



QuantHEP 2025

29 September 2025 to 2 October 2025
Lawrence Berkeley National Lab
US/Pacific timezone



❖ **Quantum Industry representatives:**

- ❖ Maxime Dupont (Rigetti)
- ❖ Vincent Pascuzzi (IBM)
- ❖ Enrico Rinaldi (Quantinuum)

❖ **Algorithm development:**

- ❖ Michael Kreshchuk (Phasecraft)

❖ **Co-design of quantum hardware:**

- ❖ Akel Hashim (AQT)

❖ **Funding & access to hardware/software:**

- ❖ Marco Fornari (ASCR)
- ❖ Ermal Rrapaj (NERSC)

Panel Discussion

- ❖ **Scalability of Quantum Simulations:** How does current quantum computing hardware need to scale to effectively handle the complexity of HEP simulations, and would a joint design of the hardware help in achieving this scalability?
- ❖ **Funding and access:** What role will the NERSC infrastructure play in advancing the field of quantum simulations and what is the best way to organize hardware access for research and maintenance of public software?
- ❖ **Hybrid Simulations:** How can quantum approaches be integrated with classical computational methods to create hybrid models that leverage the strengths of both approaches?
- ❖ **Benchmarking and Validation:** What are the best practices for benchmarking and validating quantum simulations of HEP phenomena against classical methods?