

HPC Intern Showcase

August 7, 2025

Los Alamos Study Center – 2nd Floor – Jemez & Cochiti
(Unclassified - LANL badge required)

WELCOME SESSION

8:00	Light Refreshments	All
8:10	Mini-Showcase Welcome	Julie Wiens

PRESENTATION SESSION

8:15	Mixed Compute Environments with OpenCHAMI	Sean Gibson, Richard Kim, Samuel Quan
8:30	Between the NIC and a Hard Place: Evaluating 400 Gb/s Ethernet for HPC Data Transfers	Adelle Ferris, Nikole Grandez, Evelyn Needham
8:45	GPUDirect Storage With Local NVMe and NVMe-oF Mounted Storage	Alejandro Aparcedo, Lam Le, Killian Seller
9:00	Reducing the Barrier of Entry for GPU Accelerated Workflows using Open OnDemand and Charliecloud Containers in HPC	Beamlak Bekeley, Abhinav Kotta, Kelsey Tirado
9:15	Optimizing Shared Programming Environments on Tri-lab HPC Resources: Standardizing Uenv	Bodhi Rubinstein
9:30	Lightning talks: MarFS is Getting Rusty New Crustaceans of MarFS Silly mistakes and how they help OpenCHAMI's development	Benjamin Schlueter Jaxen Bujold Almond Heil
9:45	Break	ALL
10:00	Integrating CONDUIT into Open OnDemand	Christa Collins
10:15	Lightning talks: Everything is a DAG: Designing a Test Driver from Mathematical Principles Moving MPI ABI ahead with Header Files HPC Documentation Consolidation and Modernization	Lucas Caudill Joseph Downs Andrew Rodriguez
10:30	HPC Consult Ticket Analysis with SambaNova	Daisy Nsibu
10:45	Continuous Delivery of HPC Compute Infrastructure	Ethan Clark
11:00	OpenCHAMI on OpenHPC Expanding Ease of Entry	Travis Powell
11:15	Lightning talks: Automated Workflow Telemetry with BEE and DSI What is Reality? Effective Power Management for the OpenCHAMI Cluster Mgmt. Stack	Kabir Vats Chawin Mingsuwan Lucas Ritzdorf

POSTER SESSION: 11:30 - 1:30 (LUNCH PROVIDED)

Extending ZFS Interface for Accelerators (Z.I.A.)	Luke Beirne
Continuous Delivery of HPC Compute Infrastructure	Ethan Clark
High-Performance Compression of Scientific Volume Data Using Learned 3D Gaussian Models	Landon Dyken
Commit with Reason: Managing Workspace State in Agentic Scientific Workflows	Warren Graham
CLEAR-CAM: Leveraging Physics-Informed GANs to Enhance Plutonium Detection Accuracy	Kendric Hood
Virtualization Pipeline For Testing and Validating Lustre Environments	Johnathan Martinez
Reimagining Reality: XR Visualization Workflows for Science and Engineering	Chawin Minguwan
Run:ai Notebooks and Workflows	Chris Nagy
HPC Consult Ticket Analysis with SambaNova	Daisy Nsibu
HPC Documentation Consolidation and Modernization	Andrew Rodriguez
Optimizing Shared Programming Environments on Tri-lab HPC Resources: Standardizing Uenv	Bodhi Rubinstein
Data-Driven Prediction of Tensile Strength in Material Extrusion Additive Manufacturing	Ian Wald
Watertight Data Splits: A ciFAIRer benchmark and guide to robust deduplication	Christin Whitton
Mixed Compute Environments with OpenCHAMI	Sean Gibson, Richard Kim, Samuel Quan
Between the NIC and a Hard Place: Evaluating 400 Gb/s Ethernet for HPC Data Transfers	Adelle Ferris, Nikole Grandez, Evelyn Needham
GPUDirect Storage with Local NVMe& NVMe-oF Mounted Storage	Alejandro Aparcedo, Lam Le, Killian Seller
Reducing the Barrier of Entry for GPU Accelerated Workflows using Open OnDemand and Charliecloud Containers in HPC	Beamlak Bekeley, Abhinav Kotta, Kelsey Tirado