

Day 01: July 31 st 2025		
Duration	Time	Event
0:45	08:00 - 08:45	Registration and Breakfast
		Participant check-in and morning refreshments
		Location: DICE 8-255
0:30	08:45 - 09:15	Opening and Welcoming Session
		Formal opening remarks and overview of the event agenda
		Location: DICE 8-207
0:45	09:15 - 10:00	Researcher Keynote - Dr. Akindele Odeshi
		Title: Development and Characterization of Advanced Materials for Protection Against Ballistic Impact and Explosive Loading
		Location: DICE 8-207
0:20	10:00 - 10:20	Coffee Break
		Networking opportunity and visit to the exhibit displays
		Location: DICE 8-258
1:20	10:20 - 11:40	Presentation Session
		Session 1: AI and Simulation for Smart Manufacturing
		Session 2: New Frontiers in Directed Energy Deposition Manufacturing
		Chair: Dr. Javad Bolboli
		Chair: Kimberly Meszaros
		Location: DICE 8-207
		Location: DICE 8-222
		Advanced Data-Driven Alarm Analytics Tools in the Digital Transformation Era (Harikrishna Rao Mohan Rao)
		From Spectrum to Insight: AI-Driven Monitoring of Wire-fed Laser Directed Energy Deposition (Mohsen Janmaleki)
0:15	13:00 - 13:15	Enabling Lean Manufacturing through Deep Learning Assisted Computer Vision: Process Cycle Time Analysis in Manual Assembly (Daniela Sanchez)
		Synchronized Multimodal Data Acquisition for In-Situ Characterization of Cold Metal Transfer in 3D Printing (Geetha Charan)
		An ML-Driven Edge-to-Cloud Data Pipeline for Real-Time Monitoring of Industrial Machine Performance (Raghda Al Taei)
0:45	13:15 - 14:00	Beam caustic profiling and advancements in handheld laser beam welding (HLBW) for multi-pass butt joint applications (Ivan O. Pigozzo)
		Effect of substrate-preheating on Cooling rates of Plasma Transfer Arc Additively Manufacturing HCWI Using Non-Contact Infrared Thermography (Shriyash)
1:20	11:40 - 13:00	Lunch
		Midday meal with opportunities for informal discussion and networking
		Location: DICE 8A-292
0:15	13:00 - 13:15	Talk - Dr. Andre McDonald
		Introduction to Alberta Advanced Manufacturing International Hub (AbAMI Hub)
		Location: DICE 8-207
0:45	13:15 - 14:00	Industry Keynote - Kimberly Meszaros
		Title: Navigating the Codes & Standards for Additive Manufacturing
		Location: DICE 8-207
0:20	14:00 - 14:20	Coffee Break
		Networking opportunity and visit to the exhibit displays
		Location: DICE 8-258
1:20	14:20 - 15:40	Presentation Session
		Session 3: Manufacturing for Specialized Applications
		Session 4: Robotics and AR in Manufacturing
		Chair: Dr. Shalini Singh
		Chair: Dr. Abba A. Abubakar
		Location: DICE 8-207
		Location: DICE 8-222
		Talk: Non-contact optical techniques for measurement in manufacturing: how do they work? (David S. Nobes)
		Use Cases of AR-CAD: An Augmented Reality-Based Computer-Aided Design Tool (Muhammad Talha)
0:10	15:40 - 15:50	LabFlo Choke Valve Trim Additive Manufacturing Case Studies (Chris Penniston)
		Custom Fiber Jamming Actuator using Controlled Internal Fracture of FDM 3D Printed Parts (Tianshuo Liang)
		Predictive Maintenance of Energy Transportation Pipelines Using Surrogate Deep Learning-FEA Models (Amirhossein Iranmehr)
2:10	15:50 - 18:00	Optimization of soft polymer fused granular fabrication for simplified and cost-effective prototyping in soft robotics (Kazi Zawad)
		Ballistic and dynamic performance of a novel additively manufactured hybrid armour plate (Timothy Odiaka)
		Review of human hand grasps in the drilling operation (Almas Khan)
0:10	15:40 - 15:50	Break
		Tour & Demo
		Visit to ADaMS lab facilities
2:10	15:50 - 18:00	Location: Registration Desk (DICE 8-255)

Day 02: August 1 st 2025			
Duration	Time	Event	
0:35	09:00 - 09:35	Breakfast	
		Morning refreshments served prior to sessions	
		Location: DICE 8-255	
0:45	09:35 - 10:20	Researcher Keynote - Dr. Olanrewaju Ojo	
		Title: <i>Unlocking Performance: The Critical Role of Post-Processing in Additive Manufacturing of Aerospace Superalloys</i>	
		Location: DICE 8-207	
0:20	10:20 - 10:40	Coffee Break	
		Networking opportunity and visit to the exhibit displays	
		Location: DICE 8-258	
1:20	10:40 - 12:00	Presentation Session	
		Session 5: <i>Data-Driven Solutions in Manufacturing</i>	Session 6: <i>Innovations in Polymer Advanced Manufacturing</i>
		Chair: <i>Dr. Sajid Ullah</i>	Chair: <i>Dr. David S. Nobes</i>
		Location: DICE 8-207	Location: DICE 8-222
		Talk: <i>Quantitative Modeling of Microstructure Evolution in Multi-Material Additive Manufacturing</i> (Abba Abubakar)	<i>Experimental and Machine Learning-Based Optimization Approach to Characterize the Permeation Properties of Polymer Nanocomposite Membranes for CO2 Capture</i> (Jacob Muthu)
		<i>Establishing Vibration Signatures for Condition Monitoring of PVC CNC Machine</i> (Faiza Zehra)	<i>Integration of a plug valve mechanism for improved retraction in pellet-based material extrusion</i> (William Marquis)
		<i>Improving LoRaWAN Indoor Localization via DOE Optimization and Machine Learning-Aided Triangulation</i> (Esraa Eissa)	<i>Development of a Continuous Fused Granular Fabrication Carbon Fiber Co-Extrusion System for Robotic Additive Manufacturing</i> (Muhammad Khan)
		<i>Multi-Material Thermography Models Using Polynomial and Machine Learning</i> (Andrea M. Rodríguez)	<i>Microwave-Assisted Joining for Polymers and Polymer Composites</i> (Mahima Dua)
		Location: NREF L2-112	
1:00	12:00 - 13:00	Lunch	
		Midday meal with opportunities for informal discussion and networking	
		Location: DICE 8A-292	
0:45	13:00 - 13:45	Industry Keynote - Madison C. Feehan	
		Title: <i>Space Copy: Technologies for ISRU Enabled In-Space Manufacturing</i>	
		Location: DICE 8-207	
0:15	13:45 - 14:00	Break	
1:00	14:00 - 15:00	Presentation Session	
		Session 7: <i>Space and Aerospace Manufacturing</i>	Session 8: <i>Polymers and Composite Materials</i>
		Chair: <i>Madison C. Feehan</i>	Chair: <i>Dr. Dan Sameoto</i>
		Location: DICE 8-207	Location: DICE 8-222
		<i>Machine Learning Potentials for Predicting Boron Carbide Behavior in Extreme Aerospace Environments</i> (Sara Sheikhi)	<i>Assessing anisotropy in magnetic filler modified fiber reinforced composites</i> (Yingnan Wang)
		<i>Cross-Environmental Simulation of CMT-WAAM: Insights into Melt Pool and Thermal Field Evolution</i> (Heran Geng)	<i>Durable Thin Spin-Coated Fiberglass-Reinforced PDMS Molds for High-Fidelity Microstructure Replication on Polyolefins and UHMWPE under High-Pressure, High-Temperature Conditions</i> (Abolfazl Vaheb)
		<i>Freezing-Assisted Metal 3D printing in Microgravity</i> (Ganesh Prabhu)	<i>Effects of Hydrothermal Aging Conditions on the Mechanical Properties of Unidirectional Glass Fiber-Reinforced Thermoplastic Composites</i> (Jorge Palacios Moreno)
0:20	15:00 - 15:20	Coffee Break	
		Networking opportunity and visit to the exhibit displays	
		Location: DICE 8-258	
0:20	15:20 - 15:40	Award Ceremony	
		Best Paper Awards will be presented	
		Location: DICE 8-207	
0:10	15:40 - 15:50	Closing Remark	

Note: Agenda is subject to changes