

CURRICULUM VITAE

Personal Information

Name	Agnes Poks
Title	Dr. techn.
Address	Vienna - Austria
E-mail	agnes.poks@gmail.com
Nationality	German



Education

10/2019 - 04.04.2025	Doctor of Technical Sciences / PhD in Mechanical Engineering at TU Wien - Technical University of Vienna, Austria Advisor: Ao.Univ.Prof. Dipl.-Ing. Dr.techn. Martin Kozek
2015 - 2019	Master of Science in Electrical Engineering and Information Technology at Hochschule Darmstadt - University of Applied Sciences, Germany Thesis: "Development of an identification method to estimate winding admittances in permanent magnet synchronous machines for position detection." Advisor: Prof. Dr.-Ing. Serge Zacher
2011 - 2015	Bachelor of Science in Electrical Engineering at Hochschule Heilbronn - University of Applied Sciences, Germany Thesis: "Field-oriented, sensorless control of an asynchronous machine using a Kalman filter" Advisor: Prof. Dr.-Ing. Jürgen Ulm
2009 - 2011	Training Elektronikerin Geräte und Systeme Ziehl-Abegg SE , Künzeslau, Baden-Württemberg, Germany
2003 - 2006	Training Industriekauffrau ecom Instruments GmbH , Assamstadt, Germany

Professional Work Experience

- 03/2023 - 01/2025 **Project assistant**
at TU Wien, [Research Unit of Technical Dynamics and Vehicle System Dynamics](#), Institute of Mechanics and Mechatronics in Vienna, Austria
- Motorcycle Safety - Effect and cause-based friction potential estimation. Industrial partner: [KTM F&E GmbH](#) & [PIERER Innovation GmbH](#), research project: [RWS Motorcycle](#)
 - Mass estimation for off-road vehicle.
Industrial partner: [Rheinmetall AG](#)
- 07/2019 – 02/2023 **Project assistant**
at TU Wien, [Research Unit of Control and Process Automation](#), Institute of Mechanics and Mechatronics, in Vienna, Austria
- Enhancing the efficiency of refrigerated trucks using modular cooling units through distributed model predictive control. Industrial partner: [PBX GmbH](#), research project: [DiNaMiC](#)
 - Design of a model-based control concept for an electric refrigerated transporter. Industrial partner: [PBX GmbH](#), research project: [CONSERVE](#)
 - Simulation-based investigation to capture dynamic behavior of the fuel cell system for “virtual sensor”. Industrial partner: [AVL](#), research project: [KEYTECH4EV](#)
 - Design control for compound split gearbox for rotorcraft with rotor speed variation. Industrial partner: [ZOERKLER Gears GmbH & Co KG](#), research project: [VARI-SPEED-II](#)
- 02/2015 – 05/2019 **Software Engineer**
at [ZIEHL-ABEGG SE](#), R&D-department, Künzelsau, Baden-Württemberg, Germany
- Research and development of advanced technologies for the control of electric drives.
 - Fundamental research of sensorless drive control approaches.
 - Development and integration of embedded software modules in C / C++ for different processor architectures.
- 02/2012 – 10/2012 **International internship**
at [ZIEHL-ABEGG SE](#), R&D-department, Shanghai, China
- Design and instruction of an automatic pulse magnetization device for EC rotors.

- 07/2011 – 02/2015 **Research and development intern**
at [ZIEHL-ABEGG SE](#), R&D-department, Künzelsau, Baden-
Württemberg, Germany
- Design of simulation models for drive control in Matlab
 - Programming of microcontrollers / fieldbus systems.
 - Development and documentation of software test procedures.

Teaching

- 07/2021 – 02/2024 **Thesis supervisor**
Supervision of 2 seminar works, 1 project works, 1 individual la-
boratory exercises, 2 Bachelor's thesis, and [1 Master's thesis](#)
- 2019 – 2021 [Lecturer for Fundamentals of Automatic Control](#)
Course organization, holding of exercises, and exam creation
- 2022 [Lecturer for Digital Control](#)
Course organization, holding of exercises, and exam creation

IT Skills

- | | |
|-------------------|--|
| Operation Systems | Windows, Linux |
| Software packages | Microsoft Office, L ^A T _E X, ROS & ROS2, Git |
| Programming | C/C++, Rust, Java, MATLAB, Python, Assembler, HTML and CSS |
| Simulation | SIMPACK, Adams, Gazebo |
| CAD | Autodesk Inventor, Fusen 360 |

Languages

- | | |
|---------|------------------------------|
| German | Native language |
| English | Fluent in written and spoken |

Leisure Interests

- Technology; [fltenth Autonomous Car Racing](#); robotics; motorcycling;
RC aircraft, cars and drones; sports; traveling