28th Annual CASIS Workshop 2024

Day 1 - Wednesday, June 5

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

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28th Annual CASIS Workshop 2024

Day 2 - Thursday, June 6

Time		Program
Start	End	
8:00	8:30	**Registration**
8:30	8:48	**Welcome** CASIS Director Ruben Glatt (LLNL)
		Machine Learning / Artificial Intelligence [Brian Bartoldson, Shusen Liu]
8:48	9:06	**Riemannian Gradient method with Polyak Step Size** Haonan Zhu (LLNL)
9:06	9:24	**A tour of a flexible and easy-to-use machine learning automation pipeline** Pankaj Jha (LLNL)
9:24	9:42	**AI-Powered Mining of Negative Associations in Medical Databases** Raja Rao Budaraju (Oracle)
9:42	10:00	**Seeing Objects in a Cluttered World: Computational Objectness from Motion in Video** Alexander Moore (LLNL)
10:00	10:30	**Coffee Break + Poster Session**
10:30	10:48	**Towards optimized training distribution for photo-to-face models** Igor Borovikov (Electronic Arts)
10:48	11:06	**Designing Novel Augmentation Strategies for Data-Efficient Finetuning of Object Detection Models** Kowshik Thopalli (LLNL)
11:06	11:24	**Refining Pre-trained Model Weights: Harnessing the Power of Neural Representation** Hongjun Choi (LLNL)
11:24	11:42	**Curiosity Driven Multi-Agent Transformer** Arthur Williams (LLNL)
11:42	12:00	**Revisiting Adversarial Training at Scale** Zeyu Wang (UC Santa Cruz)
12:00	13:00	**Lunch Break sponsored by IEEE Computer Society**
13:00	13:18	**Brain-Computer-Interfaces** Mohit Agarwal (Google)
13:18	13:36	**Angiogram Video Prediction: Building a Normal Distribution for predicting blood vessel vasculature** Prem Gorde (UC Davis)
13:36	13:54	**An Accurate Failure Characterization Framework for Deep Regressors** Vivek Sivaraman Narayanaswamy (LLNL)
13:54	14:12	**Graph Neural Networks for Solid Mechanics Simulation** Bo Lei (LLNL)
14:12	14:30	**Automated Ultrasonic Peak Detection using Continuous Wavelet Transform and Detection Theory** Steven Kenney (LLNL)
14:30	15:00	**Coffee Break + Poster Session**
		Quantum Sensing & Quantum Computing [Audrey Eshun, Kristin Beck]
15:30	15:48	**TBD** Erhan Saglamyurek (QUANTNET)
15:48	16:06	**3D Quantum Microscope** Dominique Davenport (LLNL)
16:06	16:24	**Enhancing Axion Dark Matter Searches with Quantum-Limited Amplifiers** Nick Du (LLNL)
16:24	16:42	**Quantum vs. Classical correlations in ghost imaging** Ted Laurence (LLNL)
16:42	17:00	**Simulating noise on a quantum processor: interactions between a qubit and resonant two-level system bath** Yaniv Rosen (LLNL)
17:00	...	**Closing**

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