
A Tool to Schedule Parallel Applications on Multiprocessors: The NANOS CPU MANAGER .....	87
<i>Xavier Martorell, Julita Corbalán, Dimitrios S. Nikolopoulos, Nacho Navarro, Eleftherios D. Polychronopoulos, Theodore S. Papatheodorou, and Jesús Labarta</i>	
Time-Sharing Parallel Jobs in the Presence of Multiple Resource Requirements .....	113
<i>Fabrizio Petrini and Wu-chun Feng</i>	
The Performance Impact of Advance Reservation Meta-scheduling .....	137
<i>Quinn Snell, Mark Clement, David Jackson, and Chad Gregory</i>	
The Influence of the Structure and Sizes of Jobs on the Performance of Co-allocation .....	154
<i>Anca I.D. Bucur and Dick H.J. Epema</i>	
Load Balancing for Minimizing Execution Time of a Target Job on a Network of Heterogeneous Workstations .....	174
<i>S.-Y. Lee and C.-H. Cho</i>	
Adaptive Selection of Partition Size for Supercomputer Requests .....	187
<i>Walredo Cirne and Francine Berman</i>	
Author Index .....	209