ModSim 2024– Day One, August 14 2024	
7:30-8:00 am	**Registration and Welcome to ModSim**
Introductions and Keynote Speaker	
8:00-8:30 am	Introduction to the 2024 ModSim Workshop – **Adolfy Hoisie**
8:30-9:15 am	**Keynote Speaker; Bill Magro -** ***HPC at a Crossroads: Navigating the AI and Cloud Revolution***
Session: Metrics for Sustainability – Session Lead: Dan Ernst	
9:15-9:45 am	***Sustainability in HPC, a look at LUMI -*** **Fredrik Robertsen**
9:45-10:15 am	***Semiconductor ModSim and the CHIPS+Science Act -*** **Rick McCormick**
10:15 -10:45 am	***Break***
	Session: Sustainability of Software and Tools – Session Lead: Dan Ernst
10:45-11:15 am	***Co-designing for Sparseness: Simulating Next-Generation Memory Systems -*** **Jeff Young**
11:15-11:45 am	***Understanding OSS Project Sustainability with Convergence Approaches -*** **Vladimir Filkov**
11:45am-12:15 pm	***Sustainable ModSim Software and Tools: A Case Study in gem5 -*** **Jason Lowe-Power**
***Lunch Pickup*: 12:15 – 1:15 p.m.**	
1:15 - 2:30 p.m.	*Panel*: **Software Ecosystem Sustainability**: *Moderator*: **Jason Lowe-Power** *Panel Participants*: **Jeff Young; Gwen Voskuilen; David Donofrio; Almadena Chtchelkanova**
2:30-3:00 p.m.	*Break*
Session: Modeling and Simulation of Sustainable Computing – Session Lead: Rob Hoekstra	
3:00-3:30 p.m.	***Predicting Sustainable High Performance Computing -*** **Dejan Milojicic**
3:30-4:00 p.m.	***Can Co-Design of Systems and Applications Deliver Sustainability? –*** **Ana-Lucia Varbanescu**
4:00-4:30 p.m.	***Simulation of Architectures for a Sustainable Computer Ecosystem -*** **Simon McIntosh-Smith**
4:30 – 5:00 p.m.	***Sustainable Computing at Scale –*** **Srilatha (Bobbie) Manne**
5:00-5:10 p.m.	***Closing Remarks***
	End Day One

ModSim 2024 – Day Two, August 15, 2024	
8:10-8:15am	**Opening Remarks – Adolfy Hoisie**
Session: Influence on the Evolving Computing Ecosystem – Session Lead: Lizy John	
8:15-8:45am	***Collaborative System-on-Chip Design with the Open-Source ESP Platforms -*** **Luca Carloni**
8:45-9:15am	***A VU on Digital Twins to Improve the Performance and Technological Sustainability of Data Centers in the Continuum–*** **Alexandru Iosup**
9:15-9:45am	***Using Architectural Simulation to investigate Chiplets for Scalable and Cost Effective HPC Beyond Exascale -*** **John Shalf**
9:45-10:15am	***Break***
10:15-11:30am	*Ad-Hoc Panel*: **To be Announced –** *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	**William Won – LIBRA: Enabling Workload-aware Multi-dimensional Network Topology Optimization for Distributed Training of Large AI Models**
12:40 - 12:50 pm	**Jason Lowe-Power – Potential and Limitation of General-Purpose Superconducting Cores**
12:50 - 1:00 pm	**Ozgur Kilic – REDWOOD: AI-Driven Dynamic Modeling of Distributed System for Optimizing Resilience and Data Management**
1:00 - 1:10 pm	**Lingda Li – Representation Learning for the Performance Modeling of Traditional and Emerging Computer Architectures**
1:10 - 1:20 pm	**Zhiling Lan – Multi-Fidelity Modeling for Multi-Traffic Network Interference Analysis**
1:20 – 1:30 pm	**Jack Jones – Using SimEng's integration with SST as a case study for its use as a sustainable ModSim tool**
1:30-2:00 pm	***Break***
2:00 - 2:10 pm	**Kevin Brown – Efficiently Composing and Controlling Hybrid Simulations of PDES and Machine Learning Models**
2:10 - 2:20 pm	**Jens Domke – A Case for 3D-Stacked Cache in HPC – Lessons Learned after Many Months of Simulations**
2:20 - 2:30 pm	**Ozgur Kilic – Modeling the Performance and Scaling of Scientific Workflows with Resource-efficient Workflow Mini-apps**
2:30 - 2:40 pm	**Matt Sinclair – Designing Better Tools For Power- and Sustainability-Aware Co-Design**
2:40 - 2:50 pm	**Morgan Kromer – Reducing Barriers to Entry with BLUEprinter: Basic Layout Unification for Emulation**
2:50 - 3:00 pm	**Vijay Janapa Reddi – Software-Hardware Co-Design of Energy-Efficient SoCs: The EPOCHS ModSim Experience Report**
3:00 - 3:10 pm	**Torsten Hoefler – Earth Virtualization Engines - Advanced Simulation for Sustainability**
3:10 - 3:30 pm	***Break***
3:30-4:15pm	**Poster Q&A Session**
4:00–6:00 pm	**Reception with Refreshments**

ModSim 2024– Day Three, August 16, 2024	
8:15-8:30 a.m.	*Dr. Sudhakar Yalamanchili – White Paper AWARD Presented by Hyesoon Kim*
	Session: Sustainable Technologies from the Edge to the Extreme – Session Lead: Hal Finkel
8:30-9:00 a.m.	***Quantifying the carbon footprint of computing: Post, Present, and Future*** **– Udit Gupta**
9:00-9:30 a.m.	***All Tomorrow's Memories (and Kernels) -*** **Bruce Jacob**
9:30-10:00 a.m.	***Processing in Memory for Energy-Efficient Computing -*** **Kevin Skadron**
10:00-10:30 a.m.	***Break***
10:30am - 11:45 am	*Panel Topic*: ***Computer Architecture & Sustainability***: *Moderator*: **Noel Wheeler;** *Panel Participants*: **Hameed Badawy; Hal Finkel; Al Geist; Rishi Khan; Torsten Hoefler**
11:45-12:00 p.m.	**Workshop Wrap-up – Adolfy Hoisie**