

Table of Contents

14th Workshop on Parallel and Distributed Simulation (PADS 2000)

Message from the General Chairs	vii
Message from the Program Chair	ix
Organizing Committees	xiii
Reviewers	xv
PADS in the 20th Century: A Brief History of Previous PADS Workshops.....	xvii

Session 1: Challenges for future research

Advanced Distributed Simulation: What we learned, where to go next	3
<i>Keynote speaker: W. H. (Dell) Lunceford, Jr.</i>	

Session 2: Parallel simulation for continuous and real-time applications

Parallel Mixed-Technology Simulation.....	7
<i>P. Frey, R. Radhakrishnan, H. W. Carter, and P. A. Wilsey</i>	
Applying Parallel Discrete Event Simulation to Network Emulation	15
<i>R. Simmonds, R. Bradford, and B. Unger</i>	
Repeatability in Real-Time Distributed Simulation Executions.....	23
<i>T. McLean and R. Fujimoto</i>	

Session 3: Optimistic system performance

Analytic Performance Model for Speculative, Synchronous, Discrete-Event Simulation	35
<i>B. L. Noble and R. D. Chamberlain</i>	
Slow Memory: The Rising Cost of Optimism	45
<i>R. A. Meyer, J. M. Martin, and R. L. Bagrodia</i>	
ROSS: A High-Performance, Low Memory, Modular Time Warp System.....	53
<i>C. D. Carothers, D. Bauer, and S. Pearce</i>	

Session 4: Interoperability issues

An Approach for Federating Parallel Simulators.....	63
<i>S. L. Ferenci, K. S. Perumalla, and R. M. Fujimoto</i>	
Safe Timestamps and Large-Scale Modeling	71
<i>D. Nicol, J. Liu, and J. Cowie</i>	

Session 5: Making parallel simulation a success

Strategies for Success in Parallel Simulation Applications	81
<i>Keynote speaker: Frederick Wieland</i>	

Session 6: Applications

Efficient Distributed Simulation of a Communication Switch with Bursty Sources and Losses.....	85
<i>A. S. McGough and I. Mitrani</i>	
Optimizing Cell-size in Grid-Based DDM.....	93
<i>R. Ayani, F. Moradi, and G. Tan</i>	
Distributed, Parallel Simulation of Multiple, Deliberative Agents.....	101
<i>A. M. Uhrmacher and K. Gugler</i>	

Session 7: Miscellaneous

Parallelizing a Sequential Logic Simulator using an Optimistic Framework based on a Global Parallel Heap Event Queue: An Experience and Performance Report.....	111
<i>S. K. Prasad and N. Junankar</i>	
Network Aware Time Management and Event Distribution.....	119
<i>G. F. Riley, R. Fujimoto, and M. H. Ammar</i>	

Session 8: Work-in-progress

Session 9: Load balancing

Locality-Preserving Load-Balancing Mechanisms for Synchronous Simulations on Shared-Memory Multiprocessors	131
<i>V.-Y. Vee and W.-J. Hsu</i>	
Load Balancing for Conservative Simulation on Shared Memory Multiprocessor Systems	139
<i>B. P. Gan, Y. H. Low, S. Jain, S. J. Turner, W. Cai, W. J. Hsu, and S. Y. Huang</i>	
Model Structure and Load Balancing in Optimistic Parallel Discrete Event Simulation	147
<i>T. K. Som and R. G. Sargent</i>	

Session 10: Scheduling

Pre-Sampling as an Approach for Exploiting Temporal Uncertainty	157
<i>M. L. Loper and R. M. Fujimoto</i>	
An Empirical Study of Conservative Scheduling	165
<i>H. Y. Song, R. A. Meyer, and R. Bagrodia</i>	
Grain Sensitive Event Scheduling in Time Warp Parallel Discrete Event Simulation	173
<i>F. Quaglia and V. Cortellessa</i>	
Author Index	181
PADS 2001 Advance Call for Papers.....	183