

MERT D. PESÉ

Clemson University | Assistant Professor

215 McAdams Hall, Clemson, SC 29631

mpese@clemson.edu | www.mpese.com

EDUCATION

University of Michigan, Ann Arbor

Ph.D in Computer Science & Engineering advised by Prof. Kang Shin

Ann Arbor, MI

Jan. 2017–Aug. 2022

Technical University Munich

M.S. in Electrical Engineering and Information Technology (*Highest Distinctions*)

Munich, Germany

Dec. 2016

Technical University Munich

B.S. in Computer Science

Munich, Germany

Aug. 2015

Technical University Munich

B.S. in Electrical Engineering and Information Technology (*Highest Distinctions*)

Munich, Germany

Jul. 2014

EMPLOYMENT

Clemson University

Assistant Professor, School of Computing

Clemson, SC

Aug. 2022–Present

University of Michigan

Graduate Research Assistant, Real-Time Computing Laboratory

Ann Arbor, MI

Jan. 2017–Aug. 2022

CISPA Helmholtz Center for Information Security

Visiting Researcher, Secure Cyber-Physical Systems Group & Trusted Systems Group

Saarbrücken, Germany

Jun. 2021–Aug. 2021

General Motors

Cybersecurity Research Intern, Electrical & Controls Systems Architecture Team

Warren, MI

Jun. 2020–Aug. 2020

Harman International

Product Cybersecurity Intern, Automotive Product Security

Novi, MI

May 2019–Aug. 2019

General Motors

Cybersecurity Research Intern, Electrical & Controls Systems Architecture Team

Warren, MI

Jun. 2018–Aug. 2018

Audi

Researcher, Audi Electronics Venture

Ingolstadt, Germany

Apr. 2016–Oct. 2016

Audi

Cybersecurity Intern, Audi Electronics Venture

Ingolstadt, Germany

Jan. 2016–Mar. 2016

University of Michigan Transportation Research Institute

Automotive Security Intern, Automotive Cybersecurity & Privacy Group

Ann Arbor, MI

Sep. 2015–Dec. 2015

Bertrandt

Automotive Ethernet Intern, In-Vehicle Networks and Gateway Team

Ingolstadt, Germany

Mar. 2015–Aug. 2015

BFFT

Embedded Software Design Intern, Vehicle Interface Development Team

Ingolstadt, Germany

Aug. 2013–Oct. 2013

Panasonic

Electrical Engineering Intern, Relays Testing Laboratory

Pfaffenhofen, Germany

Aug. 2012–Sep. 2012

PUBLICATIONS

Conference Proceedings

- [1] **Mert D. Pesé**, Dongyao Chen, C. Andrés Campos, Alice Ying, Troy Stacer and Kang G. Shin. “DETROIT: Data Collection, Translation and Sharing for Rapid Vehicular App Development,” *19th Annual IEEE International Conference on Sensing, Communication, and Networking (SECON '22)*, Sep. 2022.
- [2] **Mert D. Pesé**, Jay W. Schauer, Junhui Li and Kang G. Shin. “S2-CAN: Sufficiently Secure Controller Area Network,” *Annual Computer Security Applications Conference 2021 (ACSAC'21)*, Dec. 2021.
- [3] **Mert D. Pesé**, Xiaoying Pu, and Kang G. Shin. “SPy: Car Steering Reveals Your Trip Route!,” *Proceedings on Privacy Enhancing Technologies 2020 (PETS'20)*, July 2020.
- [4] **Mert D. Pesé**, Kang G. Shin, Josiah Bruner, and Amy Chu, “Security Analysis of Android Automotive,” *SAE Technical Paper 2020-01-1295 (WCX'20)*, Apr. 2020.
- [5] **Mert D. Pesé**, Troy Stacer, C. Andrés Campos, Eric Newberry, Dongyao Chen, and Kang G. Shin. “LibreCAN: Automated CAN Message Translator,” *2019 ACM SIGSAC Conference on Computer and Communications Security (CCS '19)*, Nov. 2019.
- [6] **Mert D. Pesé** and Kang G. Shin, “Survey of Automotive Privacy Regulations and Privacy-Related Attacks,” *SAE Technical Paper 2019-01-0479, 2019 (WCX'19)*, Mar. 2019.
- [7] Armin Wasicek, **Mert D. Pesé**, Andre Weimerskirch, Liza Burakova and Karan Singh, “Context-aware Intrusion Detection in Automotive Control Systems,” *5th escar USA (escar'17)*, Jun. 2017. (Acceptance rate: $13/49 = 26.5\%$)
- [8] **Mert D. Pesé**, Karsten Schmidt and Harald Zweck, “Hardware/Software Co-Design of an Automotive Embedded Firewall,” *SAE Technical Paper 2017-01-1659 (WCX'17)*, Mar. 2017.
- [9] Karsten Schmidt, Hubert Strauß, **Mert D. Pesé** and Benjamin Bosserelle, “Implementierungsaspekte für Ethernet/IP-Netzwerkstacks,” *Tagungsband - Embedded Software Engineering Kongress 2016*, Nov. 2016.

Workshop Proceedings

- [1] **Mert D. Pesé**, Arun Ganesan and Kang G. Shin, “CarLab: Framework for Vehicular Data Collection and Processing,” *Proceedings of the Second ACM International Workshop on Smart, Autonomous, and Connected Vehicular Systems and Services (CarSys'17)*, Oct. 2017.

PATENTS

Sufficiently Secure Controller Area Network

Inventors: **Mert D. Pesé**, Kang G. Shin

Filed in Oct. 2021

Systems and Methods for Preserving Privacy of Collected Vehicular Data Granted in Sep. 2021
 Inventors: **Mert D. Pesé**, Evripidis Paraskevas, Fan Bai, Massimo Osella, Soheil Samii US Patent 11,126,744

Anomaly Detection Systems and Methods Filed in Nov. 2020
 Inventors: **Mert D. Pesé**, Prachi Joshi, Kemal E. Tepe

Automated CAN Message Translator Filed in Sep. 2019
 Inventors: **Mert D. Pesé**, Kang G. Shin

TEACHING

Clemson University Clemson, SC
CPSC 8580 Security in Emerging Computing and Networking Systems, Fall 2022 Aug. 2022–Present

University of Michigan Ann Arbor, MI
Graduate Student Instructor, EECS 571 Principles of Real-Time Computing Aug. 2021–Dec. 2021

Technical University Munich Munich, Germany
Undergraduate Teaching Assistant, Four Courses in ECE Department Apr. 2013–Jul. 2014

STUDENT MENTORING

At University of Michigan

Eric Andrechek, Junru Du Spring 2022

Arman Tabaddor, Bryan Brauchler, Eric Andrechek, Tim Stoldt Winter 2022

Arman Tabaddor, Bryan Brauchler, Eric Andrechek, Cassandra Joseph Fall 2021

Junhui Li, Arman Tabaddor, Murali Mohan, Erich Shan, Bryan Brauchler Winter 2021

Junhui Li, Jay W. Schauer, Arman Tabaddor, Batuhan Akcay Fall 2020

Junhui Li, Jay W. Schauer, Jiaxiang Ma Summer 2020

Junhui Li, Jay W. Schauer Spring 2020

Troy Stacer, C. Andrés Campos, Alice Ying Fall 2019, Winter 2020

Troy Stacer, C. Andrés Campos, Alice Ying, Osama Saeed Winter 2019

Troy Stacer, Alejandro Fischer, Kurt Ayalp Fall 2018

PROFESSIONAL SERVICE

Organizing Committee

[VehicleSec'23] Inaugural ISOC Symposium on Vehicle Security and Privacy 2023

[WCX] SAE World Congress Experience 2022-present

Conference Program Committee

[VehicleSec'23] Inaugural ISOC Symposium on Vehicle Security and Privacy	2023
[CSCS'22] ACM Computer Science in Cars Symposium	2022
[WCX] SAE World Congress Experience	2021-present
[AutoSec] Automotive and Autonomous Vehicle Security Workshop	2021-Present

Other Service

[TIFS] IEEE Transactions on Information Forensics & Security Reviewer	2021
[ASRG] Automotive Security Research Group Member and Speaker	2019-Present
[HKN] Eta Kappa Nu - Beta Epsilon Chapter Member, Mentor and DEI Committee Member	2018-2022
[SAECA] SAE CyberAuto Challenge Industry Mentor for High School and Undergraduate Students	2019
[WCX] SAE World Congress Experience Reviewer	2019, 2020
[SEC] ACM/IEEE Symposium on Edge Computing Reviewer	2018
[ICCPS] ACM/IEEE International Conference on Cyber-Physical Systems Sub-reviewer	2017, 2018
[TEVDS20] SAE Data Link Connector Vehicle Security Committee Member	2017
[CHES] Conference on Cryptographic Hardware and Embedded Systems Sub-reviewer	2017

INVITED TALKS & PANELS

How Secure is Secure Enough? Panel Discussion @ SAE WCX 2021	Apr. 2021
LibreCAN: Automated CAN Message Translator Webinar @ ASRG	Oct. 2020
Introduction to Automotive Networks Invited Lecture @ University of Michigan	Sep. 2020
Security and Privacy of Tomorrow's Connected Vehicles WiCyS Breakfast Talk @ University of Windsor	Oct. 2019
Security and Privacy of Tomorrow's Connected Vehicles Invited Lecture @ University of Michigan	Oct. 2019, Nov. 2020

AWARDS & HONORS

Rackham Conference Travel Grant University of Michigan Rackham Graduate School	2017, 2019, 2020
ACM MobiCom Student Travel Grant ACM SIGMOBILE	2017
National Scholarship for 0.5% of all students German Academic Scholarship Foundation	2015 - 2018
Travel Grant Heinrich und Lotte Mühlfehl-Stiftung	2015
Deutschlandstipendium Federal Ministry of Education and Research (Germany)	2013, 2014
Fulbright Scholarship Fulbright Commission	2014
Scholarship for Exchange Semester Lothar and Sigrid Rohde Foundation	2014