SMC2019 AGENDA

TUESDAY, AUGUST 27

4:00 PM	**Registration Opens**	Executive Conference Center Lobby	
5:30 PM	Reception/Networking	Cattails Ballroom Foyer	
6:00 PM	Dinner & Keynote	Cattails Ballroom	
		When 100 Flops/Watt was a Giant Leap: The Apollo Guidance Computer Hardware, Software and Application in Moon Missions	Mark Miller, LLNL
8:00 PM	**Informal Discussions**	Boone/Cherokee	

WEDNESDAY, AUGUST 28

7:30 AM	**Registration Opens**	Executive Conference Center Lobby	
7:30 AM	Working Breakfast - roundtable – session 1 & 2 organizing with speakers and session chairs and attendee discussions	Cattails Ballroom	
8:30 AM	Welcome & Opening Announcements	Cumberland Amphitheatre	Jeff Nichols, ORNL

Session 1 – Mixed Feelings about Mixed Precision? - Cumberland Amphitheatre

Session Organizers: Judy Hill & Stuart Slattery, ORNL

8:35 am	Session Overview	Session Organizers: Judy Hill & Stuart

		Slattery, ORNL
8:45 am	Using Mixed Precision in Numerical Computation	Jack Dongarra (University of Tennessee)
9:15 am	Variable Precision Computing for Scientific Applications	Daniel Osei-Kuffuor (LLNL)
9:45 am	Effective use of Mixed Precision for HPC	Kate Clark (NVIDIA)
10:15 am	Break	Break
10:45 am	Mixed Precision Sampling of Quantum States of Matter	Thomas Maier (ORNL)
11:15 am	Fast, Scalable and Accurate Finite-Element Based Ab Initio Calculations Using Mixed Precision Computing	Vikram Gavini (University of Michigan)

11:45 pm	Working Lunch – Continue discussions on Mixed Feelings about Mixed Precision	Cattails Ballroom

Session 2 – AI: The Numerics of Big - Cumberland Amphitheatre

Session Organizers: David Womble, ORNL & Travis Johnston

1:00 pm	Session Overview	Session Organizers: David Womble, ORNL & Travis Johnston
1:15 pm	Local Distributed SGD: Communication, Convergence and Residual Error	Viveck Cadambe (Penn State University)
1:45 pm	Challenges Moving Toward High Performance Machine Learning	Michael Mahoney (University of California, Berkeley)
2:15 pm	The Problems With “Big”	Mike Houston (NVIDIA)
2:45 pm	Break	Break
3:00 pm	Bridging the Gap Between Deep Learning Algorithms and Systems	Mike Schulte (AMD)
3:30 pm	What The FLOP! Meaningful Metrics for Deep Learning (AI) at Scale	Travis Johnston (ORNL)

Data Challenge

Data Challenge Chair: Folami Alamudun

4:00 pm	Data Challenge Slam	Cumberland Amphitheatre	
4:30 pm	Data Challenge Poster Session and Networking Reception	Cattails Ballroom Foyer	

5:30 pm	Dinner on Your Own, Informal Discussions, Side Meetings, and **Dinner on your own**

8:00 - 10:00 pm	Informal Discussions	Boone/Cherokee

THURSDAY, AUGUST 29

7:30 am	Working Breakfast – roundtable – session 3 & 4 organizing with speakers and session chairs and attendee discussions Cattails Ballroom	

Session 3: Driving Computing to the Edge - Cumberland Amphitheatre
Session Organizers: Barney Maccabe & Shirley Moore, ORNL

8:30 am	Session Overview	Session Organizers: Barney Maccabe & Shirley Moore, ORNL
8:45 am	Edgascale Computing? Why Exascale Needs an Edge	Pete Beckman (ANL)
9:15 am	Smart Infrastructure, Smart Science	Mahadev Satyanarayanan (Satya)(Carnegie Mellon University)
9:45 am	Enhancing Driver Awareness at the Edge	Mina Sartipi (UT-Chattanooga)
10:15 am	Break	Break - Cattails Ballroom Foyer
10:45 am	Spin: Deploying Edge Services with Docker at NERSC	Cory Snavely (LBNL)
11:15 am	Beyond Moore: An Arm vision for edge to post-Exascale computing	Jonathan Beard (ARM)

11:45 pm	Working Lunch – Continue discussions on Driving Computing to the Edge	Cattails Ballroom

Session 4: On the Road to Exascale - Cumberland Amphitheatre
Session Organizers: Scott Atchley & David Bernholdt, ORNL

1:00 pm	Session Overview	Session Organizers: David Bernholdt & Scott Atchley
1:15 pm	Perlmutter - A 2020 Pre-exascale GPU-Accelerated System for NERSC	Nick Wright (LBNL)

1:45 pm	Anticipating the European Supercomputing Infrastructure of the Early 2020s	Thomas Schulthess (CSCS)
2:15 pm	Los Alamos National Laboratory Crossroads	Gary Grider (LANL)
2:45 pm	Break	Break
3:00 pm	ORNL's Frontier Exascale Computer	Al Geist (ORNL)
3:30 pm	Argonne's Aurora Exascale Computer	Susan Coghlan (ANL)
4:00 pm	The LLNL Near and Long-Term Vision for Large-Scale Systems	Bronis de Supinski (LLNL)
4:30 pm	Panel	

5:00 PM	Reception/Networking	Cattails Ballroom

6:00 pm	Working Dinner, Data Challenge Awards	Cattails Ballroom
7:00 pm	Closing Keynote: AI for Science	Rick Stevens (ANL)
8:00 pm	Informal Discussions	Boone/Cherokee

Adjourn