

Short course
IEMI and Cyber threats for wireless communications

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E6- IEMI threats for wireless communications, detections and protections
2 slots by Chaouki Kasmi
1 slot by Virginie Deniau

The short course given in session E6 is the third part of the short courses given in sessions E4 and E5. This last part of the short course will be dedicated to the solutions which can be envisaged and implemented to detect cyber-attacks in order to protect the communication links. A general background will be presented about intrusion detection systems (IDS) which can be used to monitor networks or systems and detect malicious activity. Then, more specific approaches dedicated to the detection of intentional EM interferences will be presented.

Dr. Chaouki Kasmi is Electromagnetic security researcher at ANSSI where he is working on threats related to spurious compromising emanations (TEMPEST) and intentional electromagnetic interferences (IEMI). Chaouki is giving lectures on EMSEC and cyber-security in French and foreign universities since 2010. Chaouki has also presented his researches in the framework of his PhD in Electronics at numerous national and international conferences including IEEE Conferences on EMC, AMEREM and URSI.

Dr. Virginie Deniau is Researcher in electromagnetic compatibility (EMC) for the French Institute of Science and Technology for Transport, Development, and Networks (IFSTTAR). She conducts works in the field of electromagnetic compatibility (EMC) for land transport. Her research interests include EMC test facilities and methodologies, characterization and modeling of electromagnetic transport environments and the immunity test methodologies for embedded systems. More recently, she started to work in the hardening of land transport systems regarding the cyber-attacks, such electromagnetic attacks. She participated in several national and European projects and she was scientific coordinator of the FP7 project SECRET for SECurity of Railways against Electromagnetic aTtacks. She is also chair of the URSI Committee E (Electromagnetic Interference) for the French section.