



Updated on March 10, 2016

SCF2016 MAIN CONFERENCE PROGRAMME	
Day 3 Thursday, 17 March 2016	
Breakthrough Theatre, Level 4, Matrix Building, Biopolis	
08:00 - 09:00	Registration & Welcome Coffee
NEW PROCESSOR ARCHITECTURES Chair: Srinivas Aluru	
09:00 - 09:45	A Radical Approach to Computation with Real Numbers <i>John Gustafson, A*STAR Computational Resource Centre, Singapore</i>
09:45 - 10:15	A New Processor Architecture for Exascale and Beyond <i>Thomas Sohmers, REX Computing, USA</i>
10:15 - 10:35	Break
NEW PROCESSOR ARCHITECTURES Chair: John Gustafson	
10:35 - 11:05	The Last Computing Frontier: Quantum Computing <i>Vern Brownell, D-Wave Systems Inc., Canada</i>
11:05 - 11:35	Tables, Graphs, and Problems <i>John Feo, Pacific Northwest National Laboratory & University of Washington, USA</i>
11:35 - 12:05	TrueNorth, A Low-Power Bio-inspired Neurosynaptic Architecture for Sensory Processing <i>Garrick Orchard, National University of Singapore, Singapore</i>
12:05 - 13:05	Lunch
AUTOMATA PROCESSOR Chair: Barbara Chapman	
13:05 - 13:50	Keynote Automata Processing: A New Paradigm for Computing <i>Srinivas Aluru, Georgia Institute of Technology, USA</i>
13:50 - 14:15	Pushing the Frontiers of Supercomputing with Automata Computing <i>Mircea Stan, University of Virginia, USA</i>
14:15 - 14:30	VASim: An Open Virtual Automata Simulator for Automata Processing Research <i>Jack Wadden and Kevin Skadron, University of Virginia, USA</i>

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14:30 - 14:45	Parallel Interval Stabbing on the Automata Processor <i>Indranil Roy & Matt Grimm, Micron Technology, Inc., USA</i> <i>Ankit Srivastava & Srinivas Aluru, Georgia Institute of Technology, USA</i>
14:45 - 15:00	Accelerating Weeder: A DNA Motif Search Tool using the Micron Automata Processor <i>Qiong Wang, National University of Defense Technology, China</i> <i>Mohamed El-Hadedy, University of Illinois Urbana-Champaign, USA</i> <i>Ke Wang & Kevin Skadron, University of Virginia, USA</i> <i>Presenter: Jack Wadden, University of Virginia, USA</i>
15:00 - 15:20	Break
MANY-CORE Chair: He Bing Sheng	
15:20 - 15:50	What Have We Learned About Heterogeneous Supercomputing? <i>Wen-mei Hwu, University of Illinois Urbana-Champaign, USA</i>
15:50 - 16:20	Application Readiness for the Pre-Exascale HPC Phase <i>Stan Posey, NVIDIA Corporation, USA</i>
16:20 - 16:50	Many-Core Approaches to Combinatorial Problems <i>Michael Krajecki, Julien Loiseau, Christophe Jaillet, Francois Alin & Arnaud Renard, University of Reims Champagne-Ardenne, CReSTIC, France</i>
16:50 - 17:10	Elastic Stencil Code for Cloud-based GPU Spot Instances <i>Jun Zhou, Yan Zhang & Weng-Fai Wong, National University of Singapore, Singapore</i>
17:10 - 17:25	Break
AUTOMATA PROCESSOR Chair: Mircea Stan	
17:25 - 18:25	Panel Discussion Special Session to Engage Community Input for an Automata Computing Community Infrastructure <i>Mircea Stan (Moderator), Jack Wadden & Audience</i>
18:25 - 18:30	Closing Remarks <i>Marek Michalewicz, A*STAR Computational Resource Centre</i>
END OF DAY 3	