RECENT ADVANCES IN AI FOR NATIONAL SECURITY

7th RAAINS Workshop:
AI at the Front Line

AGENDA

Monday, 23 March 2026

Pre-Workshop Courses and Autonomy Expo	
1200 Check-In/To-Go Lunch	
1300 **Track A: Courses**	**Track B: Autonomy Expo (CUI)**
AI System Architecture and Deployment Guidelines *Dave Martinez, MIT LL*	**Autonomy Al Fresco** *Eric Cristofalo, MIT LL*
Safe Reinforcement Learning for Autonomous Systems *Trevor Ashley, MIT LL*	**Tactical Navigation (TNAV)** *Luis Alvarez, MIT LL*
Operator-Focused Explainable AI: From Concept to Comparison to Deployment *Ngaire Underhill, Izzy Hurley, Melanie Platt, Harry Li, Erfaun Noorani, Daniel Stabile, Edward Kao, MIT LL*	**Autonomous Mobility through Intelligent Collaboration (AMIC)** *Dan Stoianovici, MIT LL*
A Practical Guide to Applied Generative AI *Pooya Khorrami, Evan Young, Charlie Dagli, Kenneth Alperin, Trang Nguyen, Ashok Kumar, MIT LL*	**Scalable Heterogeneous Autonomy for Resilient Coordination (SHARC)** *Brendan Long, MIT LL*
Hands-On Amazon Web Services (AWS) for AI *Brian McCarthy, Kwadwo Ankrah-Kusi, AWS*	**Static Robot Displays**

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Tuesday, 24 March 2026

Generative and Agentic AI		
0800	Check-In/Continental Breakfast	
0900	Workshop Overview and Welcome	*Jaime Peña, Ho Chit Siu, MIT LL*
0910	Opening Remarks	*Melissa G. Choi, Director, MIT LL* *Heidi Perry, Chief Technology Officer, MIT LL*
0915	Keynote	*Frank Kendall, 26th Secretary of the U.S. Air Force*
1015	Networking Break	

Session 2-1: Innovations in Generative and Agentic AI		
1030	Session Introduction	*Charlotte Shabarekh, MIT LL*
1035	Enhancing Mission Readiness with Automated Assessments	*Rachel Amey, Army Research Institute*
1055	Open-World Reasoning for Army Autonomous Heterogeneous Systems	*Celso De Melo, U.S. Army DEVCOM*
1115	AI Benchmarks for National Security	*Glenn Parham, GovBench*
1135	Lunch	

Session 2-2: Operational Use of Generative and Agentic AI		
1235	Session Introduction	*Erika Mackin, MIT LL*
1240	Operationalizing SOUTHCOM Data through Natural Language Processing and Large Language Models	*Jason Schoch, US SOUTHCOM*
1300	Enabling Secure and Scalable Evaluation of Generative AI Models for Performance and Trustworthiness Tradeoffs	*Swaroop Vattam, Michael Yee, MIT LL*
1320	Generating Synthetic Patients in Support of Mass Casualty Exercises	*Cindy Engholm, Yan Glina, MIT LL*
1340	Networking Break	

Session 2-3: Human–AI Integration		
1400	Session Introduction	*Steve Gomez, MIT LL*
1405	Field Artificial Intelligence Triage	*Kevin Brady, MIT LL*
1425	Debrief Engine to Enhance Mental Model Alignment with AI Teammates	*Izzy Hurley, Melanie Platt, MIT LL*
1445	Human-Agent Teaming Capabilities for Cyber Operations	*Harry Li, MIT LL*

Agenda subject to change. Please refer to the RAAINS website for the latest information.

AGENDA

Tuesday, 24 March 2026, continued

1505	Networking Break	
1525	**Poster Session Lightning Talks**	
	Session Introduction	*Heather Grebe, Cuyler O'Brien, MIT LL*
	Human-Machine Teaming with Scene Graphs: LLM Tool Agents for User Interaction	*Laura Niss, MIT LL*
	CHIMERA: Chemical Indicator Materials Realized by AI	*Richard Kingsborough, Lin Li, MIT LL*
	Author Identification in the Age of LLMs: Native Language and Synthetic Text Identification	*Kenneth Alperin, Adaku Uchendu, MIT LL*
	NITMRE: Incorporating AI into Military Chat Operations	*Courtland VanDam, Leslie Shing, MIT LL*
	AI-Enhanced Interference Rejection	*Rahul Jain, MIT LL*
	Guardian Autonomy for Safe Decision Making	*Jaime Peña, Maj Dan Durbin, MIT LL*
	Efficient Neural Networks for Vessel Detection in Portable Ultrasound Guided Procedures	*Mateusz Wolak, MIT LL*
	Radiology Foundation Model Development to Accelerate Medical Image Interpretation for Field Forward Care	*Lars Gjesteby, MIT LL*
	Modular Electronic Protection with AI/ML	*Keith Forsythe, MIT LL*
	Poster Session Wrap-Up	*Heather Grebe, Cuyler O'Brien, MIT LL*
1630	**Poster Session and Networking Reception (Cafeteria)**	

AGENDA

Wednesday, 25 March 2026

Robotics and Autonomy					
Session 3-1A: Operational Picture (Auditorium | Secret)			**Session 3-1B: Cross-Sector Panel (S2-180 | Unclassified)**		
0800	Check-In/Continental Breakfast		0800	Check-In/Continental Breakfast	
0900	Session Introduction *Ben Price, MIT LL*		0900	Session Introduction *Erfaun Noorani, MIT LL*	
0910	Keynote Introduction *Louis Musinski, MIT LL*		0905	Panel Introduction *Trevor Ashley, MIT LL*	
0915	Keynote *Col Justin Gamel, Director, Battle Lab, Ninth Air Force, Air Forces Central*		0910	Cross-Sector Panel *Austin Gray, Bluewater Autonomy* *Scott Van Broekhoven, MIT LL* *Lorin Selby, U.S. Navy (ret.)* *Moderator. Trevor Ashley, MIT LL*	
0945	Feature Introduction *Louis Musinski, MIT LL*				
0950	Featured Talk *Col Ryan "Dingo" Simms, USAFE*				
1020	Networking Break		1010	Networking Break	
Session 3-2: Contested PNT, Control, and Maneuver					
1035	Session Introduction		*Andrew Heier, MIT LL*		
1040	Scalable Visual Global Localization for Multi-Agent Teams		*Jon How, MIT*		
1100	Integrating AI/ML Capabilities into Alt-PNT Systems		*Ted Steiner, Draper*		
1120	Ground Autonomy in Contested and Comms Denied Battlefields		*Jon Hastie, Forterra*		
1140	Lunch				
Session 3-3: Battlefield ISR, Awareness, and Reasoning					
1240	Session Introduction		*Andrew Schoer, MIT LL*		
1245	Leveraging Cloud Based Infrastructure to Deliver AI to the Edge		*James McGee, UWDC*		
1305	Cooperative Underwater Navigation and Recognition		*Madeline Miller, MIT LL*		
1325	Scalable and Intelligent Command of Multi-Domain Autonomous Systems		*Zack Serlin, HavocAI*		
1345	Networking Break				
Session 3-4: Multi-Agent Systems and Human Control					
1405	Session Introduction		*Amy Fang, MIT LL*		
1410	Swarming Autonomy Initiative at Lincoln Laboratory		*Max Merfeld, MIT LL*		
1430	Multi-Robot Sliding Mode Autonomy (MRsMA)		*Matt Travers, CMU*		
1450	Neurosymbolic Strategies for Multi-Agent Coordination		*Alberto Speranzon, Lockheed Martin*		
1510	Multi-Agent Systems for Aerial and Space-Based Sensing		*Hamsa Balakrishnan, MIT*		
1530	Robotics and Autonomy Day Wrap-Up		*Rob Frei, Erfaun Noorani, Ben Price, MIT LL*		

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AGENDA

Thursday, 26 March 2026

Track A: Trusted and Assured AI		Track B: Industry (S2-180 | Unclassified | Hybrid)	
Session 4-0A: TS/SCI Keynote		**Session 4-1B: Frontier AI Revolution**	
0800	Check-In/Continental Breakfast	0800	Check-In/Continental Breakfast
0900	Opening Remarks *Kenny Alperin, MIT LL*	0900	Day Remarks and Morning Session Introduction *Sanjeev Mohindra, MIT LL*
0910	Keynote *IC Members*	0910	Mission Advantage: Accelerating DoW Outcomes with AWS AI/ML *Virgil Ennes, Amazon*
		0930	Google AI in Defense *Zahra Najmi, Troy Blanchard, Google*
		0950	Accelerating Novel Discoveries to Rapidly Pivot Supply Chains: Towards Resilient Organic Redox Flow Batteries for Liquid Power *Newman Cheng, Microsoft*
1010	Networking Break	1010	Networking Break
Session 4-1A: AI Red Teaming (SCI Session)		1030	Accelerating Responsible Innovation for Mission Impact *Cody Rutherford, Noblis*
1030	Session Introduction *Chris Connelly, MIT LL*		
1035	Challenges and Opportunities in AI Test and Evaluation: A Mission-Driven Case Study *Jeff Arena, MIT LL*	1050	ConductorOS *Dan Miller, Bradley Zogopoulos, BigBear.ai*
1055	Security Assessments of Open Weight Large Language Models *Ben Miller, MIT LL*		
1115	Beyond the Model: Red-Teaming AI Systems for Trustworthy and Resilient Deployment in Adversarial Landscapes *Deepu Jose, Sandia*	1110	Technology Transfer Pathways at MIT Lincoln Laboratory *Jordan Mizerak, MIT LL*
1135	Lunch	1130	Lunch

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AGENDA

Thursday, 26 March 2026, continued

Session 4-2A: AI Mission Integration (SCI Session)		Session 4-2B: Robotic Platforms and Autonomous Control	
1235	Session Introduction *Michael Chan, MIT LL*	1235	Session Introduction *Max Merfeld, MIT LL*
1240	AERO: Assurance, Evaluation, Robustness, and Onboarding - AI Assurance at Speed *Ryan Hetrick, USCC AI Task Force*	1240	Hivemind for Helicopter Autonomy *Inderraj Singh Grewal, Shield AI*
1300	AI and Command and Control at USEUCOM *COL Bobby Sickler, USEUCOM*	1300	Enabling Collaborative Autonomy: Making Multi-Platform Teamwork a Reality *David Koelle, Charles River Analytics*
		1320	Wide Are the Gates: An Inclusive Approach to Disruptive Swarm Autonomy *Ben Galdo, Sea Machines*
1320	Leveraging Physics Informed Symmetries for Out-of-Band Drone Detection *Joey Botero, MIT LL*	1340	The Last 20% Problem: Verifying and Deploying AI-Generated Software *Peter Morales, Code Metal*
1340	Networking Break	1400	Networking Break

All Tracks: Closing (Auditorium | Unclassified | Hybrid)		
1420	Session Introduction	*Joe Campbell, MIT LL*
1425	Future of AI: Air Force AI Accelerator Panel	*Daniela Rus, MIT CSAIL* *Bob Bond, MIT LL* *Col Scott Ruppel, DAF* *Sanjeev Mohindra, MIT LL* *Moderator: Joe Campbell, MIT LL*
1525	Workshop Closing Remarks	*Heidi Perry, MIT LL*

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