



VCEW

The Vail Computer Elements Workshop  
June 9-12, 2024  
<http://vcew.org>

by VCEW  
in collaboration with:

**nix**  
ADVANCED  
COMPUTING SYSTEMS  
ASSOCIATION

# VCEW 2024 Program

*All Times Mountain Daylight Time (UTC-6)*

## Sunday, June 9<sup>th</sup>

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- 4:00 pm **Check-in Time** for the Lodge at Vail
- 5:00 pm Gather in **the Lodge lobby** and walk to the **Reception**
- 6:30 pm **Dinner:** The Lodge at Vail
- 8:30 pm **Keynote: From the Garage to Mars: Memoirs of a Space Entrepreneur, Scott Tibbetts**

## Monday, June 10<sup>th</sup>

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- 7:30 am **Continental Breakfast**
- 8:30 am **Welcome:** Jim Hughes, VCEW Executive Committee Chair
  
- Session 1 Processors**
- 8:45 am *Chiplet Motivation and Design Considerations for the Next Gen Data Center,*  
Eric Fetzer, Intel
- 9:30 am *AMD MI300,* Mike Schulte, AMD (Virtual Talk)
- 10:15 am *15-Minute Break*
- 10:30 am *TBD,* John Branhaver, Lemurian Labs
- 11:15 am *Memory-Centric Computing,* Onur Mutlu, ETH Zurich
  
- 12:00 pm **Lunch**
  
- Session 2 Space + Security**
- 1:00 pm *Sky is NOT the Limit,* Tusher Chakraborty, Microsoft Research
- 1:45 pm *Detection and Correction of Radiation Errors for Commodity Microprocessors,*  
Joe Izraelevitz, University of Colorado at Boulder
- 2:30 pm *15-minute Break*
- 2:45 pm *Implications of a Dynamic Global Network in Space,* Victor Aguero, Cambrian Works
- 3:30 pm *GHOST: Hiding in Plain Sight,* Tamara Lehman, University of Colorado at Boulder



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5:00 pm      **Reception**

6:30 pm      **Dinner:** La Nonna

**Session 3      Consumer Electronics**

8:30 pm      *SoC Chip Design Center, Ichiro Naka, AIST*

9:15 pm      *AI IP Evaluation Platform, Atsushi Hasegawa, University of Tokyo*



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## Tuesday, June 11<sup>th</sup>

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- 7:30 am      **Continental Breakfast**
- Session 4      AI Systems**
- 8:45 am      *LLMs 101*, Dave Baker, Akeana
- 9:30 am      *TBD*, Tom St. John, Meta
- 10:15 am      *15-minute Break*
- 10:30 am      *Enabling Compound AI: A Data Centric Approach*, Jack Harwood, Marvell
- 11:15 am      *Powering AI's Future with Ultra Ethernet (UEC)*, J Metz, AMD
- 12:00 pm      **Lunch**
- 1:30 pm – 4:00 pm      **Free Time to enjoy Vail**
- 4:00 pm      **Planning Session for VCEW 2025**
- 5:00 pm      **Reception**
- 6:30 pm      **Dinner:** Lancelot
- Session 5      VCEW Moderated Group Discussion**
- 8:30 pm      *AI's Place in Hardware Product Design and Development*  
Moderators: Vijay Janapa Reddy, Harvard, and Dave Baker, Akeana

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## Wednesday, June 12<sup>th</sup>

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- 7:30 am      **Continental Breakfast**
- Session 6      Security + Quantum**
- 8:45 am      *Rethinking Secure NVM (and its implications for CXL)*, Iris Bahar, Colorado School  
of Mines
- 9:30 am      *Quantum Processor Tech*, Charlie Baldwin, Quantinuum (virtual)
- 10:15 am      *15-minute Break*
- 10:30 am      *What Can Quantum Learn from Classical Computing?*, Anne Matsuura, Intel  
(virtual)
- 11:15 am      *NIST PQC, Hot Off the Presses, and What's Next?*, Daniel Apon, MITRE (virtual)



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12:00 pm      **Final Thoughts:** Jim Hughes, VCEW Executive Committee Chair

**VCEW 2024 Program Committee**

**Co-Chairs:** Brian Hirano, Micron and Don Soltis, Intel

**Session Chairs**

**Processor:** Don Soltis, Intel and Brian Thompto, AMD  
Wack, IBM

**Quantum:** Andrew

**Consumer Electronics:** Atsushi Hasegawa, University of Tokyo  
NIST

**Security:** John Kelsey,

**AI:** Dave Baker, Akeana and Vijay Janapa Reddy, Harvard

**Space:** Rajshree Chabukswar, Intel and Brian Hirano, Micron