

**Systems Concepts and Integration (SCI) Panel  
SCI-300 Specialists' Meeting on  
'Cyber Physical Security of Defense Systems'  
University of Florida, Research & Engineering Education Facility (REEF)  
8-9 May 2018**

**The SCI-300 Specialists' Meeting is NATO UNCLASSIFIED and  
open to NATO Nations, Australia, Finland and Sweden**

**8 May - Day 1**

**08:10** Registration

**Introductory Remarks**

**08:30** Welcome Ceremony by SCI Panel Chair and Local Host

Dr Ric SCHLEIJPEN, TNO, The Netherlands, Dr Joseph NICHOLS, Edwards AFB CA, United States

**08:45** Introduction to the Challenges of Cyber Physical Security

Mr Alan SHAFFER, NATO STO CSO Director

**09:15** Introduction by the SM Chairman: 'Cyber Physical Security: New Challenges for NATO'

Professor Michael HENSHAW, Loughborough University, United Kingdom

**Session 1: The Intersection between Cyber and Electronic Warfare**

Session Chair: Dr Nicholas LAW, Dstl, United Kingdom

**09:30 1** Sombrero Dynamic Honeynet Defense

Mr Ken F. YU, Mr Daniel SULLIVAN, Dr Edward COLBERT, Army Research Laboratory, United States

**09:55 2** The Merge of Electronic Warfare and Cybersecurity Test

LtCol Dr Jose GUTIERREZ del ARROYO, Edwards AFB CA, United States

**10:20** **Discussion: What R&T Challenges does the Intersection between Cyber and Electronic Warfare pose for SCI Panel?**

**10:45** BREAK

**Session 2: Cyber Effects and Mitigations**

Session Chair: Professor Victor LOBO, Naval Academy, Portugal

**3** **WITHDRAWN: Cyber Warriors and Cyber Readiness Matters**

Major Judson DRESSLER, USAF, United States

**11:15 4** Representing Cyber Effects in Modelling and Simulation

Mr Bharat PATEL, Dstl, United Kingdom

**11:40 5** Pattern-of-Life Modeling Using Data Leakage in Smart Homes

Captain Steven BEYER, Dr Barry MULLINS, Dr Scott GRAHAM, Major Jason BINDEWALD, Air Force Institute of Technology, United States

**12:05** LUNCH

**13:30** **Discussion: What R&T Challenges do Cyber Effects and Mitigations Pose for the SCI Panel?**

**Session 3: Self-protection of Cyber Physical Systems**

Session Chair: Dr Johann DAMBECK, MBDA, Germany

**13:55 6** MIL-STD-1553 Device Characterization using Organic Interface Functionality

Captain John WILLIS, Dr Robert F. MILLS, Dr Scott GRAHAM, LtCol Logan MAILLOUX, Air Force Institute of Technology, United States

- 14:20 7 Next-Generation Anti-Tamper Envelopes for Cyber Physical Defense Systems  
Mr Vincent IMMLER, Mr Johannes OBERMAIER, Mr Matthias HILLER, Mr Georg SIGL, FRAUNHOFER AISEC, Mr Martin KÖNIG, FRAUNHOFER EMFT, Germany
- 14:45 BREAK
- 15:15 8 Stochastic Game for Self-secured Cyber Physical Systems  
Dr Charles KAMHOUA, US Army Research Lab, United States
- 15:40 **Discussion: What R&T Challenges does the Self-protection of Cyber Physical Systems Pose for the SCI Panel?**
- 16:05 **General Discussion about challenges for the SCI Panel that arise from Day 1**  
Professor Michael HENSHAW, SM Chairman
- 16:45 End of Day 1
- 17:00 Reception at Holiday Inn Resort Fort Walton Beach

### 9 May - Day 2

- 08:30 Introduction to Day 2
- 08:40 KEYNOTE SPEECH  
Colonel Bryan CHOI, Commander 96 Cyberspace Test Group, Cyber T&E, United States

#### Session 4: Active Defense of Networks

Session Chair: Mr René EVELEENS, Netherlands Aerospace Centre (NLR), The Netherlands

- 09:00 9 Integration of Cyber Physical Systems into the Large Scale Cyber Defence Exercises - The Locked Shields Example  
Mr Raimo PETERSON, NATO Cooperative Cyber Defence Centre of Excellence Estonia
- 09:25 10 EVE and ADAM - Situation Awareness Tools for NATO CCD COE Cyber Exercises  
Mr Francisco Jesús RUBIO MELON, ISDEFE, Spain, Mr Teemu VÄISÄNEN, VTT Technical Research Centre of Finland Ltd, Finland, Mr Mauno PIHELGAS, NATO Cooperative Cyber Defence Centre of Excellence, Estonia
- 09:50 **Discussion: What R&T Challenges does the Active Defense of Networks pose for the SCI Panel?**
- 10:15 BREAK

#### Session 5: Cyber Risk Assessment of Cyber Physical Systems

Session Chair: Dr Don LEWIS, The Aerospace Corporation, United States

- 10:45 11 Overview of the Risk Based Cyber Mission Assurance Process  
Mr François RHEAUME, DRDC, Canada
- 11:10 12 Assessing the Cyber Risk to Naval Aviation Missions  
Mr Steven B. KERN, Naval Air Systems Command, United States
- 11:35 13 Towards Dynamic Cyber Security Risk Assessment of Military Aircraft  
Mr Theo VERHOOGT, Mr René WIEGERS, Mrs Judith van BRUGGEN-van PUTTEN, Mr Nikita NOSKOV, Mr Piet HOOGEBOOM, Netherlands Aerospace Centre (NLR), The Netherlands
- 12:00 **Discussion: What R&T Challenges does the Cyber Risk Assessments of Cyber Physical Systems Pose for the SCI Panel?**
- 12:25 Summary of Specialists' Meeting by Technical Evaluation Report Writers
- 12:45 Concluding Remarks  
Professor Michael HENSHAW, SM Chairman
- 13:00 LUNCH
- 14:00 Panel Business Meeting resumes
- 16:45 Tour of the Air Force Armament Museum (1 hour)