**Radar Surface Moving Target Indication**
DEF-3528P

<u>**Agenda**</u>
SMTI Radar Fundamentals
- Radar fundamentals
- SMTI operation and system examples
- SMTI processing, exploitation, and dissemination (PED) overview
- STANAG 4607

SMTI Core Signal Processing
- Detection
- Waveforms
- Doppler filtering
- Antenna beamforming

SMTI Radar Signals
- Conventional targets
- Dismount targets
- Clutter characteristics and models
- High range resolution and other target characteristics

Key Signal Processing Methods
- Space-time adaptive processing (STAP)
- Reduced-dimension and reduced-rank STAP
- Constant false alarm rate processing (CFAR)
- Angle/Doppler estimation

Other SMTI Operation Details
- SMTI metrics
- Ground vehicle surveillance and examples
- Dismount detection
- Target recognition

SMTI Processing Architecture
- Practical STAP implementation
- Detection in heterogeneous clutter
- Surface moving target tracking
- End-to-end processing chain

Contemporary Topics
- Synthetic aperture radar (SAR)-GMTI and long dwell processing
- Change detection
- Distributed radar
- MIMO radar