

Tuesday, October 28, 2025

2:30 pm - 2:50 pm

Operationalizing AI-Driven Zero Trust Architectures for Mission Assurance in Contested Environments

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Abstract:

The Indo-Pacific region presents unique operational challenges that demand resilient solutions for secure, multi-domain collaboration in increasingly contested environments. As defense organizations accelerate adoption of artificial intelligence (AI) to enhance decision-making and operational overmatch, integration with robust cybersecurity frameworks such as Zero Trust Architecture (ZTA) is paramount to ensuring mission assurance. Deploying AI-driven capabilities at the tactical edge in disconnected, denied, intermittent, and limited (DDIL) environments requires a meticulous balance between operational agility, cybersecurity assurance, and interoperability across joint and coalition forces.

Rob Bair, leveraging more than 20 years of real-world expertise in government and military operations - including assignments at U.S. Cyber Command, NSA, and the National Security Council - offers a strategic perspective on using Zero Trust principles to secure operational AI systems in resource-constrained and contested domains. This session will explore how adaptive ZTA frameworks, coupled with AI, can enhance threat detection, strengthen decision-making cycles, and mitigate risks across multi-domain operations.

Key topics addressed will include:

- **Secure AI Deployment:** Overcoming cyber and operational risks in DDIL scenarios using ZTA-integrated AI models.
- **Dynamic Interoperability:** Ensuring coalition compatibility while maintaining secure data exchanges and real-time collaboration.
- **Ethical AI Use:** Crafting deployment frameworks that balance operational effectiveness with ethical decision-making in military applications.
- **Scaling Resilience:** Lessons learned from national defense policy to integrate ZTA and AI at scale for enduring mission success regardless of emerging threats.

Attendees will gain actionable insights and strategy recommendations to align cutting-edge AI technologies with ZTA principles, ensuring secure, survivable, and interconnected military operations within the complex Indo-Pacific operational theater.