

2015 USENIX VAIL Computer Elements Workshop

June 28-July 1, 2015

The Evolving Data Center

Program Chair: Steve Miller, Intel, steven.c.miller@intel.com

Sunday June 28 5 PM Registration, Dinner and Keynote Presentation (8:00 PM – 9:15 PM)

Security Post Snowden

John Callas, Co-founder & CTO Silent Circle

Key Note Chair: James Hughes, jphughes@mac.com

Monday June 29

Session 1: Machine Learning

8:30 AM – 12:00 noon

1. Integrating living cells with CMOS
2. Stoke: A stochastic optimizer for the x86_64
3. Quantum Computing on classical computer
4. Weaver, a self timed testable crossbar

Session 2: Processor Technology

1:30 PM – 4:30 PM

1. Cavium Thunder X
2. CHERI a capability system
3. Introduction to ARM version 8
4. Quarq efficient architecture for embedded

Session 3: Capability Systems

8:00 PM – 10:15 PM

1. sel4/L4
2. Nested Kernel: OS Arch for Intra-Kernel
3. A Blessing-Based Authorization Model

Tuesday June 30

Session 4: Storage Class Memory

8:30 AM – 12:00 noon

1. Storage for Virtualized Workloads
2. Roadmap and Interface Challenges for SCM
3. Memory at the end of the Roadmap
4. Benefits of emerging memory tech

Planning Session: Vail 2016, 4PM – 5:30 PM All invited to participate.

Session 5: Consumer Technology

8:00 PM – 10:15 PM

1. SoCs for Industrial and factory automation
2. SoC for ADAS
3. 8K DTV Technology

Wednesday July 1

Session 6: Big Data

8:30 AM – 12:00 noon

1. Trends in Datacenter Architectures
2. Key Value Store Hard Drive
3. Yedalog: Exploring Knowledge at Scale
4. JSonnet, Terraform & Packer

Chairs: David Cunningham & Sebastien Nussbaum

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