

Felix Klement

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Employment History

Sep. 2021 – now	Research associate Chair of Computer Engineering
Jul. 2019 – now	Co-Founder & CEO Data Locals
Aug. 2019 – Sep. 2021	Research associate Chair for IT-Security
Aug. 2019 – Apr. 2019	Research assistant Assistant at the Institute for IT-Security
Mai. 2018 – Jul. 2019	Software Engineer Klement - Software Development - Freelance
Mar. 2016 – Aug. 2018	Software Developer madeprojects // madeIT GmbH
Feb. 2016 – Aug. 2016	Developer System Integration CCV Deutschland GmbH

Education

2018 – 2021	University of Passau Master's programme in Computer Science Thesis title: <i>A Man-In-The-Middle Approach Towards Dataflow Management for OBD-II Interfaces in Vehicles</i>
2014 – 2018	University of Applied Sciences Landshut Bachelor's programme in Computer Science Thesis title: <i>Conception and Development of an Internet Platform for Musicians using Elixir and Phoenix</i>
2013 – 2014	Vocational High School Landshut Fachhochschulreife (A-level equivalent)
2011 – 2013	Vocational School for Computer Science Landshut Staatl. geprüfter technischer Assistent für Informatik

Research Publications

Journal Articles

- 1 **Klement, F.**, Liu, W., & Katzenbeisser, S. (2023). Towards securing the 6g transition: A comprehensive empirical method to analyze threats in o-ran environments. *IEEE Journal on Selected Areas in Communications*, 1–1. [doi:10.1109/JSAC.2023.3339172](https://doi.org/10.1109/JSAC.2023.3339172)

Conference Proceedings

- 1 Püllen, D., **Klement, F.**, Vinel, A., & Katzenbeisser, S. (2023). Ensuring trustworthy automated road vehicles: A software integrity validation approach. In *2023 IEEE International Automated Vehicle Validation Conference (IAVVC)* (pp. 1–8). [doi:10.1109/IAVVC57316.2023.10328103](https://doi.org/10.1109/IAVVC57316.2023.10328103)
- 2 Geloczi, E., **Klement, F.**, Gründinger, E., & Katzenbeisser, S. (2023). Secure stitch: Unveiling the fabric of security patterns for the internet of things. In R. Rios & J. Posegga (Eds.), *Security and trust management* (pp. 65–84). Cham: Springer Nature Switzerland.
- 3 **Klement, F.**, Takebuchi, S., Arul, T., & Katzenbeisser, S. (2023). Keep your enemies closer: On the minimal distance of adversaries when using channel-based key extraction in siso 6g systems. In *2023 19th international conference on wireless and mobile computing, networking and communications (wimob)* (pp. 445–451). [doi:10.1109/WiMob58348.2023.10187881](https://doi.org/10.1109/WiMob58348.2023.10187881)

- 4 **Klement, F., Pöhls, H. C., & Katzenbeisser, S.** (2022a). Change your car's filters: Efficient concurrent and multi-stage firewall for obd-ii network traffic. In *2022 IEEE 27th International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD)* (pp. 19–25).
[doi:10.1109/CAMAD55695.2022.9966902](https://doi.org/10.1109/CAMAD55695.2022.9966902)
- 5 **Klement, F., Pöhls, H. C., & Katzenbeisser, S.** (2022b). Man-in-the-obd: A modular, protocol agnostic firewall for automotive dongles to enhance privacy and security. In W. Li, S. Furnell, & W. Meng (Eds.), *Attacks and defenses for the internet-of-things* (pp. 143–164). [doi:10.1007/978-3-031-21311-3_7](https://doi.org/10.1007/978-3-031-21311-3_7)
- 6 Anagnostopoulos, N. A., Fan, Y., Saleem, M. U., Mexis, N., Gelóczy, E., **Klement, F.**, ... Katzenbeisser, S. (2022). Testing physical unclonable functions implemented on commercial off-the-shelf nand flash memories using programming disturbances. In *2022 IEEE 12th International Conference on Consumer Electronics (ICCE-Berlin)* (pp. 1–9). [doi:10.1109/ICCE-Berlin56473.2022.10021310](https://doi.org/10.1109/ICCE-Berlin56473.2022.10021310)
- 7 **Klement, F., Pöhls, H. C., & Spielvogel, K.** (2020). Towards privacy-preserving local monitoring and evaluation of network traffic from IoT devices and corresponding mobile phone applications. In *2020 Global Internet of Things Summit (GIOTS)* (pp. 1–6). [doi:10.1109/GIOTS49054.2020.9119507](https://doi.org/10.1109/GIOTS49054.2020.9119507)

Preprints

- 1 **Klement, F., Katzenbeisser, S., Ulitzsch, V., Krämer, J., Stanczak, S., Utkovski, Z., ... Wunder, G.** (2022). Open or not open: Are conventional radio access networks more secure and trustworthy than open-ran? arXiv: 2204.12227 [cs.CR]

Services

Technical Program Committee

TCSP Technical Committee on Security and Privacy
 - Member since 2023

Artifacts Committee

CHES The annual Conference on Cryptographic Hardware and Embedded Systems
 - Member since 2023

Reviews

DATE 2024	the 27th conference on Design, Automation, and Test in Europe
TIFS 2023	IEEE Transactions on Information Forensics & Security Journal
COSADE 2023	14th International Workshop on Constructive Side-Channel Analysis and Secure Design
NordSec 2022	27th Nordic Conference on Secure IT Systems
ESORICS 2022	the 27th European Symposium on Research in Computer Security
ICICS 2021	the 23rd International Conference on Information and Communications Security
ESORICS 2021	the 26th European Symposium on Research in Computer Security
WISTP 2019	International Conference on Information Security Theory and Practice

Student Supervision

Master's Degree

- Arghavan Shahrokhi
On the Security of Open-RAN, 5G and Beyond: A closer Look at the Threat Analysis Methodologies

Bachelor's Degree

- Emily Vorderwülbeke
An Inquiry into the Disruptive Nature of Reactive Jamming Attacks on OpenThread Networks
- Sebastian Pretzsch
CSI-Based Temperature Measurements

Skills

Languages	German, English
Coding	Elixir, Erlang, Python, PHP, Java, SQL, XML/XSL, \LaTeX , GIT, ...
Databases	MySQL, PostgreSQL, SQLite, ...
Web Dev	HTML, CSS, JavaScript, Phoenix-Framework, Processwire, ...
Misc.	Academic research, teaching, training, consultation, \LaTeX typesetting and publishing

Research Projects

Sep 2021 - now	6G RIC <i>6G Research and Innovation Cluster</i> The “6G Research and Innovation Cluster” (6G-RIC) pursues the goal of developing mobile radio systems with open interfaces across all technology boundaries. The focus is on technology development and the establishment of an efficient test infrastructure. The test infrastructure should enable the testing of new technology components under realistic and open conditions. This should accelerate direct utilisation and ensure the establishment of a new ecosystem in the medium term. <i>[4 years – 20 partners (Universities and research institutes) – funding: 70 Mio. Euro from BMBF - Federal Ministry of Education and Research]</i>
Jan 2018 - Dec 2020	SEMIoTICS <i>Smart End-to-end Massive IoT Interoperability, Connectivity and Security</i> Research on the development of a pattern-driven framework built upon existing IoT platforms to enable and guarantee secure and dependable actuation and semi-autonomic behaviour in industrial IoT applications; Participating in the task on „End-To-End Security and Privacy“ involving industrial and academic partners. <i>[3 years – 9 partners – funding: 5 Mio. Euro in EU H2020 Research and Innovation]</i>

Miscellaneous Experience

Awards and Achievements

Sep 2019	Continental - Winner of the Cloud Hackathon
Mai 2019	Continental - Winner of the Smart Mobility Hackathon

Miscellaneous Experience (continued)

Certification

- 2013 **Microsoft Certified Technology Specialist: Windows Server 2008**
- 2012 **Network engineering – Cisco CCNA Certificates**

Hobbies

Volunteer fire brigade Mainburg and Passau
(Instructor fall-protection, respirator carrier, CSA, ABC)

Climbing, Hiking, Mountaineering

Endurance training, Road cycling