

# 2023 OAK Supercomputing Fall Conference

## Little Rock, AR

### Oct. 24-26, 2023

#### Tuesday, October 24

NVIDIA Fundamentals of Deep Learning Workshop 9:00A-4:30P

#### Wednesday, October 25

Check-in & Registration 8:30A-8:45A

Opening Remarks 8:45A-9:00A

#### Contributed Talks Session 1

Dr. Jacob Monroe, University of Arkansas 9:00A-9:30A

*Learning Monte Carlo Move Sets and Molecular Distributions in a Variational Autoencoding Framework*

Dr. Dave Ussery, University of Arkansas for Medical Sciences 9:30A-10:00A

*What Can We Learn from a Million Salmonella Genomes?*

Elon Turner, ARE-ON 10:00A-10:15A

*Research Networking Ecosystem in Arkansas*

Coffee Break 10:15A-10:30A

Keynote Address 10:30A-11:30A

Dr. Douglas Kothe, Sandia National Labs

Networking Lunch 11:30A-12:30P

#### Contributed Talks Session 2 (\* indicates student presentation)

Mickey Slimp, Great Plains Network;

Jeremy Evert, Southwestern Oklahoma State University

*Emerging High Performance Computing and the Great Plains Network*

12:30P-1:00P

Recep Erol\*, University of Arkansas at Little Rock 1:00P-1:20P

*Heterogeneous Computing for Accelerated Inference: An XAI-Verified Analysis in High Performance Computing (HPC) Environments with Pre-loaded Images*

Johnna Berryhill\*, Arkansas State University 1:20P-1:40P

*Addressing Colorectal Cancer Disparities in Arkansas: Insights from a Study of Social Determinants of Health and Survival Analysis*

Poster Setup (Location: Arkansas Capitol Rotunda) 1:40P-2:00P

Poster Session (Location: Arkansas Capitol Rotunda) 2:00P-4:30P

## Thursday, October 26

### Contributed Talks Session 3 (\* indicates student presentation)

Dr. Doug Spearot, University of Florida 8:45A-9:15A  
*Simulating Plasticity in Metals at Atomistic and Mesoscopic Length Scales*

Dr. Xiaowei Xu, University of Arkansas for Medical Sciences 9:15A-9:45A  
*Customized Large Language Models for Domain Specific Applications*

Shakil Rafi\*, University of Arkansas 9:45A-10:05A  
*SOM-where in Chicago: What self-organizing maps tell us about ride-sharing behavior in Chicago during the pandemic*

Christy Dunlap\*, University of Arkansas 10:05A-10:25A  
*Supercomputing for Machine Learning of Boiling Heat Transfer*

Coffee Break 10:25A-10:40A

### Contributed Talks Session 4

Dr. Jonathan Stubblefield, Arkansas State University 10:40A-11:10A  
*Combining Modalities for the Diagnosis of Alzheimer's Disease*

Jennifer Fowler, Arkansas Economic Development Commission 11:10A-11:30A  
*Experiential Learning with National AI Campus*

The Future of OAK 11:30A-12:00P

Conference End (Lunch on your own) 12:00P

Intermediate Linux Workshop 1:00P-3:00P

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