

# WORKSHOP: Next Generation Sensing and Signal Processing

**PROGRAM MANAGER(S):** James Wilson

**DATE:** Tuesday, October 19, 2021

**TIME:** 3:15pm – 5:30pm

**ROOM NAME:** Kalei Best

## DESCRIPTION

*This workshop will discuss the motivation and challenges with pushing advanced signal processing further into the front end of wireless systems. Focus will be given to the area of passive sensing. The workshop will also publish results from DARPA Artificial Intelligence Exploration (AIE) programs, Signal Processing in Neural Networks (SPINN) and Hyper-Dimensional Data Enabled Neural Networks (HyDDENN), that explore AI-based signal processing and wireless communications for DOD communication as well as commercial 5G/6G wireless applications.*

## AGENDA

<b>3:15pm-3:30pm</b>	<b>DARPA Vision</b> James Wilson, DARPA PM
<b>3:30pm-3:45pm</b>	<b>Government Passive Sensing Needs</b> Tom Dalrymple, Air Force Research Labs
<b>3:45pm-4:00pm</b>	<b>Analog Signal Processing</b> Boris Murmann, Stanford University, Professor
<b>4:00pm-4:15pm</b>	<b>Wideband Passive Coherent Location</b> Jack Holloway, Raytheon Technologies, Director, Advanced Sensor Programs
<b>Afternoon Break: 4:15pm-4:30pm</b>	
<b>4:30pm-4:45pm</b>	<b>End-to-End Autoencoder Communications with Interference Suppression</b> Kemal Davaslioglu, Intelligent Automation Inc., Senior Research Scientist
<b>4:45pm-5:00pm</b>	<b>Embedded Physics-informed AI at the Edge for Communications in Nonstationary Channels and Busy Spectrum</b> Gil Raz, Systems & Technology Research, Chief Scientist
<b>5:00pm-5:15pm</b>	<b>NGMS HD Matched Filter and Edge Supercompute (ESC)</b> Nishant Zachariah, Northrup Grumman, Program Manager
<b>5:15pm-5:30pm</b>	<b>Round Table Discussion</b> with audience participation
<b>Workshops Conclude at 5:30pm</b>	

## QUESTIONS

Please contact Greg Jones for more information following this workshop at [gregory.jones.ctr@arpa.mil](mailto:gregory.jones.ctr@arpa.mil).