ModSim 2022 – Day One, August 10, 2022	
7:30-8:15 a.m.	**Registration and Welcome to ModSim**
Introductions and Keynote Speaker	
8:15-8:45 a.m.	Introduction to the 2022 ModSim Workshop – **Adolfy Hoisie**
8:45-9:30 a.m.	**Keynote Speaker; David Mountain:** ***You Ain't Seen Nothing Yet***
Session Title Lessons Learned From Success and Failure– Session Lead: Rob Hoekstra	
9:30-10:00 a.m.	***A Retrospective Look at SPEC Benchmarking, including Successes and Failures*** **- John Henning**
10:00-10:30 a.m.	***Applications and ModSim: How the two are intertwined*** **– Tom Gibbs**
10:30-11:00 a.m.	***Break***
	Session Title Applications and Work Flows – Session Lead: Rob Hoekstra
11:00-11:30 a.m.	***ModSim and Application Co-design: From Petascale (Roadrunner) to Exascale (ECP)*** **- Tim Germann**
11:30am-12:00 pm	***Title TBA*** **- Giri Chukkapalli – NO SHOW**
12:00-12:30 p.m.	***Modeling and Simulation in the Exascale Computing Project*** **- Scott Pakin**
Lunch Pickup**: 12:30 – 1:30 p.m.**	
1:30 - 2:45 p.m.	*Panel:* Simulators & Simulation: *Moderator*: **Rich Carlson & Dan Ernst** *Panelist*: ***Hameed Badawy, Tim Germann, Serge Leef, Jason Lowe-Power, Jeff Vetter***
2:45-3:15 p.m.	*Break*
Session Title ModSim Method and Tools: – Session Lead: Bob Mrosky	
3:15-3:45 p.m.	***Profiling and Modeling for Application and System Analysis*** **- Heidi Poxon**
3:45-4:15 p.m.	***Principal Kernel Analysis: A Tractable Methodology to Simulate Scaled GPU Workloads*** **- Tim Rogers**
4:15-4:45 p.m.	***Thoughts and Experiences on Decades of Modeling*** **– David Donofrio**
4:45 – 5:00 p.m.	***Almadena Chtchelkanova : NSF update***
5:00-5:10 p.m.	***Closing Remarks***
	End Day One

ModSim 2022 – Day Two, August 11, 2022	
8:15-8:25 am	**Day 2 Opening Remarks – Adolfy Hoisie**
Session Title: Success and The State- of-the-Art – Session Lead: Bob Mrosky	
8:25-8:55am	***A Decade of Design to Reach Exascale for ModSim* – *Al Geist***
8:55-9:25am	***The Modeling and Simulation Process for Large IBM Systems* - Jose Moreira**
9:25-9:55am	***Towards FugakuNEXT - Experiences of Fugaku and Path Moving Forward* - Satoshi Matsuoka**
9:55-10:25am	***Break***
10:25-11:30am	*Ad-Hoc Panel*: **Reflections on ModSim: Successes, Failures, and the Future – *Moderator*: Bruce Childers**
***Lunch Pickup*: 11:30 am - 12:30 pm**	
Contributed Presentations Session: – RAPID-FIRE: Session Leaders: Martin Schulz and Almadena Chtchelkanova	
12:30-12:40 pm	Ayaz Akram– **Toward High-Fidelity Heterogeneous Memory System Modeling in gem5**
12:40-12:50 pm	Mikhail Isaev – **ParaGraph: An application-simulator interface and toolkit for hardware-software co-design**
12:50-1:00 pm	Thomas Flynn – **SimNet: Machine Learning-based Computer Architecture Simulation**
1:00-1:10 pm	Christian Engelmann – **Resilience Design Patterns: A Structured Modeling Approach of Resilience in Computing Systems**
1:10-1:20 pm	Jack Jones – **A design space exploration for optimal vector unit composition**
1:20-1:50 pm	***Break***
1:50-2:00 pm	Raveesh Garg – **SST-STONNE: Enabling cycle-level simulation of flexible spatial accelerators for DNNs and GNNs with a detailed memory hierarchy**
2:00-2:10 pm	Patrick Lavin – **Multifidelity DRAM Simulation**
2:10-2:20 pm	Jeffrey Young – **Improving Tooling for Capturing and Summarizing Sparse Memory Accesses**
2:20-2:30 pm	Prasanna Balaprakash – **Graph Neural Network for Anomalies Detection in Scientific Workflows**
2:30-2:40 pm	Qijing (Jenny) Huang – **Learning A Continuous and Reconstructible Latent Space for Hardware Accelerator Design**
2:40-3:10 pm	***Break***
3:10-3:20 pm	Stephen Dabideen – **DARPA's Distributed Experimentation Environment and its application to the evaluation emerging Department of Defense technologies**
3:20-3:30 pm	Rafael Ferreira da Silva – **Measuring the Performance of Generated Workflow Benchmarks at Scale**
3:30-3:40 pm	Anastasiia Butko – **Exploring Message-driven Computation to Unlock the Performance of Asynchronous Algorithms**
3:40-3:50 pm	Subhankar Pal – **Agile Design Space Exploration of SoCs for Autonomous Vehicles**
3:50-4:00 pm	Nageswara Rao – **Design-to-Deployment Continuum Platform for Computing-Instrument Ecosystems**
4:00-4:10 pm	***Break***
4:10-5:10 pm	**Poster Q&A Session**
4:45–6:45 pm	**Reception with Refreshments**

ModSim 2022– Day Three, August 12, 2022	
8:00-8:15 a.m.	*Dr. Sudhakar Yalamanchili – White Paper AWARD Presented by Hyesoon Kim*
8:15-9:00 a.m.	**Keynote Presenter; Horst Simon - *Scientific Computing Beyond the Exascale Era***
Session Title: Architecture – Session Lead: Jason Lowe-Power	
9:00-9:30 a.m.	***Modeling and Self-evaluation for Accelerator Control and Performance* - Kevin Brown**
9:30-10:00 a.m.	***Reflections on AMD's Publicly Available Simulators: Successes, Challenges, and the Future* – Brad Beckmann**
10:00-10:30 a.m.	***Challenges and Directions in Modeling Cloud Performance* - Abhishek Dhanotia**
10:30-11:00 a.m.	***Future of ModSim with Cloud, AI and Gaming* - Mujtaba Hamid**
11:00-11:10 a.m.	***Break***
11:10am-12:20 pm	*Panel Topic*: ***Computing at Extreme Scales***: *Moderator*: **Shekhar Borkar & Noel Wheeler** *Panelists*: **Ron Brightwell, Dan Ernst, Al Geist, Satoshi Matsuoka, Horst Simon**
12:20-12:30 p.m.	**Workshop Wrap-up**