

## Agenda as of 5/14/2026

<b>Event contact</b>	Ryan Meyer, 865-341-3547 (office); 573-777-0089 (mobile); meyerrm@ornl.gov			
<b>2026 NDE for AM Workshop</b>				
<b>Time</b>	<b>Event</b>	<b>Speaker(s)</b>	<b>Moderator(s)/Scribe</b>	<b>Location</b>
<b>Tuesday, May 19<sup>th</sup>, 2026 (Day 1)</b>				
7:30a – 8:00a	Registration/Badge pickup	N/A		MDF Lobby
8:00a – 8:15a	Welcome	Joe Hoagland - ORNL		MDF 112A/112B
8:15a – 8:30a	Opening Brief	Ryan Meyer – ORNL		MDF 112A/112B
8:30a – 9:00a	Keynote	Shant Kenderian – The Aerospace Corporation		MDF 112A/112B
<b>Session 1 - NDE for AM: Current Challenges and State of the Art</b>				
9:00a – 9:20a	Session 1.1	Meimei Li – DOE AMMT	Ahmed Hassen – ORNL Ryan Meyer – ORNL	MDF 112A/112B
9:20a – 9:40a	Session 1.2	James Kemp – DOE AMMTO	Ahmed Hassen – ORNL Ryan Meyer – ORNL	MDF 112A/112B
9:40a – 10:00a	Session 1.3	Stephen Cumblidge – NRC	Ahmed Hassen – ORNL Ryan Meyer – ORNL	MDF 112A/112B
10:00a – 10:10a	<b>Group Photo</b>			MDF 112A/112B
10:10a – 10:20a	<b>Break</b>			MDF 112A/112B
10:20a – 11:05a	<u>Panel Discussion:</u> Session 1 – NDE for AM: Current challenges and State of the Art	<ul style="list-style-type: none"> <li>• Meimei Li – DOE AMMT</li> <li>• James Kemp – DOE AMTO</li> <li>• Stephen Cumblidge – NRC</li> <li>• Bruce Greer – EPRI</li> <li>• Craig Gerardi – Kairos</li> </ul>	Ahmed Hassen – ORNL Ryan Meyer – ORNL	MDF 112A/112B

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<b>Tuesday, May 19<sup>th</sup>, 2026 (Day 1)</b>				
<b>Session 2 - AI/ML Applications</b>				
11:05a – 11:20a	<i>Unsupervised Learning-Enabled Pulsed Infrared Thermographic Microscopy of Subsurface Defects in Stainless Steel</i>	Alexander Heifetz – ANL	Ryan Meyer – ORNL Ahmed Hassen – ORNL	MDF 112A/112B
11:20a – 11:35a	<i>Simurgh: AI-Powered Fast and Accurate X-Ray CT Reconstruction and Super-resolution for High-Throughput NDE in advanced Manufacturing</i>	Obaid Rahman – ORNL	Ryan Meyer – ORNL Ahmed Hassen – ORNL	MDF 112A/112B
11:35a – 11:40a	<b>Lightning Talk:</b> <i>Machine-learning approach for 3D acoustic emission (AE) source localization in additively manufactured metals</i>	Jinying Zhu – University of Nebraska, Lincoln	Ryan Meyer – ORNL Ahmed Hassen – ORNL	MDF 112A/112B
11:40a – 11:45a	<b>Lightning Talk:</b> <i>Seeing the Invisible: Non-Destructive Testing with IRIS aiOne</i>	Andrew Dougherty – RDI Technologies	Ryan Meyer – ORNL Ahmed Hassen – ORNL	MDF 112A/112B
11:45a – 12:10p	<u>Panel Discussion:</u> Session 2 - AI/ML Applications	<ul style="list-style-type: none"> <li>• Alexander Heifetz – ANL</li> <li>• Obaid Rahman – ORNL</li> <li>• Jinying Zhu – University of Nebraska, Lincoln</li> <li>• Andrew Dougherty – RDI Technologies</li> </ul>	Ryan Meyer – ORNL Ahmed Hassen – ORNL	MDF 112A/112B
12:10p – 1:10p	<b>Working Lunch:</b> <i>TBD</i>	Srinivas Tadepalli – Nvidia	Ryan Meyer – ORNL Ahmed Hassen – ORNL	MDF 112A/112B
<b>Session 3 – Ex-situ NDE</b>				
1:10p – 1:25p	<i>NDE approaches for inspecting components fabricated using solid phase processing</i>	Richard Jacob – PNNL	Ryan Meyer – ORNL Ryan Spencer – ORNL	MDF 112A/112B
1:25p – 1:40p	<i>The Next Generation of CT</i>	Shane Sunkin – VisiConsult	Ryan Meyer – ORNL Ryan Spencer – ORNL	MDF 112A/112B

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<b>Tuesday, May 19<sup>th</sup>, 2026 (Day 1)</b>				
1:40p – 1:55p	<i>Time-of-Flight Neutron Imaging of Additively Manufactured Components: a new tool to measure structural defects, phase and strain mapping at the Oak Ridge National Laboratory Spallation Neutron Source VENUS Facility</i>	Hassina Bilheux – ORNL	Ryan Meyer – ORNL Ryan Spencer – ORNL	MDF 112A/112B
1:55p – 2:10p	<i>High Energy X-ray Computed Tomography and multimodal imaging</i>	Dayakar Penumadu – University of Tennessee, Knoxville	Ryan Meyer – ORNL Ryan Spencer – ORNL	MDF 112A/112B
2:10p – 2:35p	<u>Panel Discussion:</u> Session 3 – Ex-situ NDE	<ul style="list-style-type: none"> <li>• Richard Jacob – PNNL</li> <li>• Shane Sunkin – VisiConsult</li> <li>• Hassina Bilheux – ORNL</li> <li>• Dayakar Penumadu – University of Tennessee, Knoxville</li> </ul>	Ryan Meyer – ORNL Ryan Spencer – ORNL	MDF 112A/112B
<b>Session 4 – Qualification and Certification Updates</b>				
2:35p – 2:50p	<i>NDE Best Practice in Voluntary Consensus Standards for Metal Additive Manufactured Parts</i>	Jesse Waller – New Mexico State University	Ryan Spencer – ORNL Pradeep Ramuhalli – ORNL	MDF 112A/112B
2:50p – 2:55p	<b>Lightning Talk:</b> <i>Nondestructive Testing for NAVSEA Additive</i>	Craig Sheppard – NAVSEA 05P2 (NDT)	Ryan Spencer – ORNL Pradeep Ramuhalli – ORNL	MDF 112A/112B
2:55p – 3:00p	<b>Lightning Talk:</b> <i>NAVAIR NAWC-AD Qualification and Certification Efforts for AM Parts</i>	Emily Currier – NAVAIR	Ryan Spencer – ORNL Pradeep Ramuhalli – ORNL	MDF 112A/112B
3:00p – 3:05p	<b>Lightning Talk:</b> <i>ARP7065: Standardizing In Situ Process Monitoring Taxonomy for Future Qualification Frameworks</i>	Tyler LeBrun – TBGA	Ryan Spencer – ORNL Pradeep Ramuhalli – ORNL	MDF 112A/112B

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3:30p – 4:40p	Breakout (Day 1 topics) <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th>Breakout Group #</th> <th>Topic</th> <th>Facilitator</th> </tr> </thead> <tbody> <tr><td>1</td><td>TBD</td><td>Pradeep Ramuhalli</td></tr> <tr><td>2</td><td>TBD</td><td>Holden Hyer</td></tr> <tr><td>3</td><td>TBD</td><td>Subrata Mukherjee</td></tr> <tr><td>4</td><td>TBD</td><td>Ahmad Hassen</td></tr> <tr><td>5</td><td>TBD</td><td>Ryan Meyer</td></tr> <tr><td>6</td><td>TBD</td><td>Ryan Spencer</td></tr> <tr><td>7</td><td>TBD</td><td>Amir Ziabari</td></tr> <tr><td>8</td><td>TBD</td><td>Prashant Jain</td></tr> </tbody> </table>			Breakout Group #	Topic	Facilitator	1	TBD	Pradeep Ramuhalli	2	TBD	Holden Hyer	3	TBD	Subrata Mukherjee	4	TBD	Ahmad Hassen	5	TBD	Ryan Meyer	6	TBD	Ryan Spencer	7	TBD	Amir Ziabari	8	TBD	Prashant Jain	MDF Group 1 – 112A Group 2 – 112B Group 3 – 112B Group 4 – 112C Group 5 – 304 Group 6 – 305 Group 7 – 309 Group 8 – 325
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4:40p – 4:50p	Day 1 Conclusions	Ahmed Hassen – ORNL		MDF 112A/112B																											
4:50p – 5:00p	<b>Break/Transition to Working Reception in Lieu of Dinner/Poster Session</b>			MDF																											

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<b>Time</b>	<b>Posters</b>	<b>Speaker(s)</b>	<b>Location</b>
<b>Tuesday, May 19<sup>th</sup>, 2026 (Day 1)</b>			
<b>Working Reception in Lieu of Dinner/Poster Session</b>			
5:00p – 6:20p	<i>Ultrafast solidification signatures in Cu: time-resolved SAXS/WAXS observations and molecular dynamics interpretation across laser-relevant cooling rates</i>	Sandesh Giri – University of Louisiana at Lafayette	MDF 112A/112B
	<i>Advancing Additive Manufacturing Quality: In-Situ Process Monitoring and Probability of Detection Analysis</i>	Hossein Taheri – Georgia Southern University	MDF 112A/112B
	<i>In-Situ Sensors and Synchrotron X-ray Characterization of LPBF AM Process</i>	Sandesh Giri (on behalf of Sen Liu) – University of Louisiana at Lafayette	MDF 112A/112B
	<i>Computed tomography (CT) analysis to inspect additively manufactured components</i>	Hannah Vazquez – University of Dayton Research Institute	MDF 112A/112B
	<i>Phased Array Ultrasound Inspection for Additive Reinforced Thermoforming Manufacturing</i>	Adwoa Owusu – University of Tennessee, Knoxville	MDF 112A/112B
	<i>Support-Free Multi-Axis Additive Manufacturing for Large-Scale Overhang Structures with Residual Stress Control</i>	Xinyi Xiao – University of N. Texas	MDF 112A/112B
	<i>Multi-Scale Monitoring for Wire-Arc Additive Manufacturing</i>	William Werner – University of Tennessee, Knoxville	MDF 112A/112B

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<b>Wednesday, May 20<sup>th</sup>, 2026 (Day 2)</b>				
8:00a – 9:20a	<b>MDF Tour</b>			MDF
<b>Session 5 – In-situ NDE/Monitoring</b>				
9:20a – 9:30a	Review of Day 1	Ryan Meyer – ORNL Pradeep Ramuhalli – ORNL		MDF 112A/112B
9:30a – 9:45a	<i>In-situ NDE During Additive Manufacturing</i>	Paul Panetta – The Aerospace Corporation	Amir Ziabari – ORNL Ryan Spencer – ORNL	MDF 112A/112B
9:45a – 10:00a	<i>Thermal Imaging to identify subsurface porosity of metal components</i>	Eric MacDonald – UTEP	Amir Ziabari – ORNL Ryan Spencer – ORNL	MDF 112A/112B
10:00a – 10:15a	<i>Miniaturized inspection probes without friction limitations in harsh environments</i>	Mihai Duduta – University of Connecticut	Amir Ziabari – ORNL Ryan Spencer – ORNL	MDF 112A/112B
10:15a – 10:30a	<i>Recent Advances on the Use of In Situ Monitoring as a Nondestructive Evaluation Tool for Laser Powder Bed Fusion</i>	Zachary Snow – ORNL	Amir Ziabari – ORNL Ryan Spencer – ORNL	MDF 112A/112B
10:30p – 10:45p	<i>Electrical tomography methods for non-invasive monitoring and NDE of manufacturing processes</i>	Tyler Tallman – Purdue University	Amir Ziabari – ORNL Ryan Spencer – ORNL	MDF 112A/112B
10:45p – 10:50p	<b>Lightning Talk:</b> <i>Ultrafast solidification signatures in Cu: time-resolved SAXS/WAXS observations and molecular dynamics interpretation across laser-relevant cooling rates</i>	Sandesh Giri – University of Louisiana at Lafayette	Amir Ziabari – ORNL Ryan Spencer – ORNL	MDF 112A/112B

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<b>Wednesday, May 20<sup>th</sup>, 2026 (Day 2)</b>				
10:50a – 11:15a	<b>Panel Discussion:</b> Session 5 – In-situ NDE/Monitoring	<ul style="list-style-type: none"> <li>Paul Panetta – The Aerospace Corporation</li> <li>Eric MacDonald – UTEP</li> <li>Mihai Duduta – University of Connecticut</li> <li>Zachary Snow – ORNL</li> <li>Tyler Tallman – Purdue University</li> <li>Sandesh Giri – University of Louisiana at Lafayette</li> </ul>	Amir Ziabari – ORNL Ryan Spencer – ORNL	MDF 112A/112B
<b>Session 6 - Digital infrastructure for NDE automation</b>				
11:15a – 11:30a	<i>Management of Digital NDT Records (DICONDE)</i>	Gregory Mohr – MIB/Serco	Pradeep Ramuhalli – ORNL Ryan Meyer – ORNL	MDF 112A/112B
11:30a – 11:45a	<i>Designed to Evolve: Obsolescence-Resistant vs Planned-Obsolescence in NDE</i>	Abhishek Shukla – UTEX Scientific	Pradeep Ramuhalli – ORNL Ryan Meyer – ORNL	MDF 112A/112B
11:45a – 12:00p	<i>Accommodating inconsistent geometries for mapping NDE data in the digital thread/digital twin</i>	Steve Holland – CNDE	Pradeep Ramuhalli – ORNL Ryan Meyer – ORNL	MDF 112A/112B
12:00a – 12:15p	<i>Damara Tern: A data management platform for advanced manufacturing</i>	Stephanie Cooper – ORNL	Pradeep Ramuhalli – ORNL Ryan Meyer – ORNL	MDF 112A/112B
12:15p – 1:15p	<b>Working Lunch:</b> Attendee Polling Session	Amir Ziabari – ORNL Pradeep Ramuhalli – ORNL		MDF

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<b>Wednesday, May 20<sup>th</sup>, 2026 (Day 2)</b>				
1:15p – 1:40p	<b>Panel Discussion:</b> Session 6 – Digital Infrastructure for NDE automation	<ul style="list-style-type: none"> <li>Gregory Mohr – MIB/Serco</li> <li>Abhishek Shukla – UTEX Scientific</li> <li>Steve Holland – CNDE</li> <li>Stephanie Cooper – ORNL</li> </ul>	Pradeep Ramuhalli – ORNL Ryan Meyer – ORNL	MDF 112A/112B
<b>Session 7 – Rapid Qualification to Enable Automated Workflows</b>				
1:40p – 1:55p	<i>From Monitoring to Quality: Using Multi-Sensor Process Signatures for Rapid AM Quality Assessment</i>	Shuchi Khurana – Addiguru	Ryan Meyer – ORNL Amir Ziabari – ORNL	MDF 112A/112B
1:55p – 2:10p	<i>Expedite LPBF Qualification via Multimodal In-Situ Monitoring &amp; Closed-Loop Control</i>	Yash Parikh – EOS of North America, Inc.	Ryan Meyer – ORNL Amir Ziabari – ORNL	MDF 112A/112B
2:10p – 2:25p	<i>AI-enabled high-throughput time-resolved XCT workflow for interrupted creep of LPBF parts</i>	Rahul Franklin - ORNL	Ryan Meyer – ORNL Amir Ziabari – ORNL	MDF 112A/112B
2:25p – 2:50p	<b>Panel Discussion:</b> Session 7 – Rapid Qualification to Enable Automated Workflows	<ul style="list-style-type: none"> <li>Shuchi Khurana – Addiguru</li> <li>Yash Parikh – EOS of North America, Inc.</li> <li>Rahul Franklin - ORNL</li> </ul>	Ryan Meyer – ORNL Amir Ziabari – ORNL	MDF 112A/112B

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<b>Wednesday, May 20<sup>th</sup>, 2026 (Day 2)</b>				
2:50p – 4:00p	Breakout (Day 2 topics)			MDF Group 1 – 112A Group 2 – 112B Group 3 – 112B Group 4 – 112C Group 5 – 113 Group 6 – 311 Group 7 – 305 Group 8 – 309
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4:00p- 4:45p	Breakout Summaries – Day 1 and Day 2	Ryan Meyer – ORNL Ryan Spencer – ORNL Amir Ziabari – ORNL Pradeep Ramuhalli – ORNL	MDF 112A/112B	
4:45p – 5:00p	Conclusion and Next Steps	Pradeep Ramuhalli – ORNL	MDF 112A/112B	
5:00p	Adjourn	Ryan Meyer – ORNL	MDF 112A/112B	