

# 2024 HPC Intern Showcase Agenda

Los Alamos Study Center – 2nd Floor – Jemez & Cochiti  
August 8, 2024 (Unclassified)

## WELCOME SESSION

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

## PRESENTATION SESSION

8:12	Automated OpenCHAMI Integration Testing and Cluster Deployment	Marcos Johnson-Noya, Alana Kihn, Madison Mejia
8:27	Cray Programming Environment Containerization	Ever J. Dominguez R., Almond J. Heil
8:42	Cluster Management with Containerization on Switches	Dohyun Lee, Anvitha Ramachandran, Robin Simpson
8:57	Charliecloud as a Kubernetes Runtime	London Bielicke, Angelica A. Loshak
9:12	HPCInfo Improvements with Focus on Fairshare	Matthew Vandeberg
9:24	Communication Performance Assessment of Sapphire Rapids Architecture	Jackson Wesley
9:36	Software is for People: A Pavilion Case Study	Hank Wikle
9:50	<b>Break</b>	<b>ALL</b>
10:00	<b>Lightning talks:</b> Crafting an FTP Hook for Fishing in MarFS MUSTANG: An Overview Cluster Care: Reducing Downtime with Automated Node Failure Recovery	Jordan Hebert Paul D. Karhnak Robin E. Preble
10:12	Trusted Platform Provisioning for the OpenCHAMI Cluster Management Stack	Lucas Ritzdorf
10:24	LDMS (Lightweight Distributed Metric Service) Deployment on CSM Systems Abstract	M. Aiden Phillips
10:36	Development of a Capacity ON Demand User Interaction Toolkit (CONDUIT)Web Dashboard	Christa Collins
10:48	Effective Database Design for Efficient Workflow Orchestration	Kabir Vats
11:00	Are we there yet? Predicting the Queue Wait Times and Job Runtimes for HPC Jobs	Christin Whitton
11:12	Leveraging Lustre to Implement Incremental Indexing in GUF1	Migeljan Imeri
11:24	Enhancing Workflow Manager and Resource Manager to Support Elastic Scientific Workflows in HPC Systems	Rajat Bhattarai
11:36	Echo State Networks: An Approach to Non-Intrusive Anomaly Detection in Manufacturing	Kendric Hood
11:48	Edge-Disjoint Spanning Trees on Star-Product Networks	Daniel Hwang

## POSTER SESSION: 12:00 - 1:15 (LUNCH PROVIDED)

Understanding Cosmological Simulation Data via an Ensemble Visualization Workflow	Chloe Keilers
Comparison of data engineering tools	Kalem Smith
Applied Machine Learning for Surrogate Modeling	Warren Graham
MAIM: MarFS Access Improvements and MIMOSA	Benjamin Schlueter
Automated OpenCHAMI Integration Testing and Cluster Deployment	Marcos Johnson-Noya, Alana Kihn, Madison Mejia
Cray Programming Environment Containerization	Ever J. Dominguez R., Almond J. Heil
Cluster Management with Containerization on Switches	Dohyun Lee, Anvitha Ramachandran, Robin Simpson
Charliecloud as a Kubernetes Runtime	London Bielicke, Angelica A. Loshak
Communication Performance Assessment of Sapphire Rapids Architecture	Jackson Wesley
Trusted Platform Provisioning for the OpenCHAMI Cluster Management Stack	Lucas Ritzdorf
Are we there yet? Predicting the Queue Wait Times and Job Runtimes for HPC Jobs	Christin Whitton
Development of a Capacity ON Demand User Interaction Toolkit (CONDUIT)Web Dashboard	Christa Collins
MUSTANG: A Powerful Tool for MarFS Object Cataloging and Retrieval	Paul D. Karhnak
Effective Database Design for Efficient Workflow Orchestration	Kabir Vats
Echo State Networks: An Approach to Non-Intrusive Anomaly Detection in Manufacturing	Kendric Hood
Edge-Disjoint Spanning Trees on Star-Product Networks	Daniel Hwang