

# Dr. Andreas Weichslgartner

## Resume

✉ [weichslgartner@gmail.com](mailto:weichslgartner@gmail.com)

### Experience

- 04.2017- **Developer/Technical Security Expert**, *Cariad SE/Audi AG*, Ingolstadt, Germany.  
now Designed and implemented an embedded intrusion detection system (IDS) prototype in **C/C++** for detecting anomalies in POSIX systems and automotive networked communication (**Ethernet, CAN**). Performed data analysis of automotive networks, Linux audit files, security risk analysis in **Python/Pandas**. Generated machine learning models for anomaly detection with **Tensorflow/Scikit-Learn/Numpy**. Is an integral developer in an **agile team (SCRUM)** to design and implement the **series automotive software** of IDS. Pushed continuous fuzzing and security testing inside Cariad as technical expert. Worked on research projects like ML-based **fuzzing, adversarial attacks on Lidar**, or **embedded post quantum cryptography**. Was involved in several penetration-test activities and held workshops (e.g. secure coding, fuzzing, ML in security), gave talks (e.g., [ELIV](#)), and participated in panel discussions (e.g., Cariad Security Summit). Supervised PhD/Master students and interns.
- 09.2010- **Researcher at the Department of Hardware/Software Co-Design**, *Friedrich-Alexander-Universität*  
04.2017 *Erlangen-Nürnberg (FAU)*, Erlangen, Germany.  
Conducted research on optimization, real-time/embedded systems, security, software (**Java, Python, C**) and hardware (**VHDL, SystemVerilog**) development. Collaborated in a transregional research center with 60 international researchers on future many-core architectures. (Co)authored various peer-reviewed research papers at international conferences (23 papers, e.g., CODES+ISSS, DATE, DAC), leading journals (9 articles, e.g., ACM TECS, IEEE TCAD), and a [book](#). Acted as a member of a program committee (ReConFig) and reviewer for several conferences and journals. Supervised students' theses and was involved in teaching (e.g., foundations of technical computer science, design of interactive embedded systems).
- 09.2009- **Internship: Embedded Linux and Waver Testing**, *Infineon Technologies AG*, Regensburg, Germany.  
01.2010 Developed an embedded Linux solution for intrinsic data monitoring of wafer testing machines. Included a C program for real-time logging/filtering of raw machine data and a web interface/dashboard.
- 2003-2004 **Civil Service (Zivildienst)**, *Kreiskrankenhaus Kelheim*, Kelheim, Germany.

### Education

- 2010-2017 **PhD (Dr.-Ing.) in Computer Science at the Department of Hardware/Software Co-Design**, *Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)*, Erlangen, Germany.  
Thesis Application Mapping Methodologies for Invasive NoC-Based Architectures (Grade 1.1)
- 2004-2010 **Diploma (Dipl.-Ing.) in Information and Communication Technology**, *Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)*, Erlangen, Germany.  
GPA 1.3 (very good)  
Thesis Decentralized Embedding of Communication Topologies onto Networks-on-Chip (Grade 1.0)

### Software Skills

- Languages ○ Python (experienced), C++ (experienced), C (intermediate), Java (intermediate), VHDL (Familiar)  
Technology ○ Github Actions, Gitlab CI, Docker

### Soft Skills

Inter-cultural communication, Gender communication, Scientific writing, Self and time management, Agile teamwork

### Languages

German (native), English (full professional proficiency), Portuguese (limited working proficiency)

### Interests and Hobbies

Traveling, Programming (e.g., Advent of Code), Climbing, Music (playing guitar/bass, concerts), Reading, Art, Cooking

### Links

[Google Scholar](#), [Blog](#), [Github](#), [Linkedin](#),