Tuesday

Tuesday, 15 April 2025		
BRK-01 7:30 - 8:00 a.m.	Continental Breakfast	Kossiakoff Center Dining Room

Tuesday, 15 April 2025		
KEY-01 8:00 - 8:45 a.m.	Keynote Speaker: UAV Threat Briefing	Auditorium
Speaker: **Thomas Powers** UAV Threat Analyst Johns Hopkins University Applied Physics Laboratory		

Tuesday, 15 April 2025		
KEY-02 8:45 - 9:30 a.m.	Keynote	Auditorium

Tuesday, 15 April 2025		
NET-01 9:30 - 10:00 a.m.	Networking Coffee Break	Kossiakoff Center Dining Room

Tuesday, 15 April 2025				
AI-01	Autonomy, Collaborative Engagement, Machine Intelligence, Robotic and Uncrewed Systems I			Classroom 5/6
Chaired by: P. BENNER, Raytheon				
10:00 a.m. AIAA-Defense2025-9000 **Analog-Accelerated Signal Processing Application Specific Integrated Circuits (ASICs) for Advanced Radiofrequency Applications at the Edge** C. Bennett, P. Xiao, B. Feinberg, D. Richardson, W. Wahby, R. Jacobs-Gedrim, Sandia National Laboratories, Albuquerque, NM; et al.	10:30 a.m. AIAA-Defense2025-9001 **Low Power Synthetic Aperture RADAR and Positional Awareness Using Analog In-Memory Compute** D. Richardson, P. Xiao, D. West, K. McClernon, D. Ries, C. Bennett, Sandia National Laboratories, Albuquerque, NM; et al.	11:00 a.m. AIAA-Defense2025-9002 **Demonstration of Trajectory Optimization Using Analog Processing for On-Vehicle Computation** B. Feinberg, R. Denis, A. Javeed, P. Xiao, C. Bennett, E. Boman, Sandia National Laboratories, Albuquerque, NM; et al.	11:30 a.m. AIAA-Defense2025-9003 **Experimental and Computational Investigation of Aerothermodynamic Loads on a High-Speed Projectile Forebody** L. Tronstad, A. Stephens-Stockdale, K. Hanquist, J. Threadgill, S. Craig, The University of Arizona College of Engineering, Tucson, AZ	

Tuesday, 15 April 2025				
AP-01	Advanced Prototypes			Classroom 3/4
Chaired by: G. ANDREWS, MIT Lincoln Laboratory and R. FONTAINE, MIT Lincoln Laboratory				
10:00 a.m. AIAA-Defense2025-9004 **Design of the Fan-in-Wing High Speed VTOL System** K. Uleck, A. Feldstein, Aurora Flight Sciences, Manassas, VA	10:30 a.m. AIAA-Defense2025-9005 **3D Printed Guided Rocket** M. Manalac, E. Chee, Naval Information Warfare Center Pacific, Pearl City, HI; M. Lindsey, S. Becker, US INDOPACOM, Halawa, HI	11:00 a.m. AIAA-Defense2025-9006 **BlackGold® Blade Technology** A. Ringer, Air Force Research Laboratory, Wright-Patterson AFB, OH	11:30 a.m. AIAA-Defense2025-9007 **An Analytical Approach to Confirming Flight Safety for an Advanced Prototype Maneuvering Vehicle** G. Miller, Johns Hopkins University Applied Physics Laboratory, Laurel, MD	

Tuesday, 15 April 2025				
SASS-01	Space Access and Space Systems			Classroom 7/8
Chaired by: M. MCFARLAND, Raytheon				
10:00 a.m. AIAA-Defense2025-9008 **The Cislunar High-Ground and Clandestine Threats to GEO** P. Miga, Advanced Space, Westminster, CO	10:30 a.m. AIAA-Defense2025-9009 **Capability-Oriented Trade Study for Satellite Multi-Mode Modular Propulsion System Applications** S. Williams, Moog, Niagara Falls, NY	11:00 a.m. AIAA-Defense2025-9010 **Otter VLEO Air Breathing Electric Propulsion Technology Development** S. Popkin, Defense Advanced Research Projects Agency, Arlington, VA; K. Cannon, Booz Allen Hamilton Inc, McLean, VA; C. Carter, Amentum Services Inc, Germantown, MD; D. Frist, Space Systems Integration, Chantilly, VA; A. Esposita, TEC Solutions, Arlington, VA	11:30 a.m. AIAA-Defense2025-9011 **Materials and Processes Controls for VLEO Missions** M. Graziano, A. Gerger, R. Tillman, T. Langley, L. Wingert, J. Taylor, Johns Hopkins University Applied Physics Laboratory, Laurel, MD; et al.	

Tuesday, 15 April 2025				
SPMS-01	System Performance Modeling and Simulation I			Parsons Auditorium
Chaired by: S. CHOCRON, Southwest Research Institute and J. WALKER, Southwest Research Institute				
10:00 a.m. AIAA-Defense2025-9012 **An Overview of the Sage Surrogate Modeling Software** A. Kaminsky, A. House, L. Jensen, A. Brown, M. Liu, W. Chapman, CFD Research Corporation, Huntsville, AL; et al.	10:30 a.m. AIAA-Defense2025-9013 **Surrogate Modeling for Hypersonic Vehicles Using HPCMP CREATE™ Sage** A. Wissink, US Army DEVCOM Aviation & Missile Center, Moffett Field, CA; D. McDaniel, US Department of Defense High Performance Computing Modernization Program, Alexandria, VA	11:00 a.m. AIAA-Defense2025-9014 **Trajectory Analysis and Visualization Methods for Unsteady Store Separation** N. De Lucca, A. Rainford, M. Whiteley, MZA Associates, Dayton, OH; I. Maatz, R. Speth, S. Sherer, Air Force Research Laboratory, Wright-Patterson AFB, OH	11:30 a.m. AIAA-Defense2025-9015 **A Store Positioning System for Unsteady Force Sensing on Stores in Windtunnels** N. De Lucca, B. Catron, A. Smith, M. Whiteley, A. Burt, MZA Associates, Dayton, OH; I. Maatz, Air Force Research Laboratory, Wright-Patterson AFB, OH	

Tuesday, 15 April 2025				
TE-01	Test & Evaluation I			Auditorium
Chaired by: N. MUESCHKE, Southwest Research Institute and K. CASPER, Sandia National Laboratories				
10:00 a.m. AIAA-Defense2025-9016 **LIDSS: LLNL Flight Test Support Team** A. Rousso, Lawrence Livermore National Laboratory, Livermore, CA	10:30 a.m. AIAA-Defense2025-9017 **An Opportunity for Recoverable TPS Sample Measurements on a Commercial Reentry Capsule: TPS Holder and Sample Design and Simulation** S. Babiniec, K. Casper, J. Engerer, S. Harris, Z. Wilson, Sandia National Laboratories, Albuquerque, NM	11:00 a.m. AIAA-Defense2025-9018 **Aerothermal Modeling Efforts for the Mach-TB Sub Scale Test 1 Hypersonic Sounding Rocket Flight** E. Robertson, K. Casper, C. Smith, S. Babiniec, Sandia National Laboratories, Albuquerque, NM		

Tuesday, 15 April 2025		
LUNCH-01 12:00 - 1:00 p.m.	Lunch Available	Kossiakoff Center Dining Room

Tuesday, 15 April 2025				
AI-02	Autonomy, Collaborative Engagement, Machine Intelligence, Robotic and Uncrewed Systems II			Classroom 5/6
Chaired by: P. BENNER, Raytheon				
1:00 p.m. AIAA-Defense2025-9019 **Weapon-to-Target Assignment with Information Variability** J. Pozderac, A. Newman, M. Ricci, P. Rivera, J. Schmidt, A. Thompson, Johns Hopkins University Applied Physics Laboratory, Laurel, MD; et al.	1:30 p.m. AIAA-Defense2025-9020 **Training Environment for High Performance Aircraft Reinforcement Learning** G. Search, DAF Artificial Intelligence Accelerator, Cambridge, MA	2:00 p.m. AIAA-Defense2025-9021 **Evolution of Safety Certification Processes to Support Soldier-Driven COTS UAS and CUAS Initiatives** L. Mutuel, US Department of Defense, Washington, D.C.	2:30 p.m. AIAA-Defense2025-9022 **Reverse Engineering and Vulnerability Elucidation of Algorithms ("REVEAL")** J. Williams, M. Blowers, M. Jones, Datalytica, Laurel, MD	3:00 p.m. AIAA-Defense2025-9023 **High-Fidelity Computational Aerodynamic Analysis Without Human Meshing Effort** A. Ricciardi, J. Trout, N. Gibbons, E. Blades, ATA Engineering, Inc., San Diego, CA

Tuesday, 15 April 2025				
GNC-01	Navigation Warfare for Long-Range Fires			Classroom 3/4
Chaired by: J. PARISH, Sandia National Laboratories and C. BRASHAR, Sandia National Laboratories				
1:00 p.m. AIAA-Defense2025-9024 **Navigation Warfare Threats for Long-Range Fires** C. Brashar, Sandia National Laboratories, Albuquerque, NM	1:30 p.m. AIAA-Defense2025-9025 **Strategies for SigOp Navigation Under GNSS Threat Proliferation** M. Boler, Auburn University, Auburn, AL; C. Brashar, Sandia National Laboratories, Albuquerque, NM	2:00 p.m. AIAA-Defense2025-9026 **Jamming Threat Characterization Via C/N0 Distribution Monitoring** J. Ortiz, C. Brashar, Sandia National Laboratories, Albuquerque, NM	2:30 p.m. AIAA-Defense2025-9027 **BAE Systems GPS Threat Mitigation Capabilities in a Complex and Everchanging Environment** M. Cook, BAE Systems Inc, Falls Church, VA	3:00 p.m. AIAA-Defense2025-9028 **Optimal Control for Hypersonic Glide Vehicle Trajectory Optimization and Guidance** Y. Agamawi, D. Lugar, S. Sherman, Johns Hopkins University, Baltimore, MD

Tuesday, 15 April 2025				
HYTASP-01	High-Maneuverability and Hypersonic Systems and Technologies I			Parsons Auditorium
Chaired by: K. GOULD, MIT Lincoln Laboratory and C. REYNOLDS, Lockheed Martin Space Systems				
1:00 p.m. AIAA-Defense2025-9029 **Analysis of US Wind Tunnels for DoD Capability Development of Advanced Hypersonic Weapons** J. Urzay, J. Jones, S. Gerics, C. Eber, H. Hall, J. Tringe, US Air Force Reserve Hypersonics Team, Washington, D.C.	1:30 p.m. AIAA-Defense2025-9030 **In-Flight Radiometric Imaging of Two Uncooled IR Seeker Windows at Hypersonic Speed** D. Stoianovici, D. Blais, Massachusetts Institute of Technology Lincoln Laboratory, Lexington, MA	2:00 p.m. AIAA-Defense2025-9031 **Flight Vehicle Aero-Optical Simulations** L. Melander, N. Falkiewicz, C. Buttaccio, K. Gould, Massachusetts Institute of Technology Lincoln Laboratory, Lexington, MA	2:30 p.m. AIAA-Defense2025-9032 **NASA's TBCC Operational Scale System Concept: Design and Analysis Overview** A. Cowling, NASA, Hampton, VA	

Tuesday, 15 April 2025				
SPMS-02	System Performance Modeling and Simulation II			Classroom 7/8
Chaired by: W. BOORD, Boord Engineering, Sciences and Technology and W. LONDENBERG, L3Harris Technologies				
1:00 p.m. AIAA-Defense2025-9033 **Complex Separating Aerial Vehicle with Modeling and Simulation an Advanced Technology Demonstration** R. Agte, F. Heinsohn, United States Navy, Patuxent River, MD; W. Boord, BEST, LLC, Severna Park, MD	1:30 p.m. AIAA-Defense2025-9034 **Development of the CSAVMS Aerial Test Target and Threat Modeling and Simulation Testbed** R. McLaughlin, J. Yancosek, M. Perhinschi, West Virginia University, Morgantown, WV	2:00 p.m. AIAA-Defense2025-9035 **Application of Scaled Flight Testing, M\&S and Analytic Scaling Analysis in the Characterization and Prediction of Tumbling UAVAJ Dynamics for CSAVMS Design** W. Huebsch, C. Griffin, P. Browning, C. McCallister, R. McLaughlin, J. Zapor, West Virginia University, Morgantown, WV; et al.	2:30 p.m. AIAA-Defense2025-9036 **The Development of Physics-Informed Neural Network Based Aerodynamic Models Using Flight-Test and Computational Fluid Dynamics Data** N. Michek, W. Huebsch, P. Mehta, C. Griffin, H. Dennison, M. Farha, West Virginia University, Morgantown, WV; et al.	3:00 p.m. AIAA-Defense2025-9037 **Iterative Design Approach for a Solid Rocket Propelled Supersonic Anti-Ship Missile** P. Browning, West Virginia University, Morgantown, WV; W. Boord, Naval Sea Systems Command, Washington Navy Yard, D.C.

Tuesday, 15 April 2025				
TE-02	Test & Evaluation II			Auditorium
Chaired by: K. CASPER, Sandia National Laboratories and N. MUESCHKE, Southwest Research Institute				
1:00 p.m. AIAA-Defense2025-9038 **The Minnesota Aerospace Complex (MAC)** A. Castrogiovanni, North Wind, St. Paul, MN	1:30 p.m. AIAA-Defense2025-9039 **Successful Reactivation of HYPULSE at Purdue: Commissioning Test Campaign** J. Jewell, Purdue University, West Lafayette, IN	2:00 p.m. AIAA-Defense2025-9040 **Hypersonic Wind Tunnels at the University of Arizona** S. Craig, The University of Arizona, Tucson, AZ	2:30 p.m. AIAA-Defense2025-9041 **New Test Capabilities in the Hypersonic Wave-Heated Facility** A. Dufrene, J. Peace, T. Wadhams, CUBRC, Buffalo, NY	3:00 p.m. AIAA-Defense2025-9042 **Texas A&M University System Hypersonic Ground Test Capabilities – From Lab to Launch** N. Tichenor, R. Bowersox, R. Miles, T. Lacy, Texas A&M University System, College Station, TX

Tuesday, 15 April 2025		
NET-02 3:30 - 4:00 p.m.	Networking Coffee Break	Kossiakoff Center Dining Room

Tuesday, 15 April 2025		
KEY-03 4:00 - 5:30 p.m.	Keynote Panel: Long-Range Kill Webs	Auditorium

Moderator: **Meggan Schoenberg**, Principal Director for Integrated Network System of Systems, Office of the Assistant Secretary of Defense for Critical Technologies, Office of the Under Secretary of Defense for Research and Engineering

Panelists:

Maj. Gen. Luke Cropsey, USAF
Executive Officer for Command, Control, Communications and Battle Management
Department of the Air Force

LTC Michael Woodhouse, USA
Deputy Cell Director for Warfighter Integration and the Long Range Kill Web Lead
Space Development Agency

Tuesday, 15 April 2025		
NET-08 5:30 - 7:00 p.m.	Networking Reception	Kossiakoff Center Dining Room
Relax and enjoy conversation, drinks and food with attendees and speakers. It's a great way to miss the DC traffic!		

Wednesday

Wednesday, 16 April 2025		
BRK-02 7:30 - 8:00 a.m.	Continental Breakfast	Kossiakoff Center Dining Room

Wednesday, 16 April 2025		
KEY-04 8:00 - 9:30 a.m.	Keynotes: The Transformative Role of Unmanned Systems	Auditorium

Speakers:

David DeVon
Portfolio Manager/Lead for Unmanned and Air Systems
Office of the Under Secretary of Defense for Research and Engineering

Lt. Col. Charles LeDeatte, USAF
Director, AFCENT Battle Lab, Chief Technology and Data Officer
Ninth Air Force (Air Forces Central)

Maj. Phillip Smith, USMC
Program Manager, Tactical Technology Office
DARPA

Wednesday, 16 April 2025		
NET-03 9:30 - 10:00 a.m.	Networking Coffee Break	Kossiakoff Center Dining Room

Wednesday, 16 April 2025				
DE-01	MDAO/Uncertainty Quantification			Classroom 5/6
Chaired by: D. ALLISON, Anduril Industries and J. REY, MIT Lincoln Laboratory				
10:00 a.m. AIAA-Defense2025-9043 **Coupling MBSE and MDAO to Increase Design and Fabrication Efficiency of Small UAS** M. Briggs, K. Butler, T. Fields, University of Missouri-Kansas City, Kansas City, MO	10:30 a.m. AIAA-Defense2025-9044 **Uncertainty Quantification in MDAO for Early Industrial Aircraft Preliminary Design** J. Haderlie, K. Sugiyama, Northrop Grumman Aeronautics Systems, Palmdale, CA; E. Forster, D. Clark, Air Force Research Laboratory, Wright-Patterson AFB, OH	11:00 a.m. AIAA-Defense2025-9045 **Applications of Artificial Intelligence and Machine Learning (AI/ML) to the Analysis of Store Separation Dynamics and Missile Plume Signatures** A. Zambon, J. Shipman, A. Cepero, M. O'Gara, J. Tomes, N. Sinha, Combustion Research and Flow Technology Inc, Pipersville, PA	11:30 a.m. AIAA-Defense2025-9046 **Uncertainty Propagation for a Hypersonic Vehicle Through a Model Validation Hierarchy Framework** A. Kaminsky, CFD Research Corporation, Huntsville, AL; W. Oberkampf, William L. Oberkampf Consulting, Georgetown, TX; J. Camberos, Air Force Institute of Technology, Wright-Patterson AFB, OH; H. Bae, Wright State University, Dayton, OH; D. Jacques, Air Force Institute of Technology, Wright-Patterson AFB, OH; A. Schreiner, CFD Research Corporation, Huntsville, AL; et al.	

Wednesday, 16 April 2025				
DEW-01	High Power Laser Technology			Classroom 3/4
Chaired by: M. NEICE, Directed Energy Professional Society and G. WOOD, The Johns Hopkins University - Applied Physics Laboratory (JHU/APL)				
10:00 a.m. AIAA-Defense2025-9047 **Airborne Directed Energy Systems Integration Committee Status** J. Ehrhart, RTX Corporation, McKinney, TX; D. Parkes, The Boeing Company Defense Space and Security, Albuquerque, NM	10:30 a.m. AIAA-Defense2025-9048 **Hybrid Integrated Turret for Extended Capability High Energy Lasers** A. Smith, M. Whiteley, N. De Lucca, MZA Associates Corporation, Dayton, OH	11:00 a.m. AIAA-Defense2025-9049 **Aerial Dynamic Atmospheric Profiling Turbulence Sensor (ADAPTS)** M. Whiteley, R. Drye, A. Smith, MZA Associates Corporation, Dayton, OH	11:30 a.m. AIAA-Defense2025-9050 **Event-Based Sensor Triangulation** D. Ziehl, R. Miller, Air Force Research Laboratory Directed Energy Directorate, Kirtland AFB, NM; J. Lu, Leidos Inc, Albuquerque, NM; J. Cox, Air Force Research Laboratory Directed Energy Directorate, Kirtland AFB, NM	

Wednesday, 16 April 2025				
HYTASP-02	HYTASP Propulsion Session			Auditorium
Chaired by: K. GOULD, MIT Lincoln Laboratory and C. REYNOLDS, Lockheed Martin Space Systems				
10:00 a.m. AIAA-Defense2025-9051 **NASA's TBCC Demonstration System Concept: Design and Analysis Overview** A. Cowling, NASA, Hampton, VA	10:30 a.m. AIAA-Defense2025-9052 **NASA's TBCC Demonstration System Concept: Inlet Model Test** C. Ground, I. Neel, K. Cabell, D. Witte, NASA Langley Research Center, Hampton, VA	11:00 a.m. AIAA-Defense2025-9053 **Dual Flow-Path RDE Operation and Design** A. Knisely, J. Higginson, R. Burke, C. Martin, M. Kanapathipillai, Johns Hopkins University Applied Physics Laboratory, Laurel, MD	11:30 a.m. AIAA-Defense2025-9054 **Pre-Compression of Seeker Windows for Enhanced Reliability** A. Guzman, R. Sharma, J. Tejada, Massachusetts Institute of Technology Lincoln Laboratory, Lexington, MA	

Wednesday, 16 April 2025				
SPMS-03	System Performance Modeling and Simulation III			Classroom 7/8
Chaired by: J. WALKER, Southwest Research Institute and T. WADHAMS, CUBRC, Inc.				
10:00 a.m. AIAA-Defense2025-9055 **Navigation Design Trades and Mission Engineering for Tactical and Strategic Missile Systems on the Future Battlefield** E. Schulken, J. Price, C. Nugent, N. Kaplan, M. Steffens, The Charles Stark Draper Laboratory Inc, Cambridge, MA	10:30 a.m. AIAA-Defense2025-9057 **A Store Trajectory Repeatability Parameter for Releases from a Cavity under Hypersonic Conditions** D. Montes, R. Grandhi, Air Force Institute of Technology, Wright-Patterson AFB, OH			

Wednesday, 16 April 2025				
TE-03	Test & Evaluation III			Parsons Auditorium
Chaired by: S. BABA, Raytheon and Z. SIMS, Lockheed Martin Space Systems				
10:00 a.m. AIAA-Defense2025-9058 **Propulsion Test and Evaluation Capabilities of the AEDC 716th Test Squadron (Payne_Webb)** N. Payne, J. Webb, Arnold Engineering Development Complex, Arnold AFB, TN	10:30 a.m. AIAA-Defense2025-9059 **Optical Diagnostic Capability Improvements in the AEDC 716th Aerodynamics Test Squadron** C. Morris, M. Nelson, M. Petterson, Arnold Engineering Development Complex, Arnold AFB, TN	11:00 a.m. AIAA-Defense2025-9060 **Artificial Boundary Layer Transition in AEDC/VKF Wind Tunnels** B. Peckinpaugh, Arnold Engineering Development Complex, Arnold AFB, TN; B. Foshee, US Air Force Academy, U.S. Air Force Academy, CO; J. Hopf, C. Morris, Arnold Engineering Development Complex, Arnold AFB, TN	11:30 a.m. AIAA-Defense2025-9061 **The Ohio State University Large Area Reflected Shock (LARS) Tunnel: Recent Developments and Future Plans** J. Little, R. Mathison, N. Webb, The Ohio State University, Columbus, OH	

Wednesday, 16 April 2025		
LUNCH-02 12:00 - 1:00 p.m.	Lunch Available	Kossiakoff Center Dining Room

Wednesday, 16 April 2025				
DE-02	Digital Thread/Digital Twin			Classroom 5/6
Chaired by: M. BELISLE, Northrop Grumman Mission Systems and D. ALLISON, Anduril Industries				
1:00 p.m. AIAA-Defense2025-9062 **Advancing Digital Engineering Through the Automation of Geometric Modeling, Meshing, and Aerodynamic Analysis** C. Humphrey, Air Force Institute of Technology, Wright-Patterson AFB, OH; J. Camberos, Air Force Institute of Technology Graduate School of Engineering and Management, Wright-Patterson AFB, OH	1:30 p.m. AIAA-Defense2025-9063 **Digital Mission Architectures in Support of Mission Engineering Analysis** A. Kim, OUSD R&E Mission Integration, Alexandria, VA	2:00 p.m. AIAA-Defense2025-9064 **The CRJ-700 Flying Test Bed Aircraft Digital Shadow** S. Kelly, W. San Pedro, Northrop Grumman Mission Systems, Linthicum Heights, MD	2:30 p.m. AIAA-Defense2025-9065 **Effective Collaboration and Integration Between Multiple Sites with Restricted Information Sharing** Z. Wilde, N. Pappafotis, Los Alamos National Laboratory, Los Alamos, NM	

Wednesday, 16 April 2025				
GNC-02	Navigation Technologies for Overcoming Highly Contested Environments			Parsons Auditorium
Chaired by: C. BRASHAR, Sandia National Laboratories and J. PARISH, Sandia National Laboratories				
1:00 p.m. AIAA-Defense2025-9066 **AI/ML Driven Calibration of Inertial Sensors** A. Canciani, Leidos Inc, Reston, VA	1:30 p.m. AIAA-Defense2025-9067 **Real-Time Implementation Challenges of LEO Doppler Navigation** S. Hunt, Sandia National Laboratories, Albuquerque, NM	2:00 p.m. AIAA-Defense2025-9068 **A Dual-Control Autopilot Design for Combined Tail Fin & Divert Thruster Controlled Hit-to-Kill Interceptor** D. Boudreau, J. Muka, A. Schaller, E. Arseneault, G. Young, RTX Corporation, Tewksbury, MA	2:30 p.m. AIAA-Defense2025-9069 **Stochastic Optimization with Mixed Integer-Continuous Variables** J. Spall, L. Wang, Johns Hopkins University, Baltimore, MD	3:00 p.m. AIAA-Defense2025-9070 **Honeywell's Vibrating Beam MEMS Accelerometer for Strategic and Hypersonic Applications (MV60)** P. Cousseau, J. Reinke, S. Becka, M. Robinson, Honeywell Aerospace, Phoenix, AZ

Wednesday, 16 April 2025				
HYTASP-03	HYTASP Special Session: Morphing Missile Technology through Forebody Articulation			Auditorium
Chaired by: K. GOULD, MIT Lincoln Laboratory and C. REYNOLDS, Lockheed Martin Space Systems				
1:00 p.m. AIAA-Defense2025-9071 **Morphing Test Article Design and Fabrication** M. Rask, Cummings Aerospace, Niceville, FL	1:30 p.m. AIAA-Defense2025-9072 **Active Learning Techniques for Generating High-Fidelity Aerodynamic Databases: A Case Study on the MUTANT Program** B. Orr, Leidos Inc, Reston, VA; B. Dickinson, Air Force Research Laboratory Munitions Directorate, Eglin AFB, FL; D. Bodkin, J. Goble, P. Munday, Z. Patterson, Leidos Inc, Reston, VA	2:00 p.m. AIAA-Defense2025-9073 **Intercept Capability Analysis of an Air-to-Air Articulated Nose Missile** C. Butler, Earthly Dynamics, Roswell, GA	2:30 p.m. AIAA-Defense2025-9074 **High Fidelity Prediction of Hypersonic Seeker Window Cooling & Aero-Optical (AO) Distortion** N. Sinha, P. Panickar, J. Tomes, J. Papp, CRAFT Tech, Pipersville, PA	3:00 p.m. AIAA-Defense2025-9075 **Development of a Web-Based Visualization Tool to Compare Hypersonic Ground Test Facilities** A. Klausner, A. Barney, J. Yirrell, Massachusetts Institute of Technology Lincoln Laboratory, Lexington, MA

Wednesday, 16 April 2025				
SPMS-04	System Performance Modeling and Simulation IV			Classroom 7/8
Chaired by: Z. SIMS, Lockheed Martin Space Systems and S. CHOCRON, Southwest Research Institute				
1:00 p.m. AIAA-Defense2025-9076 **Leveraging Modular Software Architecture to Support Debris Integration and Validation** E. Liu, A. Velez Candelaria, S. McCarty, E. Uthoff, Johns Hopkins University Applied Physics Laboratory, Laurel, MD	1:30 p.m. AIAA-Defense2025-9077 **Computationally Efficient Simulation of Exoatmospheric Post-Intercept Debris Kinematics and Probability of Collision** T. Safwat, Johns Hopkins University Applied Physics Laboratory, Laurel, MD	2:00 p.m. AIAA-Defense2025-9078 **Advanced Computational Methods for Fast-Running Physics Modeling** J. Painter, A. Auvil, Corvid Technologies, Mooresville, NC; E. Scarborough, D. Littrell, Air Force Research Laboratory Munitions Directorate, Eglin AFB, FL	2:30 p.m. AIAA-Defense2025-9079 **Airblast Flight Dynamic Response on an Endo Atmospheric Reentry Vehicle** G. Zola, Lockheed Martin Corporation, Valley Forge, PA	3:00 p.m. AIAA-Defense2025-9080 **Finite Element Modeling of Nuclear Blast Effects on Relevant Target** G. Pendleton, T. Roberts, J. Hess, Los Alamos National Laboratory, Los Alamos, NM

Wednesday, 16 April 2025				
TE-04	Test & Evaluation IV			Classroom 3/4
Chaired by: T. WADHAMS, CUBRC, Inc. and W. LONDENBERG, L3Harris Technologies				
1:00 p.m. AIAA-Defense2025-9081 **Aerodynamic Modeling and Wind Tunnel Testing of a Damaged Airframe** N. Yanes, O. Rodriguez, H. Logan, H. Yates, J. Juliano, J. Morrison, The Johns Hopkins University Applied Physics Laboratory, Laurel, MD; et al.	1:30 p.m. AIAA-Defense2025-9082 **High-Temperature Plate-Impact Testing of Carbon-Carbon** E. O'Hare, M. Barsotti, Protection Engineering Consultants, Dripping Springs, TX; S. Chocron, R. Enriquez-Vargas, Southwest Research Institute, San Antonio, TX	2:00 p.m. AIAA-Defense2025-9083 **Experimental Validation of Computational Aerodynamic Predictions for Hypersonic Vehicle Performance Evaluation** A. Ricciardi, N. Gibbons, J. Trout, E. Blades, ATA Engineering, Inc, San Diego, CA; R. Bhakta, K. Casper, Sandia National Laboratories, Albuquerque, NM	2:30 p.m. AIAA-Defense2025-9084 **Experimental Validation and Comparison of Vehicle Loading Response to Dynamic Testbed Data in Hypersonic Conditions** R. Bhakta, K. Casper, Sandia National Laboratories, Albuquerque, NM; A. Ricciardi, ATA Engineering Inc., Huntsville, AL; J. Murray, J. Pehrson, M. De Zetter, Sandia National Laboratories, Albuquerque, NM; et al.	3:00 p.m. AIAA-Defense2025-9085 **Gas Measurement Techniques Used in Hypersonic Clean Air Ground Testing** J. Herdy, S. Johnson, S. Roth, CFD Research Corporation, Huntsville, AL

Wednesday, 16 April 2025		
NET-04 3:30 - 4:00 p.m.	Networking Coffee Break	Kossiakoff Center Dining Room

Wednesday, 16 April 2025		
KEY-05 4:00 - 5:30 p.m.	Keynote Panel: Industrial Base and Capacity	Auditorium

Moderator: **Christine Michienzi**, Senior Associate (Non-resident), Defense Industrial Initiatives Group, CSIS

Panelists:

Aditi Kumar
Distinguished Visiting Fellow
University of Pennsylvania

Alison Perez
Senior Investment Manager
Lockheed Martin Ventures

Michael Rambo
Senior Manager, Global
Technology Strategy
Spirit AeroSystems

Tom Sarama
Chief Engineer
Raytheon

Neil Thurgood
Senior Vice President
Anduril Industries

Eric Wollerman
President
Honeywell Federal Manufacturing
and Technologies (FM&T)

Thursday

Thursday, 17 April 2025		
BRK-03 7:30 - 8:00 a.m.	Continental Breakfast	Kossiakoff Center Dining Room

Thursday, 17 April 2025		
KEY-06 8:00 - 8:45 a.m.	Keynote: Hypersonic Threat Briefing: China's Hypersonic Capabilities	Auditorium

Speaker:

Brett Boylston
Foreign Technology Group Manager
Beyond New Horizons, LLC/Arnold Engineering Development Complex

Thursday, 17 April 2025		
KEY-07 8:45 - 9:30 a.m.	Keynote: Hypersonics	Auditorium

Speaker:

James Weber
Principal Director for Hypersonics
Office of the Under Secretary of Defense for Research and Engineering

Thursday, 17 April 2025		
NET-05 9:30 - 10:00 a.m.	Networking Coffee Break	Kossiakoff Center Dining Room

Thursday, 17 April 2025				
AI-03	Autonomy, Collaborative Engagement, Machine Intelligence, Robotic and Uncrewed Systems III			Classroom 5/6
Chaired by: P. BENNER, Raytheon				
10:00 a.m. AIAA-Defense2025-9086 **Real-Time Maneuvering for Hypersonic Engagements via Tree Search and Learning** K. Williams, R. Schlossman, Sandia National Laboratories, Albuquerque, NM; M. Connelly, A. Gross, K. Choi, A. Mazumdar, Georgia Institute of Technology, Atlanta, GA; et al.	10:30 a.m. AIAA-Defense2025-9087 **Intelligent Optimization Simulation Framework for Test and Evaluation of Autonomous Systems** S. Snarski, B. Persons, N. Khan, Modern Technology Solutions, Inc., Huntsville, AL	11:00 a.m. AIAA-Defense2025-9088 **Decentralized Coordination of Heterogeneous Reinforcement Learning Agents for 3-Dimensional Interception** S. Poldervaart, D. Crowder, Sandia National Laboratories, Albuquerque, NM		

Thursday, 17 April 2025				
DE-03	Large Data/Digital Collaboration			Classroom 7/8
Chaired by: J. REY, MIT Lincoln Laboratory and M. BELISLE, Northrop Grumman Mission Systems				
10:00 a.m. AIAA-Defense2025-9089 **Active Learning Applications for Creation of Large-Scale Aerodynamic Datasets** Z. Patterson, P. Munday, J. Goble, D. Bodkin, Leidos Inc, Reston, VA	10:30 a.m. AIAA-Defense2025-9090 **An Expedite Method to Estimate AI Training Complexity** R. Chandra, Northrop Grumman Mission Systems, Linthicum Heights, MD	11:00 a.m. AIAA-Defense2025-9091 **Lessons Learned at Raytheon from Planning and Holding Digital Design Reviews** K. Schmidt, C. Poblete, RTX Corporation, Arlington, VA		

Thursday, 17 April 2025				
DEW-02	High Power Microwave Technology & Laser Lethality			Classroom 3/4
Chaired by: M. NEICE, Directed Energy Professional Society and G. WOOD, The Johns Hopkins University - Applied Physics Laboratory (JHU/APL)				
10:00 a.m. AIAA-Defense2025-9092 **Recent Developments in Compact HPM Source Capabilities for cUAS and Related Missions** T. Fields, R. Allen, P. Bland, F. Berber-Halmen, University of Missouri-Kansas City, Kansas City, MO	10:30 a.m. AIAA-Defense2025-9093 **Weapons Range Dependent Lethality (WRDL) for Missile Defense with Directed Energy** J. Heinrichs, Johns Hopkins University Applied Physics Laboratory, Laurel, MD			

Thursday, 17 April 2025				
GNC-03	Guidance Navigation and Control I			Parsons Auditorium
Chaired by: D. BOUDREAU, The Raytheon Company and M. PRIESS, The MITRE Corporation				
10:00 a.m. AIAA-Defense2025-9094 **Toward Efficient Optimal Trajectory Design for Fin-Controlled Vehicles** M. Priess, The MITRE Corporation, McLean, VA	10:30 a.m. AIAA-Defense2025-9095 **Abstract: Atmospheric Contributions and Considerations to Reentry Accuracy Modeling** A. Lanahan, Lockheed Martin Corporation, King of Prussia, PA	11:00 a.m. AIAA-Defense2025-9096 **Benign Environment Characterization Via C/N0 Distribution Monitoring** J. Ortiz, C. Brashar, Sandia National Laboratories, Albuquerque, NM	11:30 a.m. AIAA-Defense2025-9097 **High-Agility SmallSats via CMGs and Onboard Trajectory Optimization** D. Fishelman, M. Baumgart, Blue Canyon Technologies Inc, Lafayette, CO	

Thursday, 17 April 2025				
WSE-01	Weapon System Operational Performance			Auditorium
Chaired by: R. MACDERMOTT, Air Force Institute of Technology and W. BOORD, Boord Engineering, Sciences and Technology				
10:00 a.m. AIAA-Defense2025-9098 **Update on USAF Hypersonic Systems** J. Komives, Deputy Assistant Secretary of the Air Force (Science, Technology, & Engineering), Washington, D.C.	10:30 a.m. AIAA-Defense2025-9099 **Trade Study of Notional Hypersonic Weapons and their Lethal Effects on Targets of Interest** M. Cowan, C. Salazar, D. Morrow, Lawrence Livermore National Laboratory, Livermore, CA	11:00 a.m. AIAA-Defense2025-9100 **A Penetrator Effectiveness and Survivability Study for Agile Concept Development** T. Roberts, G. Pendleton, C. Bianchini, A. Carpenter, Los Alamos National Laboratory, Los Alamos, NM	11:30 a.m. AIAA-Defense2025-9101 **Novel Method for Future Reentry Environments Definition** A. Sanders, Lawrence Livermore National Laboratory, Livermore, CA	

Thursday, 17 April 2025				
SMS-01	Strategic Missile Systems			Classroom 3/4
Chaired by: A. EDSALL, The Charles Stark Draper Laboratory, Inc. and M. OLMOS, Northrop Grumman Space Systems				
11:00 a.m. AIAA-Defense2025-9102 **Mach 25+ Strategic Systems Flight Testing with Recoverable Commercial Space Reentry Vehicles** M. Pandian, M. Kulakhmetov, Varda Space Industries, El Segundo, CA; A. Rao, E. Vaughan, V. Murray, Air Force Research Laboratory, Space Vehicles Directorate, Kirtland AFB, NM; D. McFarland, Varda Space Industries, El Segundo, CA				

Thursday, 17 April 2025		
LUNCH-03 12:00 - 1:00 p.m.	Lunch Available	Kossiakoff Center Dining Room

Thursday, 17 April 2025				
AMD-01	Air & Missile Defense			Parsons Auditorium
Chaired by: R. GAMBLE, Canvas Inc LLC and D. FOX, Lockheed Martin Missiles and Fire Control				
1:00 p.m. AIAA-Defense2025-9103 **Checkmate: Leveraging Offensive-Defensive Analysis and Design Competition to Outpace the Adversary** K. Phillips, M. Galfond, J. Barton, C. Cooper, N. Fezie, C. Merriman, Johns Hopkins University Applied Physics Laboratory, Laurel, MD; et al.	1:30 p.m. AIAA-Defense2025-9104 **Continued Analysis of Missile Intercept Lethality Against TBM Threats and Resulting Debris Fall** M. Harmon, Lockheed Martin Missiles and Fire Control, Dallas, TX	2:00 p.m. AIAA-Defense2025-9105 **High-Fidelity Advanced Threat Modeling for Non-Kinetic Defeat** J. Morgan, W. Carter, M. Cerasoli, D. Ortiz, N. Testa, D. Yon, Johns Hopkins University Applied Physics Laboratory, Laurel, MD; et al.	2:30 p.m. AIAA-Defense2025-9106 **Overview and Status of the TTAS Aero-Optical Capability: TTAS-AO** W. Coirier, Kratos Defense and Rocket Support Services, Huntsville, AL	3:00 p.m. AIAA-Defense2025-9107 **Missile Defense Deployment Optimization via a Hidden Gene Genetic Algorithm** A. Gabhart, J. Grant, P. Colvert, Verity Integrated Systems, Inc., Huntsville, AL

Thursday, 17 April 2025				
DE-04	Digital Acquisition/MBSE			Classroom 7/8
Chaired by: M. BELISLE, Northrop Grumman Mission Systems and D. ALLISON, Anduril Industries				
1:00 p.m. AIAA-Defense2025-9108 **Ensuring the Security of Advanced Manufacturing Technology in Aerospace and Defense** C. Knutson, Department of Defense, Fort Meade, MD; G. Ciocarlie, CyManII, San Antonio, TX	1:30 p.m. AIAA-Defense2025-9109 **Enabling MBSE & Simulation for SOPs Through Generative AI** A. Abrari, SPEC Innovations, Manassas, VA	2:00 p.m. AIAA-Defense2025-9110 **Integrating AUVSI Events to Cloud-Based Tools and SE Principles** D. Galarza, SPEC Innovations, Manassas, VA		

Thursday, 17 April 2025				
GNC-04	Guidance Navigation and Control II			Classroom 3/4
Chaired by: M. NIESTROY, Lockheed Martin Aeronautics				
1:00 p.m. AIAA-Defense2025-9111 **Coordinated Multi-Agent Optimal Guidance with Reinforcement Learning** S. Jensen, K. Williams, K. Williams, J. Pagan, D. Crowder, C. Llanes, Sandia National Laboratories, Albuquerque, NM; et al.	1:30 p.m. AIAA-Defense2025-9112 **Collaborative Guidance for Guaranteed Capture of Maneuvering Threats** P. Rivera, Johns Hopkins University Applied Physics Laboratory, Laurel, MD	2:00 p.m. AIAA-Defense2025-9113 **Desensitized Optimal Homing** G. Bennett, S. Jensen, Sandia National Laboratories, Albuquerque, NM		

Thursday, 17 April 2025				
HYTASP-04	HYTASP Special Session: Very Low Earth Orbit (vLEO) Application			Auditorium
Chaired by: K. GOULD, MIT Lincoln Laboratory and C. REYNOLDS, Lockheed Martin Space Systems				
1:00 p.m. AIAA-Defense2025-9114 **Current Activities and Enabling Technologies To Operate in Very Low Earth Orbits** J. John, M. Zuber, J. Abraham, W. Schlei, S. Albert, Johns Hopkins University Applied Physics Laboratory, Laurel, MD	1:30 p.m. AIAA-Defense2025-9115 **Assessing an Air-Breathing Electric Propulsion System: A Simulation Framework** A. Raisanen, J. Taylor, A. Faust, J. Higginson, M. Zuber, Johns Hopkins University Applied Physics Laboratory, Laurel, MD	2:00 p.m. AIAA-Defense2025-9116 **Aerodynamic Design for Very Low Earth Orbit** M. Jones, S. Spreizer, L. Melander, C. James, S. Adam, Massachusetts Institute of Technology Lincoln Laboratory, Lexington, MA	2:30 p.m. AIAA-Defense2025-9117 **Science and Technology Development Towards Operationalizing vLEO Panel Discussion** M. Zuber, Johns Hopkins University Applied Physics Laboratory, Laurel, MD; I. Boyd, Center for National Security Initiatives, Boulder, CO; S. Shepard, Lockheed Martin Corporation Aerospace and Defense, Bethesda, MD; S. Swithenbank, Defense Advanced Research Projects Agency, Arlington, VA	

Thursday, 17 April 2025				
TAC-01	Tactical Missiles			Classroom 5/6
Chaired by: M. FRIEDLANDER, L3Harris Technologies Inc and E. DIMAS, L3Harris/Aerojet Rocketdyne				
1:00 p.m. AIAA-Defense2025-9118 **Development and Flight Test Validation of a Low-Cost Technology Demonstrator** D. Pierce, Naval Postgraduate School Graduate School of Engineering and Applied Sciences, Monterey, CA	1:30 p.m. AIAA-Defense2025-9119 **Foreign Artillery: Country 1** W. Wallace, US Department of Defense, Charlottesville, VA	2:00 p.m. AIAA-Defense2025-9120 **Foreign Artillery: Country 2** W. Wallace, US Department of Defense, Charlottesville, VA	2:30 p.m. AIAA-Defense2025-9121 **Foreign Artillery: Country 3** W. Wallace, US Department of Defense, Charlottesville, VA	3:00 p.m. AIAA-Defense2025-9122 **Foreign Artillery: Country 4** W. Wallace, US Department of Defense, Charlottesville, VA

Thursday, 17 April 2025				
SUR-01	Survivability			Classroom 7/8
Chaired by: D. ALLISON, Anduril Industries and M. BELISLE, Northrop Grumman Mission Systems				
2:30 p.m. AIAA-Defense2025-9123 **Growth Mechanisms of Damaged Thermal Protection System Materials** I. Boyd, N. Campbell, University of Colorado Boulder, Boulder, CO; Y. Rhim, S. Slingluff, Johns Hopkins University Applied Physics Laboratory, Laurel, MD	3:00 p.m. AIAA-Defense2025-9124 **Low RCS sUAS Design and Flight Testing** T. Fields, A. Chance, L. Becker, University of Missouri-Kansas City, Kansas City, MO			

Thursday, 17 April 2025		
NET-06 3:30 - 4:00 p.m.	Networking Coffee Break	Kossiakoff Center Dining Room

Thursday, 17 April 2025		
KEY-08 4:00 - 5:30 p.m.	Keynote Panel: Combatant Commands	Auditorium

Moderator: **Jordan Feidler**, General Manager, Pentagon and Multi-Domain Division, The Aerospace Corporation

Panelists:

David Denhard
Chief Scientist and Technical Advisor
U.S. Space Command

Martin Lindsey
Science and Technology Division Chief (J85)
U.S. Indo-Pacific Command

Thursday, 17 April 2025		
KEY-09 5:30 - 6:15 p.m.	Keynote	Auditorium

Speaker:

RADM Michael Donnelly, USN
Director, Air Warfare Division, N98
Office of the Chief of Naval Operations

Friday

Friday, 18 April 2025		
BRK-04 7:30 - 8:00 a.m.	Continental Breakfast	Kossiakoff Center Dining Room

Friday, 18 April 2025		
KEY-10 8:00 - 9:30 a.m.	Keynote Panel: Lessons Learned from Recent Conflicts	Auditorium

Moderator: **Bryan Clark**, Senior Fellow and Director, Center for Defense Concepts and Technology, Hudson Institute

Panelists:

Gillian Bussey
Deputy Chief Science Officer
U.S. Space Force

CAPT Quinton Packard, USN
U.S. Navy Military Fellow
CSIS

Maj Gen James E. Smith, USSF
Vice Director for Joint Force Development
The Joint Staff

Friday, 18 April 2025		
NET-07 9:30 - 10:00 a.m.	Networking Coffee Break	Kossiakoff Center Dining Room

Friday, 18 April 2025				
HYTASP-05	High-Maneuverability and Hypersonic Systems and Technologies II			Auditorium
Chaired by: C. REYNOLDS, Lockheed Martin Space Systems and K. GOULD, MIT Lincoln Laboratory				
10:00 a.m. AIAA-Defense2025-9125 **Space Weather impacts to Operationalize Very Low Earth Orbits** C. Cantrall, M. Zuber, L. Paxton, P. Dandenault, Y. Zhang, R. Mesquita, Johns Hopkins University Applied Physics Laboratory, Laurel, MD; et al.	10:30 a.m. AIAA-Defense2025-9126 **Integrated Fluid – Electromagnetic Toolset for Hypersonic Wake Simulations: Validation using Archival Data from the Classified Literature** G. Andrews, A. Hodges, Massachusetts Institute of Technology Lincoln Laboratory, Lexington, MA	11:00 a.m. AIAA-Defense2025-9127 **Towards Real-Time High-Fidelity Trajectory Generation for Survivable Hypersonic Missions** A. Mazumdar, Sandia National Laboratories, Albuquerque, NM; T. Matteson, B. Wampler, S. Golembeski, C. Bossard, Georgia Institute of Technology, Atlanta, GA; A. Forbes, Georgia Institute of Technology Research Institute, Atlanta, GA; et al.	11:30 a.m. AIAA-Defense2025-9128 **Analysis of a Small Wide-Field-of-View (WFOV) Seeker for Hypersonic Defense** B. Barquest, S. Knapp, J. McIntire, L. Urbano, Massachusetts Institute of Technology Lincoln Laboratory, Lexington, MA	12:00 p.m. AIAA-Defense2025-9129 **Thermally Aware Estimation and Guidance** A. Mazumdar, K. Casper, E. Dreyer, R. Wagnild, L. McDivitt, Sandia National Laboratories, Albuquerque, NM; T. Matteson, Georgia Institute of Technology, Atlanta, GA; et al.

Friday, 18 April 2025				
SPMS-05	System Performance Modeling and Simulation V			Classroom 7/8
Chaired by: S. BABA, Raytheon and W. BOORD, Boord Engineering, Sciences and Technology				
10:00 a.m. AIAA-Defense2025-9130 **Guidelines for Sampling Selection in Turbulence Simulations Using Wave Optics** C. Kwan, E. Wanzek, E. Vacek, S. Park, E. Groch, Johns Hopkins University Applied Physics Laboratory, Laurel, MD	10:30 a.m. AIAA-Defense2025-9131 **Optimal Aircraft Mission Management Using Direct Transcription and Nonlinear Programming** R. Wenzel, Lone Star Analysis, Addison, TX	11:00 a.m. AIAA-Defense2025-9132 **Reduced Order Model of the Jet Interaction Force on the Basic Finner** P. Munday, J. Goble, Leidos Inc, Eglin AFB, FL	11:30 a.m. AIAA-Defense2025-9133 **Trajectory, Hypersonic Flow, and Electromagnetic Analysis for a Notional Flight Test** R. Adelgren, A. Groteluesch, L. Freeman, M. Amrhein, M. Matamales, C. Parden, Arcfield, Chantilly, VA; et al.	12:00 p.m. AIAA-Defense2025-9134 **MUSCAT – A Model-Based Testbed for Predicting Sensor Performance in Detecting UAS** A. Raz, M. Hieb, George Mason University College of Engineering and Computing, Fairfax, VA

Friday, 18 April 2025				
TE-05	Test & Evaluation V			Classroom 5/6
Chaired by: W. LONDENBERG, L3Harris Technologies and R. MACDERMOTT, Air Force Institute of Technology				
10:00 a.m. AIAA-Defense2025-9135 **An Overview of Target Characterization for Penetration Experiments** S. Ruflin, D. Wentzel, S. Ramsey, R. Baty, C. Spawn, Los Alamos National Laboratory, Los Alamos, NM	10:30 a.m. AIAA-Defense2025-9136 **Material Selection and Modeling Efforts for Target Penetration Experiments** E. Rougier, L. Frash, M. Meng, E. Bryant, A. Padilla, K. Bennett, Los Alamos National Laboratory, Los Alamos, NM	11:00 a.m. AIAA-Defense2025-9137 **Missile Material Erosion by Hypervelocity Micro Particle Impacts** J. Moreno, M. Shaeffer, K. Ramesh, Johns Hopkins University, Baltimore, MD; S. Slingluff, Y. Rhim, D. Brown, Johns Hopkins University Applied Physics Laboratory, Laurel, MD	11:30 a.m. AIAA-Defense2025-9138 **Evaluation of Unsteady PSP Measurements on the AGARD-C Model in AEDC PWT 16T** M. Nelson, C. Morris, M. Sellers, Arnold Engineering Development Complex, Arnold AFB, TN	

Friday, 18 April 2025				
WSH-01	Weapon Systems History and Lessons Learned			Classroom 3/4
Chaired by: M. FRIEDLANDER, L3Harris Technologies Inc				
10:00 a.m. AIAA-Defense2025-9139 **LEAPing to Interceptor Success: Transition of LEAP and ASAS Technology Development Programs to Missile Defense Production SM-3 SDACS and TSRM** E. Lato, M. Stransky, D. Weber, Northrop Grumman Corp, Fall Church, VA	10:30 a.m. AIAA-Defense2025-9140 **Development History of the Javelin Propulsion System.** A. Pollard, Lockheed Martin Missiles and Fire Control Orlando, Orlando, FL	11:00 a.m. AIAA-Defense2025-9141 **Lessons Learned on the Road to Fielding Hypersonic Strike Weapons** M. White, WhiteAero, LLC, Ocean View, DE		

PROCEEDINGS AND JOURNAL ARTICLES

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