

The 2024 Energy HPC Conference: Taking Supercomputing Further in the Face of the Energy Transition

The [Ken Kennedy Institute](#) at Rice University hosted the 17th annual [Energy High Performance Computing \(HPC\) Conference](#) on March 5-7, 2024 at the BioScience Research Collaborative, welcoming over 560 guests to Rice from 30 states and 11 countries.

The Institute collaborated with [Keith Gray](#), conference co-founder and Oil & Gas HPC Architect at Intel, along with an interdisciplinary planning committee to build this year's program based on current trends, needs, challenges, and opportunities in HPC and the energy industry.

"The Energy HPC Conference is a community that comes together, sharing best practices and finding solutions to help develop the world's energy supply chain — from atom-scale to Earthscale — through HPC," said committee member Donny Cooper, TotalEnergies.

The conference featured a lineup of invited speakers, panels, technical talks, and "birds of feather" sessions that combined diverse insights and perspectives from industry, academia, and national labs. Attendees also had the opportunity to engage with over 30 exhibitors during networking breaks and afternoon receptions, followed by poster presentations and four add-on workshops.



Speakers at the 2024 Energy HPC Conference included Rice University's Executive Vice President for Research [Ramamoorthy Ramesh](#), Noah Harding Assistant Professor of Computer Science [Tasos Kyrillidis](#), and the 2023 ACM/IEEE CS Ken Kennedy Award recipient [Keshav Pingali](#), along with leaders from Chevron, Grit Ventures, Hewlett Packard Labs, NVIDIA, Shell, TACC, and the Argonne, Oak Ridge, and Sandia National Laboratories.



Notable additions to this year's conference were numerous sessions focused on the rise of artificial intelligence in transforming the energy landscape. Speakers explored trends and possibilities at the intersection of HPC and AI, discussing the future of the energy transition, open software ecosystems, and responsible applications to improve efficiency and optimization. Samantha Nava of the Ken Kennedy Institute collaborated with a cohort of specialists and engineers to convene a workshop titled "AI in Energy." This endeavor aimed to meticulously scrutinize the feasibility of implementing secure and synergistic artificial intelligence technologies within the energy sector.

"The Ken Kennedy Institute at Rice University is committed to supporting cutting-edge research, educating innovators, and connecting across industries by bringing together thought leaders from our regional and global energy and high-performance computing communities," said [Lydia Kavvaki](#), professor of Computer Science and Director of the Ken Kennedy Institute. "The conference serves as a forum to initiate collaborations and explore technological innovation to address demands in energy, computing, AI, and more."

Recordings from the 2024 Energy HPC Conference can be found on the [Ken Kennedy Institute's YouTube channel](#).

Join the Ken Kennedy Institute [HPC Community](#) to be the first to know details about the 2025 Energy HPC Conference and other HPC-related events. You can also join the general [Ken Kennedy Institute Community](#) mailing list to stay in the know on all other news and events happening through the Ken Kennedy Institute, or follow along with us on [Medium](#), [LinkedIn](#), [X](#), and [YouTube](#).

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