



The World's Leading Automotive  
Cyber Security Conference



The Venue

We are looking forward to welcoming you in Stuttgart, Germany!  
The 17th escar conference will take place at the International Congresscenter Stuttgart (Messe Stuttgart):

Landesmesse Stuttgart GmbH  
ICS International Congresscenter Stuttgart  
Messepiazza 1, 70629 Stuttgart, Germany



europe.escar.info



Tickets

Student (age limit: 27 years)	369,00 EUR*
Regular	949,00 EUR*
	*plus 19% VAT

Each Ticket includes:

- Get together with welcome drink and snack
- Social program: Airport Tour
- Conference dinner at the Mövenpick hotel
- Lunch & coffee breaks
- Conference proceedings

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Contact

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Organiser:

isits AG International School of IT Security  
Huestr. 30, 44787 Bochum, Germany

Sponsors



17<sup>th</sup> escar Europe

escar – Embedded Security in Cars

19<sup>th</sup> and 20<sup>th</sup> of November 2019  
Stuttgart, Germany



Main Topics

- 2 keynote speakers, 3 invited talks
- More than 10 reviewed presentations & poster sessions
- For the first time in escar history there will be 2 workshops & 2 tutorials
- Exchange of the most recent insights on Automotive Cyber Security
- Connect with international experts from industry, academia and government

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Top Speaker



Amit Elazari Bar On  
Intel Corporation  
UC Berkeley's School of Information Master



Sebastian Faust  
Technical University of Darmstadt



Jonathan Petit  
Qualcomm Technologies, Inc.



Timo Winkelvos  
Volkswagen AG



Albert Held  
Daimler AG

Organizer:



# Conference Program

Tuesday, November 19<sup>th</sup>, 2019

08:30 – 09:00 Registration Workshop Participants

09:00 – 12:00 Workshops, Tutorials, Social Event

12:00 – 13:30 Lunch

**Official begin of 17<sup>th</sup> escar Europe conference**

13:30 – 13:45 **Chairman's welcome and opening address**

13:45 – 14:30 **Keynote**

**Legal Aspects of Vulnerability Disclosure and Bug Bounties and Regulatory Trends**  
Amit Elazari Bar On

**Session I – Security Management and Post-Quantum Crypto**

14:30 – 15:00 **Establishing an Automotive Cyber Defense Center**  
Falk Langer, Fabian Schueppel and Lukas Stahlbock

15:00 – 15:30 **Post-Quantum Key Exchange Mechanism for Safety Critical Systems**  
Tim Fritzmann, Jonas Vith and Johanna Sepulveda

15:30 – 16:15 Coffee Break

16:15 – 16:45 **Invited talk**

**Blockchain Technology: Hope, Hype, High-Tech**  
Sebastian Faust

**Session II – Intrusion and Misbehavior Detection**

16:45 – 17:15 **Application-aware Intrusion Detection: A Systematic Literature Review and Implications for Automotive Systems**  
David Schubert, Hendrik Eikerling and Jörg Holtmann

17:15 – 17:45 **Deterministic Sybil Attack Exclusion in Cooperative-Intelligent Transportation Systems**  
Jan Trauernicht and Norbert Bißmeyer

17:45 – 18:15 **Intrusion Detection and Prevention System for FlexRay against Spoofed Frame Injection**  
Takeshi Kishikawa, Ryo Hirano, Yoshihiro Ujiie, Tomoyuki Haga, Hideki Matsushima, Kazuya Fujimura and Jun Anzai

19:30 – ∞ **Dinner at**

**MÖVENPICK HOTEL STUTTGART AIRPORT**  
Flughafenstraße 50  
70629 Stuttgart  
Germany

*Please note that attending dinner requires a pre-reservation.*



**Social Program: Enjoy an exclusive airport tour at the Stuttgart Airport!**

Taking place: November 19<sup>th</sup>, 10:00 am – 12:00 am

The social program is held parallel to our workshops and tutorials and is not overlapping with the presentations. For more information please visit [europe.escar.info](http://europe.escar.info)

Wednesday, November 20<sup>th</sup> 2019

09:00 – 09:45 **Keynote**

**Automated Driving Security**  
Jonathan Petit

**Session III – Safety and Security**

09:45 – 10:15 **Safety Goals in Vehicle Security Analyses – A Method to Assess Malicious Attacks with Safety Impact**  
David Förster, Claudia Loderhose, Thomas Bruckschlägl and Franziska Wiemer

10:15 – 10:45 **The Challenge of being Safe and Secure – Designing Process Interfaces between Safety and Security**  
Joachim Graf, Juergen Klarmann, Claudia Loderhose and Franziska Wiemer

10:45 – 11:30 Coffee Break

11:30 – 12:00 **Invited talk**

**Volkswagen Vehicle Key Management System – Key to Cryptography in Cars: Challenges, Requirements, Solution**  
Timo Winkelvos

**Session IV – Securing Onboard Communication**

12:00 – 12:30 **Introducing HSM-based secure on-board communication in vehicles – Challenges and Lessons Learned**  
Frederic Stumpf, Christopher Pohl, Daniel Hoettges and Tobias Klein

12:30 – 13:00 **Assessment and Guidance for AUTOSAR Secure Onboard Communication Application**  
David Tromba and Julia Huber

13:00 – 14:30 Lunch & Poster & Exhibition

14:30 – 15:00 **Invited talk**

**UN Regulation Automotive Cybersecurity**  
Albert Held

**Session V – (In-)Secure Boot**

15:00 – 15:30 **Secure Boot Revisited: Challenges for Secure Implementations in the Automotive Domain**  
Liron Kaneti, Steffen Sanwald, Marc Stöttinger and Martin Böhner

15:30 – 16:00 **Insecure Boot**  
Andrea Barisani

16:00 – 16:15 Outlook and closing remarks by the Chairman

## Additional Workshops and Tutorials

Taking place November 19<sup>th</sup>, 09:00 am – 12:00 am

Our workshops and tutorials are held parallel to our social program and are not overlapping with the presentations.

**Workshop 1: Practical In-Vehicle Communications Hacking**  
Henrik Ferdinand Nölscher, Javier Vazquez

**Workshop 2: Hands on Cryptography – A Practical Tutorial to Encryption, Digital Signatures, and Certificates**  
Prof. Dr.-Ing. Jan Pelzl

**Tutorial 1: E/E Security in Cars**  
Ramona Jung

**Tutorial 2: Implementing Cybersecurity Management Systems**  
Jan-Felix van Dam & Moritz Minzlaff