Fraunhofer AISEC

Certified Cyber Security Specialist

Online Sessions on Tuesdays, 5:00 – approx. 6:30 pm CEST in Zoom

Time	Content	Lecturer
Oct 17, 2023	Introduction to IT-Security: assets, threats, and security objectives	Prof. Dr. Daniel Loebenberger
Oct 24, 2023	Cryptography (I): Symmetric and asymmetric primitives	Prof. Dr. Daniel Loebenberger
Nov 7, 2023	Cryptography (II): security level, standards and key-sizes	Prof. Dr. Daniel Loebenberger
Nov 14, 2023	Classical Network Security: IP-spoofing, firewalling, SYN-flooding etc.	Prof. Dr. Daniel Loebenberger
Nov 21, 2023	Cryptographic Communication Protocols: Authenticated Key Exchange, TLS, WPA2, and SSH	Prof. Dr. Daniel Loebenberger
Nov 28, 2023	System Security (I): Layer model, attack potential and attack surfaces	Prof. Dr. Daniel Loebenberger
Dec 5, 2023	System Security (II): Authentication, passwords and access control	Prof. Dr. Daniel Loebenberger
Dec 12, 2023	System Security (III): Generating good randomness	Prof. Dr. Daniel Loebenberger
Jan 9, 2024	Development Security: Life-Cycle, principles of secure development	Prof. Dr. Daniel Loebenberger
Jan 16, 2024	Application Security: Data encryption, crypto messanger	Prof. Dr. Daniel Loebenberger
Jan 23, 2024	Security Modelling and Evaluation: A glimpse on Common Criteria	Prof. Dr. Daniel Loebenberger
Jan 30, 2024	Critical Infrastructures: Regulations for high security contexts	Prof. Dr. Daniel Loebenberger

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Hands-On Session in Garching bei München

Feb 7, 2024	Content	Lecturer
	Intro: Memory Management, Assembler basics, Using a Debugger, Exercise: Debugging warm up	Prof. Dr. Daniel Loebenberger
	Buffer Overflows 1: Writing a first exploit Exercise: Writing exploit	Prof. Dr. Daniel Loebenberger
Coffee break		
	Buffer Overflows 1: Writing a first exploit Exercise: Writing exploit	Prof. Dr. Daniel Loebenberger
Lunch break		
	Buffer Overflows 2: Executing Shellcode Exercise: Writing exploit	Prof. Dr. Daniel Loebenberger
	Buffer Overflows 2: Executing Shellcode Exercise: Writing exploit	Prof. Dr. Daniel Loebenberger
Coffee break		
	Defense Mechanisms 1: ASLR, ESP, Stack Protector	Prof. Dr. Daniel Loebenberger
	Exploits beyond Stack overflows	Prof. Dr. Daniel Loebenberger