



"Peering into the Crystal Ball - New Trends in Defence and Security IT"

Programme Overview

Pre-Session Keynotes

Session 1: *Data driven Defence – New trends in the operational Environment*

Serving the operational needs at the strategic and the tactical level of:

- Improved situational awareness
- Common Operational Picture
- Increased high precision effects
- Operating within different classification environments simultaneously
- Handling huge amounts of data

the solutions and ideas in the technology area of (*amongst others*)

- Data collection, analytics, and distribution
- Artificial Intelligence
- Electronic ID,
- Sensor technology
- Imaging techniques

may be discussed. Key questions can be:

- How to automate and secure data related processes?
- Will trusted AI help to gain advantages on all levels of operations?
- What new technologies of personal identification can help to speed up processes and secure access?
- How to include more and new types of sensors into meshed systems?
- How to manage and integrate various levels of classification of data?
- How to anticipate actions of adversaries?
- New developments at the man-machine interface?

Session 2: *Digitalisation at the Edge - New trends how to communicate*

Serving the operational needs at the strategic and the tactical level of

- Advanced and robust communications including SatCom
- High readiness and mobility requirements for CIS
- Digitalisation of the battlefield/at the edge
- Multidomain/Joint all domain Command and control
- C4ISR,

the solutions and ideas in the technology area of (*amongst others*)

- 5G and 6G
- Computing at the Edge,
- Combat and hybrid cloud
- Deployable CIS
- Battle Management Systems
- IoT

may be discussed. Key questions can be:

- What will be the operational benefit of 5G and ultimately 6G for military needs?
- How can distributed systems and users on the battlefield be connected under adversarial conditions of the EM spectrum?
- Advanced use of Space-based systems for communications and situational awareness
- Secure and efficient models for cloud computing at the edge?
- What robust and efficient mobile CIS can be provided?
- How to integrate into or make use of IoT for military operations?

Session 3: *Quantum Technology at the Doorsteps - New trends in computing, cryptography, sensing, etc...*

Serving the operational needs mainly at the strategic level, but perhaps in future also at the tactical level of:

- Advanced cryptography
- Countering stealth technologies
- Securing the supply chain
- Increased computational power,

the solutions and foreseeable developments in the technology area of (*amongst others*)

- Quantum computing
- Quantum cryptography,
- Quantum sensing
- Blockchain

may be discussed. Key questions can be:

- Are there solutions out there for operational use?
- What are the parameters and requirements for quantum computing in the military environment?

- How can blockchain help to secure the supply chain, both for hardware and software?
- Are there other applications for quantum computing in future?
- How to support the transfer from academic research to operational use?

Session 4: Cyber Security or nothing – New trends in Cyber Intelligence, Defence, Protection

Serving the operational needs at the strategic and the tactical level of

- Fighting in the Cyber domain
- Protecting networks against all types of cyber threat
- Including new operational domains like space
- Keeping dominance in information operations
- Defending in hybrid warfare
- Supply chain attacks

the solutions and ideas in the technology area of (*amongst others*)

- Cyber defence against APTs
- Cyber security
- Zero Trust
- Cloud security
- Automated cyber defence
- Artificial Intelligence

may be discussed. Key questions can be:

- How can cyber security be increased while considering human behavior?
- Mission critical cyber security and its support?
- Will the Zero Trust approach work?
- What are weaknesses and protection means of increased cloud engagement?
- Is there a need for AI supported/based cyber defence?