## 28th Annual CASIS Workshop 2024
### Day 1 - Wednesday, June 5

| Time Start | Time End | Program |
|---|---|---|
| 8:00 | 8:30 | **Registration** |
| 8:30 | 8:48 | **Welcome**<br>CASIS Director Ruben Glatt (LLNL) |
| | | **Remote and Non-invasive Sensing [Sean K. Lehman]** |
| 8:48 | 9:06 | **CMOS Readout Integrated Circuit and Energy Harvester**<br>Brad Funsten (LLNL) |
| 9:06 | 9:24 | **Computational 3D compact imagers using a single layer of microlens array**<br>Weijian Yang (UC Davis) |
| 9:24 | 9:42 | **Optimal band selection for target detection with a LWIR multispectral imager**<br>Mike Zelinski (LLNL) |
| 9:42 | 10:00 | **Shooter Alarm System**<br>Sean K. Lehman (LLNL) |
| 10:00 | 10:30 | **Coffee Break + Poster Session** |
| | | **Non-Destructive Evaluation [Seemeen Karimi]** |
| 10:30 | 10:48 | **3D Characterization of Manufactured Features and Process-Induced Porosity**<br>Andrew Townsend (LLNL) |
| 10:48 | 11:06 | **Segmentation of Low-Contrast X-ray Computed Tomography Microstructures for High Explosives**<br>Brian Rogers (LLNL) |
| 11:06 | 11:24 | **Tender X-ray tomography at the Advanced Light Source**<br>Jean-Baptiste Forien (LLNL) |
| 11:24 | 11:42 | **High Energy Computed Tomography for Inspection of Air Cargo**<br>Joseph Bendahan (LLNL) |
| 11:42 | 12:00 | **An improved reconstruction technique for interior X-ray computed tomography**<br>Shabnam Semnani (UC San Diego) |
| 12:00 | 13:00 | **Lunch Break sponsored by IEEE Signal Processing Society** |
| 13:00 | 13:18 | **Automatic jumpoff detection from PDV signal**<br>Paul Munger (LLNL) |
| 13:18 | 13:36 | **In-situ microwave characterization of cellular fluidic systems**<br>Saptarshi Mukherjee (LLNL) |
| 13:36 | 13:54 | **Novel Linear Phase-Retrieval Methods for Lab Phase-CT systems**<br>Venkatesh Sridhar (LLNL) |
| | | **Energy Applications [Jhi-Young Joo]** |
| 13:54 | 14:12 | **Optimal PMU Placement for State Estimation with Grid Parameter Uncertainty**<br>Irabiel Romero (UC Merced) |
| 14:12 | 14:30 | **Spectral Correlation Function Based Detection Method for Grid-Signal Distortions**<br>Ali Riza Ekti (ORNL) & Ozgur Alaca (ORNL) |
| 14:30 | 15:00 | **Coffee Break + Poster Session** |
| | | **National Ignition Facility [Anne Garafalo]** |
| 15:00 | 15:18 | **Lights, cameras, digital image correlation at the National Ignition Facility!**<br>Charles Brown (LLNL) |
| 15:18 | 15:36 | **Enhancing NLTE Models for ICF Simulation through ML-Based Dimension Reduction and SR**<br>Min Sang Cho (LLNL) |
| 15:36 | 15:54 | **Multi-Frame Gated X-Ray Imager (MGXI) for Fast Hard X-Ray Imaging**<br>Mary Ann Mort (UC Davis) |
| 15:54 | 16:12 | **Integration of High-Fidelity Pulse Shaping to NIF Integrated Computer Control Systems**<br>Lei Wang (LLNL) |
| 16:12 | 16:30 | **Computer Tomography of NIF Capsules**<br>Joseph Bendahan (LLNL) |
| 16:30 | 17:00 | **Viewing ignition through an x-ray focus**<br>Bernard Kozioziemski (LLNL) |
| 17:30 | ... | **Closing** |


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## 28th Annual CASIS Workshop 2024
### Day 2 - Thursday, June 6

| Time Start | Time End | Program |
|---|---|---|
| 8:00 | 8:30 | **Registration** |
| 8:30 | 8:48 | **Welcome**<br>CASIS Director Ruben Glatt (LLNL) |
| | | **Machine Learning / Artificial Intelligence [Brian Bartoldson, Shusen Liu]** |
| 8:48 | 9:06 | **Riemannian Gradient method with Polyak Step Size**<br>Haonan Zhu (LLNL) |
| 9:06 | 9:24 | **A tour of a flexible and easy-to-use machine learning automation pipeline**<br>Pankaj Jha (LLNL) |
| 9:24 | 9:42 | **AI-Powered Mining of Negative Associations in Medical Databases**<br>Raja Rao Budaraju (Oracle) |
| 9:42 | 10:00 | **Seeing Objects in a Cluttered World: Computational Objectness from Motion in Video**<br>Alexander Moore (LLNL) |
| 10:00 | 10:30 | **Coffee Break + Poster Session** |
| 10:30 | 10:48 | **Towards optimized training distribution for photo-to-face models**<br>Igor Borovikov (Electronic Arts) |
| 10:48 | 11:06 | **Designing Novel Augmentation Strategies for Data-Efficient Finetuning of Object Detection Models**<br>Kowshik Thopalli (LLNL) |
| 11:06 | 11:24 | **Refining Pre-trained Model Weights: Harnessing the Power of Neural Representation**<br>Hongjun Choi (LLNL) |
| 11:24 | 11:42 | **Curiosity Driven Multi-Agent Transformer**<br>Arthur Williams (LLNL) |
| 11:42 | 12:00 | **Revisiting Adversarial Training at Scale**<br>Zeyu Wang (UC Santa Cruz) |
| 12:00 | 13:00 | **Lunch Break sponsored by IEEE Computer Society** |
| 13:00 | 13:18 | **Brain-Computer-Interfaces**<br>Mohit Agarwal (Google) |
| 13:18 | 13:36 | **Angiogram Video Prediction: Building a Normal Distribution for predicting blood vessel vasculature**<br>Prem Gorde (UC Davis) |
| 13:36 | 13:54 | **An Accurate Failure Characterization Framework for Deep Regressors**<br>Vivek Sivaraman Narayanaswamy (LLNL) |
| 13:54 | 14:12 | **Graph Neural Networks for Solid Mechanics Simulation**<br>Bo Lei (LLNL) |
| 14:12 | 14:30 | **Automated Ultrasonic Peak Detection using Continuous Wavelet Transform and Detection Theory**<br>Steven Kenney (LLNL) |
| 14:30 | 15:00 | **Coffee Break + Poster Session** |
| | | **Quantum Sensing & Quantum Computing [Audrey Eshun, Kristin Beck]** |
| 15:00 | 15:18 | **TBD**<br>Erhan Saglamyurek (QUANTNET) |
| 15:18 | 15:36 | **3D Quantum Microscope**<br>Dominique Davenport (LLNL) |
| 15:36 | 15:54 | **Enhancing Axion Dark Matter Searches with Quantum-Limited Amplifiers**<br>Nick Du (LLNL) |
| 15:54 | 16:12 | **Quantum vs. Classical correlations in ghost imaging**<br>Ted Laurence (LLNL) |
| 16:12 | 16:30 | **Simulating noise on a quantum processor: interactions between a qubit and resonant two-level system bath**<br>Yaniv Rosen (LLNL) |
| 16:30 | ... | **Closing** |


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