ModSim 2019 – Day One, August 14, 2019	
7:15-8:00 a.m.	**Registration and Welcome to ModSim**
Introductions and Keynote Speaker	
8:00-8:30 a.m.	Introduction to the 2019 ModSim Workshop – **Adolfy Hoisie**
8:30-9:15 a.m.	Keynote Speaker – Wade Shen: **Optimal Hardware Design via Rapid, Multi-resolution Modeling**
Integrative ModSim Methods – Session Lead: Noel Wheeler	
9:15-9:45 a.m.	Dan Ernst – **Scaling Insights to Exascale: An Integration of Simulation and Modeling**
9:45-10:15 a.m.	Jaime Moreno – **Benchmark Modeling, Projection and Validation in Summit and Sierra Supercomputers**
10:15-10:45 a.m.	*Break*
10:45-11:15 a.m.	Jason Lowe-Power – **Gem5, Interoperability, and Improving Simulation Methodology**
11:15-11:45 am	Andreas Gerstlauer - **Predictive Modeling for Heterogeneous System Design**
Lunch Pickup: **11:45 a.m. – 12:30 p.m.**	
12:30-2:00 p.m.	*Panel:* **State of Simulation Tools**: *Moderator*: **Jason Lowe-Power** *Panelist:* **Jose Brunheroto, Arun Rodrigues, Evgeny Bolotin, Brad Beckmann**
ModSim of Subsystems – Session Lead: Bruce Childers	
2:00-2:30 p.m.	Bruce Jacob – **State of the Art in Modeling of Memory Systems**
2:30-3:00 p.m.	Gwen Voskuilen – **Simulation by Composition: Using Models as Building Blocks to Enable Simulation of Complex Node Architectures**
3:00-3:30 p.m.	*Break*
3:30-4:00 p.m.	Chris Carothers – **Fit Fly: A Case Study on Interconnect Innovation Through Parallel Simulation**
4:00-4:45 p.m.	Pradip Bose & Jeff Vetter - **ModSim Challenges for Easily Programmable Heterogeneous System-on-Chip**
4:45-5:15 p.m.	*Sudhakar Yalamanchili Tribute*
5:15-5:30 p.m.	*Closing Remarks*
	End Day One

ModSim 2019 – Day Two, August 15, 2019	
8:15-9:00a.m.	View from Washington D.C. – Bill Harrod - **System-Level Application Modeling (SLAM)**
ModSim for Artificial Intelligence and Machine Learning as a Method for ModSim – Session Lead: Almadena Chtchelkanova	
9:00-9:30a.m.	Satoshi Matsuoka – **The first 'Exascale' Supercomputer with Real Application Performance as the Primary Target, and Towards the Future**
9:30-10:00a.m.	Jim Sexton - **Cognitive Discovery and Intelligent Simulation**
10:00-10:30a.m.	*Break*
10:30-11:00a.m.	Rajit Manohar - **Architecture for Neuromorphic Computing**
11:00-11:30a.m.	Subhasish Mitra – **Computing NanoSystems for the Coming Superstorm of Abundant Data: The N3XT 1,000X**
Lunch Pickup: **11:30 p.m.-12:15 p.m.**	
12:15-1:45p.m.	*Panel:* ***What the Hell is Co-Design?*** *Moderator:* **Adolfy Hoisie** *Panelist:* **Ian Karlin, Valerie Taylor, Subhasish Mitra, Shekhar Borkar**
1:45-2:30p.m.	Keynote Speaker: Serge Leef - **Toward Simulation and Optimization of Distributed Real-Time Intelligent Vehicle Electronics**
2:30-3:00p.m.	*Break*
Contributed Presentations Session: – RAPID-FIRE : Session Lead: Martin Schulz	
3:00-3:10p.m.	Bruce Childers - **Designing SST simulations with Occam**
3:10-3:20p.m.	Tony Gutierrez - **Full-System GPU Simulation in gem5**
3:20-3:30p.m.	Lingda Li - **ARM Scalable Vector Extension Simulation using gem5**
3:30-3:40p.m.	Hameed Badawy - **PPT-GPU: Scalable Performance Modeling of GPGPUs**
3:40-3:50p.m.	Sabbir Ahmed - **Creating Heterogeneous Simulations with SST and SystemC**
3:50-4:00p.m.	Aravind Neelakantan - **BE-SST: Coarse-Grained Simulation Method & Tools for Full-System Modeling and Simulation**
4:00-4:10p.m.	Georgios Papadimitriou - **End-to-End Online Performance Data Capture and Analysis for Scientific Workflows**
4:10-4:20p.m.	Jeffrey Young - **Developing Techniques to Support Fully Integrated Full System Models for Programming Models CoDesign**
4:20-4:30p.m.	John Leidel - **Democratizing Rapid Hardware Prototyping**
4:30-4:40p.m.	Tim Rogers - **Modernizing, Scaling and Validating Accelerator Simulators for the Next Decade of Research**
4:40-4:50p.m.	Dean Chester - **Full-System Modeling and Simulation – Contributions towards coupling, contention, and I/O**
4:50-5:00p.m.	Nathan Tallent - **Predicting and Improving I/O Throughput Using Reinforcement Learning**
5:00-5:10p.m.	Nageswara Rao - **Characterize and Classify HPC Applications Using Machine Learning Models**
5:10-5:20 p.m.	Thomas Flynn- **Memory Performance Modeling with Machine learning**
5:20-6:30 p.m.	**Closing Remarks followed by Presenter and Poster Q&A Session in the Merrill Commons Room**
	End of Day Two

ModSim 2019 – Day Three, August 16, 2019	
Current State-of-the-Art in ModSim for Full-system Modeling and Simulation (projects, initiatives, tools, developments) – Session Lead: Bob Mrosky	
8:30-9:00 a.m.	David Donofrio – **ModSim Activities as Part of the ECP Hardware Evaluation Project**
9:00-9:30 a.m.	Simon McIntosh-Smith – **Enabling Processor Design Space Exploration with SimEng**
9:30-10:00 a.m.	David Mountain – **Project 38 Success Requires ModSim**
10:00-10:15 a.m.	*Break*
10:15-10:45 a.m.	Herman Lam – **Compute Cache Architecture for the Acceleration of Mission-Critical Data Analytics**
10:45a.m.-12:15p.m.	*Panel:* **ModSim for Microelectronics Initiatives**: *Moderator:* **Rob Hoekstra,** *Panelist:* **Shekhar Borkar, Tom Conte, Jim Ang, Serge Leef**
12:15-12:30p.m.	**Workshop Wrap-up**