

Topic	Speaker	Organization	Description	Introduction bio
Application of Video Analytics Through Artificial Intelligence	Keith Riser	US Army, RDECOM CERDEC I2WD, RDER-IWP-II	The future of Video analytics and Artificial Intelligence is intertwined. As we look to apply AI to more areas, we have to be aware of the benefits and caveats associated with viewing AI to the solution to every problem. As AI powered autonomous systems are added into the mix, to DoD will need to be able to trust the accuracy of those systems when mission critical decisions rely upon them.	
Recognizing Faces in the Dark	Dr. Sean Hu	US Army Research Lab	Abstract: This talk will present polarimetric thermal imaging for acquisition of facial signatures in nighttime and low-light conditions, and describe several neural network based approaches that have been developed for matching the acquired polarimetric thermal facial signature against face databases only containing visible spectrum facial imagery. Various thrusts (algorithm development, data collection, sensor maturation, and stakeholder feedback) will be discussed as part of a holistic effort to mature this promising capability into a mature system.	Shuowen “Sean” Hu joined the U.S. Army Research Laboratory (ARL) in 2009, as an electronics engineer in the Image Processing Branch. He has over 45 conference and journal publications – co-authoring a best paper at IEEE WACV 2016 and at WACV 2018, a runner-up best paper at IEEE BTAS 2016, and three of his journal articles have been highlighted in OSA’s “Spotlight on Optics”. His current research focuses on cross-spectrum face recognition as well as on target detection and classification. He holds a B.S. in electrical and computer engineering from Cornell University in and the Ph.D. in electrical and computer engineering from Purdue University.

<p>Super-Resolution Image from low resolution cameras.</p>	<p>Dr. Susan Young</p>	<p>US Army Research Lab</p>	<p>Super-Resolution Image Reconstruction (SRIR) is an image processing/signal processing technology that can improve image resolution from existing sensors without upgrading hardware. Using a very small number of digital input frames, resolution can be doubled or even quadrupled when this software technology is applied. While initially developed for military applications, the possible software technology uses range from home video to law enforcement, security, face recognition, medical imaging, and industrial applications where high-resolution images are desirable from low-resolution cameras.</p>	
<p>Existing cameras and sensors used for enhanced surveillance</p>		<p>Jedvice, LLC</p>	<p>JedEye Improves Security Response with Mobile, Contextual and Intuitive Situational Awareness  JedEye delivers situational awareness directly to field responders in real-time, granting tactical advantage to accelerate and improve response to emergency incidents.  As a solution that bolts-on the existing security infrastructure, JedEye revolutionizes the use of cameras and sensors with full context to facilitate proactive security operations.</p>	<p>Eran Jedwab has 25 years of experience in military service, industry and consulting to government authorities and is an expert in linking technology developers with users of mission critical systems.  He has served as the Chief Technology Officer of the Land Radar Unit at the Israel Defense Forces (IDF), as a Program Manager at the IDF and at the Israeli High-Tech industry, as a consultant to the Israeli Ministry of Defense (MoD) and the IDF. Based on lessons learned gained from his vast field experience, he established Jedvice to deliver the next generation of innovative solutions for the deployment and operation of security systems.</p>

<p>Detection of gases and volatile organic compounds</p>	<p>Dr. Abhishek Motayed</p>	<p>N5 Sensors, Inc.</p>	<p>N5's revolutionary new sensor technology offers detection of a multitude of gases ranging from carbon monoxide, carbon dioxide, nitrogen dioxide, sulfur dioxide to volatile organic compounds. We offer low-power single gas, dual-gas and 4 gas sensor devices in several small footprints, ideal for battery-powered devices, wearables, and connected systems.</p>	
<p>Internet of Things (IOT) - What's the latest and where are we going.</p>	<p>Todd Marks</p>	<p>Mindgrub Technologies</p>	<p>The latest in IOT from physical devices, to home automation, vehicles and smart city initiatives. Learn about electronics, software, sensors, and actuators and how these devices connect the physical world with humans and digital systems. In addition, the efficiency and economic benefits of networked systems, as well as data analysis and reduced human intervention.</p>	
<p>APG Tech Transfer offices opportunities (technology available for transfer)</p>	<p>Tom Mulkern</p>	<p>US Army Research Lab</p>	<p>Tech Transfer opportunities within the Internet of Things and the Army's IoBT</p>	