2024 Winter Meeting Agenda

Materials Data Science for Stockpile Stewardship Center of Excellence

December 10 - 11 2024, Tinkham Veale Ballroom A

	Day 0 - Monday, December 9th
4:00 PM	**KCNSC ISC "Visual" AI/ML Opportunity Concept** *Dan Bowen, KCNSC Chief Scientist*

	Day 1 - Tuesday, December 10th	
9:00 AM	**Check-in and Breakfast**	
9:30 AM	**Director's Welcome**	
9:40 AM	**Center Overview**	
9:55 AM	**Technical Session - Research Updates**	
	Common Research Analytics and Data Lifecycle Environment (CRADLE) *Arafath Nihar, Case Western Reserve University*	
	FAIRification, Ontologies & Where They Lead *Prof. Erika Barcelos, Case Western Reserve University*	
	Advanced Manufacturing Overview *Prof. Laura Bruckman, Case Western Reserve University*	
	X-ray Diffraction & Synchrotron Science *Prof. Matthew Willard, Case Western Reserve University*	
11:15 AM	**Technical Session - Electronic Components**	
	Progress on Electronic Component Reliability Research and the Data-Enabled Workforce for the NNSA *Kristopher Davis, University of Central Florida*	
	"DCIEDD with CARE" - Building an Autonomous Ecosystem for the Discovery and Optimization of Metal Nanoparticle Inks. *Dr. Elliott Fowler, Sandia National Laboratories*	
12:00 PM	**Networking Lunch**	**Mezzanine**
12:40 PM	**Roundtable - Strategy and Goals for Digital Transformation**	
	MDS3-COE: Case Study of Data Governance, Stewardship & Cybersecurity for AI & Digital Transformation *Dr. Quynh Tran, Case Western Reserve University*	
	NNSA Enterprise BluePrint: Needs and Wants for Data Governance & Digital Transformation *Prof. Pawan Tripathi, Case Western Reserve University*	
	ArgoPV: Orchestrating the PV Lifecycle using Neuro-Symbolic AI *Prof. Roger French, Case Western Reserve University*	
	Knowledge Graph for Chemical Reactions: Building a KG & Ontology from Historical Data *Dr. Quynh Tran, Case Western Reserve University*	
	Chemical Solubility by GNNs (with LANL) *Prof. Yinghui Wu, Case Western Reserve University*	
2:20 PM	**Roundable - Integrating NNSA's Interests**	
3:10 PM	**Afternoon Technical Session**	
	An Ab-initio Study of Self-Irradiation Damage in alpha-Pu *Dr. Roxanne Tuchton, Los Alamos National Laboratory*	
	Advanced Manufacturing: Integrating Multiple Data Streams *Prof. Laura Bruckman, Case Western Reserve University*	
4:00 PM	**Poster Session**	**Mezzanine**
5:30 PM	**Evening Reception**	**Michelson & Morley**

	Wednesday, December 11th	
9:00 AM	**Check-in and Breakfast**	
9:30 AM	**Welcome & Introduction**	
9:40 AM	**Technical Session - Uncertainty Quantification & Information Theory**	
	Current and Future Approaches to Uncertainty Quantification in Deep Learning *Dr. Ozan Dernek, Prof. Anirban Mondal, Case Western Reserve University*	
10:45 AM	**Roundtable - Allocating Effort Across Research, Impactful Research**	
11:45 AM	**Networking Lunch**	
12:45 PM	**NNSA, Lab & MDS^3 Leadership Meeting** (closed session)	**Conference Room**
	Afternoon Facility Tours (Optional)	