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Computer Elements
Workshop in cooperation
with

VCEW 2021 Program

June 20-23, 2021 Virtual and the Christiania, Vail

Program Chair: Don Soltis, Intel
Program Co-Chair: Brian Hirano, Micron

Sunday June 20

All times are in Mountain Daylight TZ

5:00 pm   Local attendees: Registration and Reception TBA
6:30 pm   Local attendees: Dinner TBA

8:30 pm   **Keynote: Robert Hormuth, AMD**
          Abstract: In the Future 4 Worlds of the IT industry there are 2 major unknown questions that could shape the landscape for technology, innovation, and the market for decades to come. In this talk we will explore 4 possible worlds of the future; how we would get there, how the players will react, and who wins and loses in each outcome.

Monday June 21

8:00 am   Local attendees: Breakfast
9:00 am   **Welcome**
Session 1   **Processors – Chair: Edmund Gieske**
9:15 am   **Cezanne APU**, Sonu Arora, AMD
9:45 am   **GPU**, Mike Mantor, AMD
10:15 am   **POWER10 Server Processor**, Brian Thompto, IBM
10:45 am   **Building future European Processors**, John Davis, Barcelona Supercomputer Center
                          Breakout

11:30 am Processors
          Consumer Electronics
          I/O Interconnect
          Security
          Software
          Memory
12:00 pm   Lunch

Session 2   **I/O Interconnect – Chair: Yahya Sotoudeh, Intel**
1:30 pm   **CXL**, Debendra Das Sharma, Intel
2:00 pm   **Luminous Si-Photonics**, Dave Baker
2:30 pm   **I/O INCEPTION: Bringing the World of Interconnects into the Package**, Gabe
                          Loh, AMD **Consumer Electronics – Chair: Yoshio Masubuchi, Kioxia**
3:00 pm   **Fugaku Supercomputer**, Dr. Matsuhisa Sato, Riken

5:00 pm   Local attendees: Reception
6:30 pm   Local attendees: Dinner at Lancelot

8:00 am	Breakfast

Session 3   **Memory – Chair: Michael Allen, ARM**

9:00 am	Architecture Support for Persistent Storage, William Wang, ARM
9:30 am	Error Correction vs. Error Detection in DRAM Functional Safety, Steffen Buch, Micron

           Security – Chair: Amy Santoni, Intel

10:00 am	Post-Quantum Cryptography Competition, Dustin Moody, NIST
10:30 am	Fully Homomorphic Encryption Work with DARPA, Rosario Cammarota, Intel
11:00 am	Glitching Attacks, David Hulton, Micron

           Breakout Session

11:30 am	Processors
	Consumer Electronics
	I/O Interconnect
	Security
	Software
	Memory

12:00 pm	Attendee photo (screenshot video tiles)
12:10 pm	Lunch

1:30 pm – 4:30 pm	Free time to enjoy Vail

4:00 pm	Planning session for VCEW 2022
5:00 pm	Local attendees: Reception
6:30 pm	Local attendees: Dinner at Left Bank

8:00 am	Breakfast

Session 4   **Software - Chair: Brian Hirano, Micron**

9:00 am	When Memory Meets ML on Social Network Platforms, Hsien-Hsin Sean Lee, Facebook
9:30 am	MLCommons, David Kanter, MLCommons
10:30 am	Protocol/Flat Buffers – Low Latency/Efficient Data Transport, Brian Hirano, Micron
11:00 am	MemVerge (Memory Virtualization), Charles Fan, MemVerge
11:30 am	Closing

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