universität innsbruck

innsbruck Drive and Energy Systems Laboratory

From PES to iDES: Introduction to iDES and Recent Updates

- Japan/ETH/ECPE Power Electronics Workshop -

Takanobu Ohno

University of Innsbruck, Institute for Mechatronics
Innsbruck Drives and Energy Systems Laboratory (iDES)
Technikerstraße 13a, Floor 1, Office 127
https://www.uibk.ac.at/mechatronik/ides/

June 09, 2024, ETH Zürich

Self Introduction

Takanobu Ohno, Postdoc

2022 Ph.D. at Tokyo University of Science

2022 – 2023 Visiting Researcher at PES ETHZ

2023 – Postdoc at Innsbruck University

Spasoje Mirić, Ass. Prof.

2018 Ph.D. at University of Belgrade

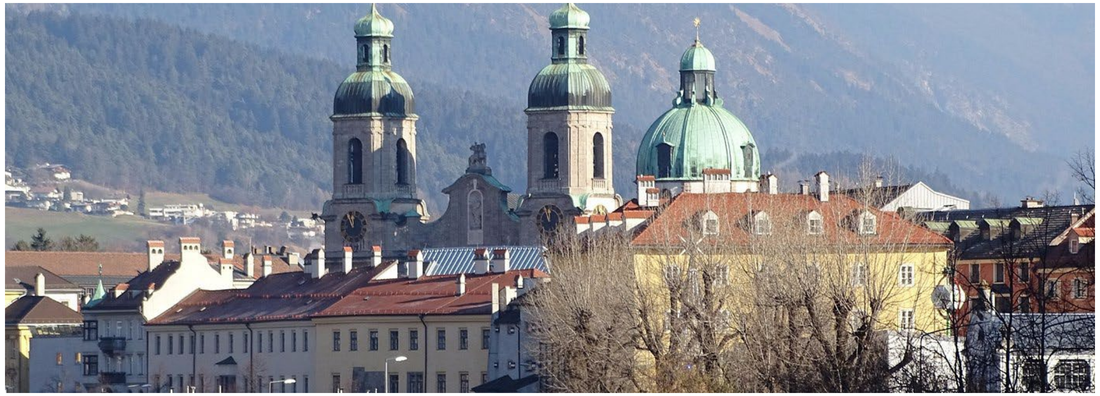
2021 Second Ph.D. at ETH Zürich PES

2021 – 2023 Postdoc at PES ETHZ

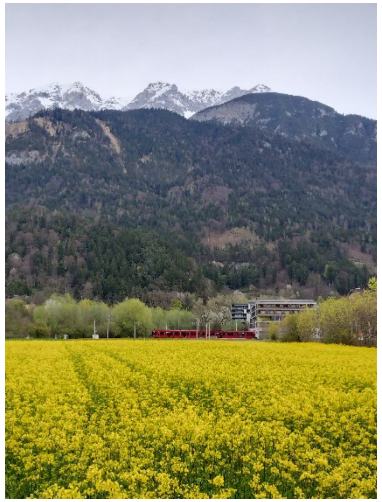
2023 – Ass. Prof. at Innsbruck University

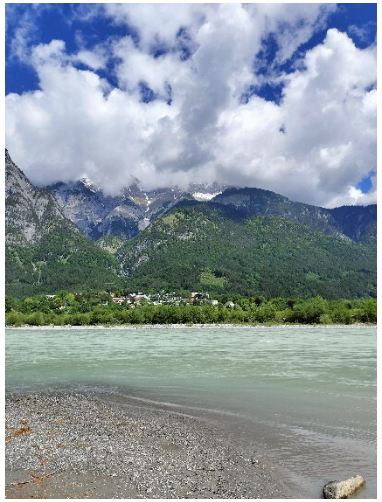
Power Electronic Systems Laboratory → innsbruck Drive and Energy Systems Laboratory

Innsbruck City



Innsbruck University





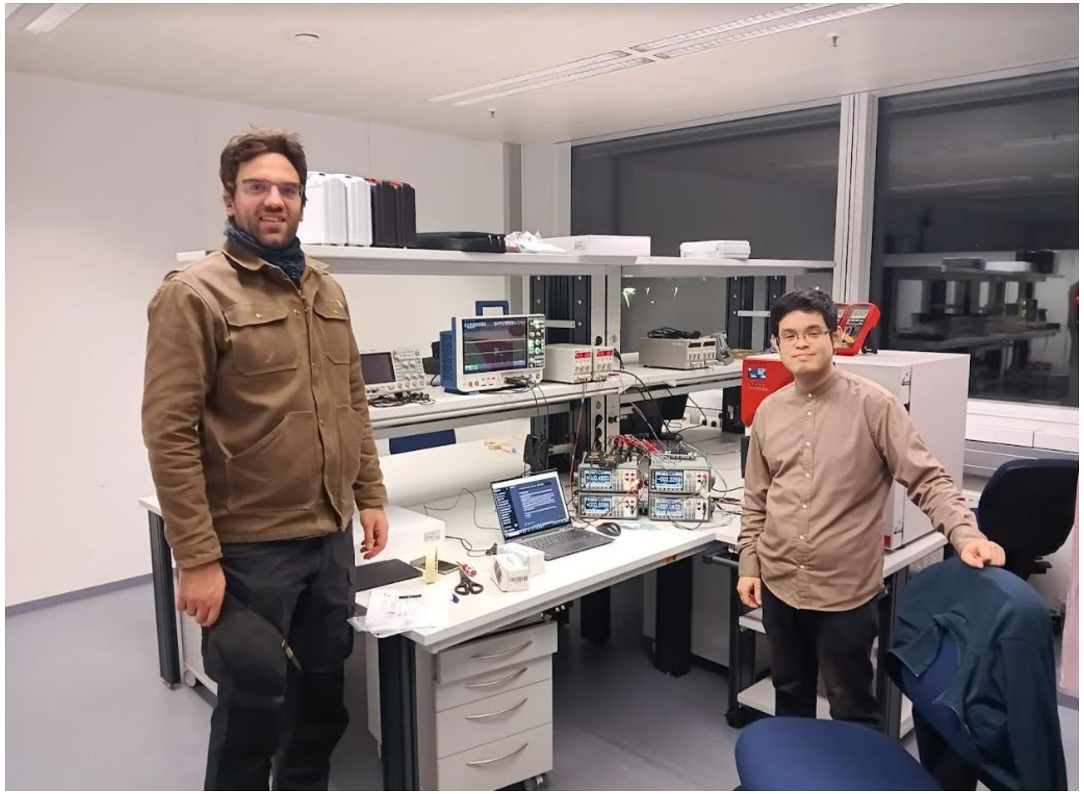
Universität Innsbruck – Campus Technik

Faculty of - Architektur
- Biologie
- Mathematik
- Physik
- Technische Wissenschaften

Institute für
- Infrastruktur
- Konstruktion
- Mechatronik (2020 –)

Innsbruck Drive and Energy Systems Laboratory (iDES)

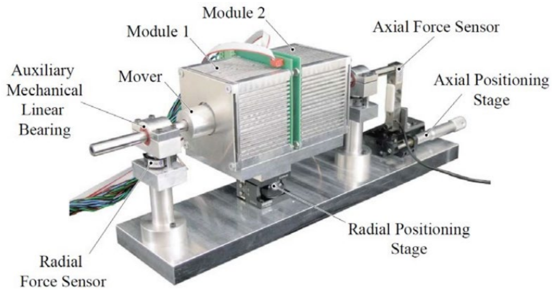
Dec. 2023

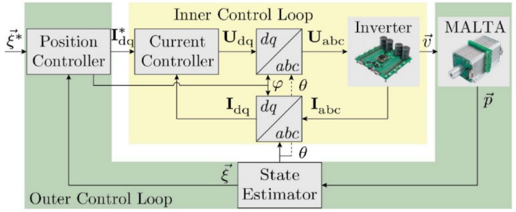


Nowadays

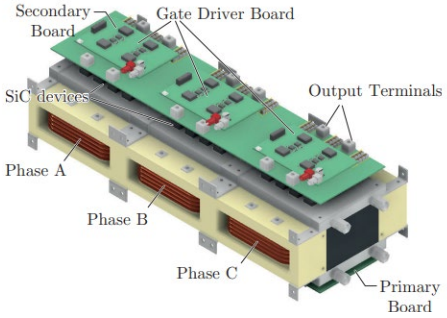
Innsbruck Drive and Energy Systems Laboratory (iDES)

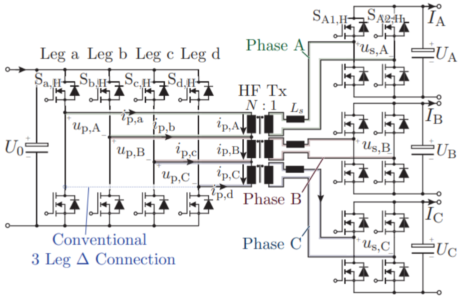
Spasoje Mirić, Mechatronics





Takanobu Ohno, Power Electronics





Drive System

WPT System

Magnetic Levitation

Modulation Comparison

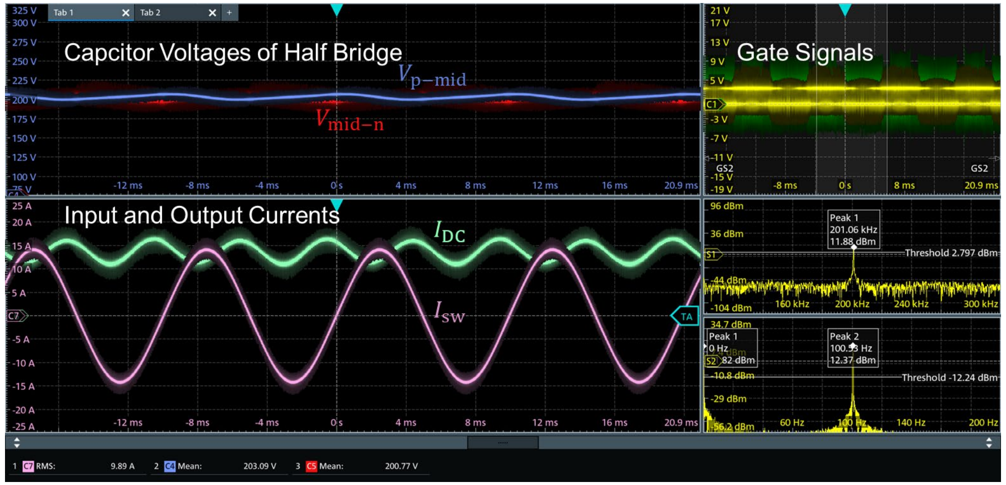
Loss Modelling

Device Characterization

Current Research

Half Bridge Constant Duty Operation Test

Half Bridge 5 kW Load Test



Lectures

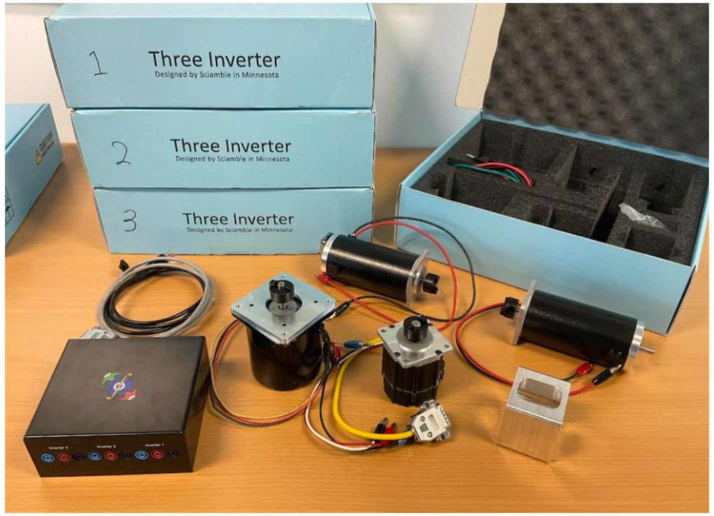
Lectures Offered @iDES

Sommer Semester

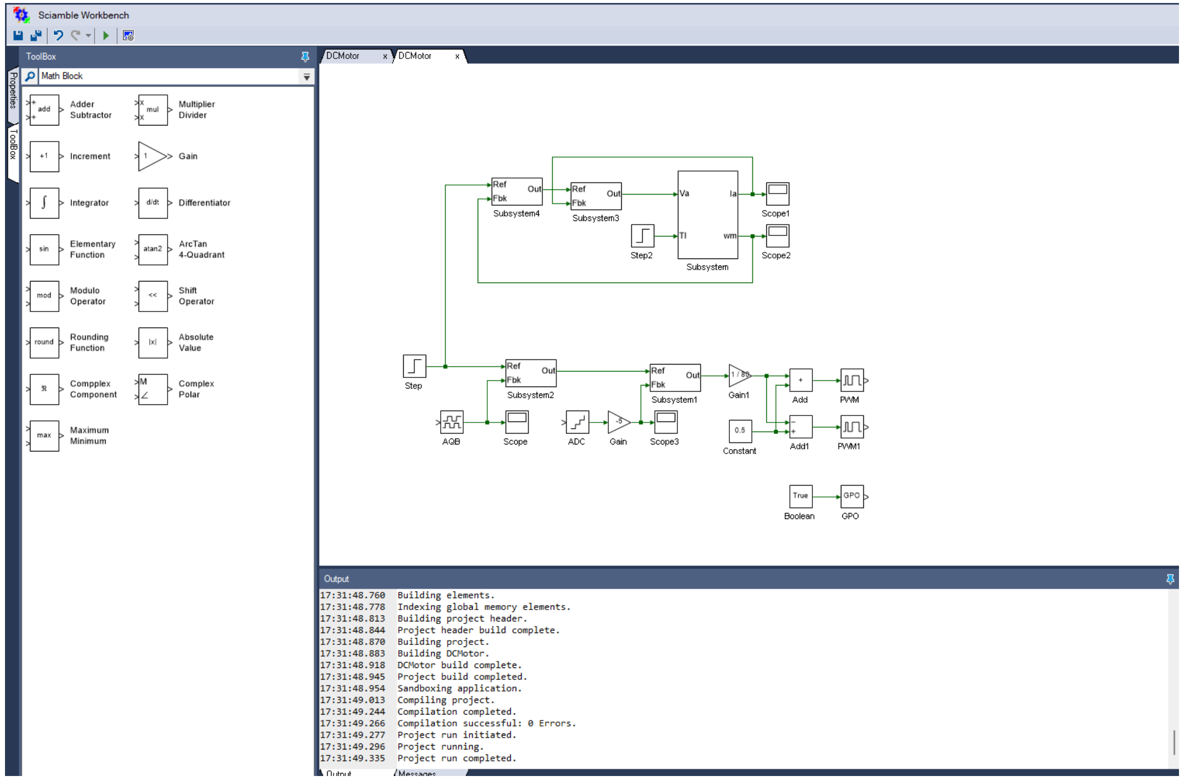
- 850708 VU Elektrische Machinen (Prof. Mirić, Dr. Ohno)
- 850709 VO Elektrische Antriebstechnik (Prof. Mirić, Dr. Ohno)
- 850710 VU Regelung von Antriebssystemen (Dr. Ohno)
- 850715 VU Elektomechanische Aktuatorik (Prof. Mirić)
- 850720 VU Antriebsregelung (Prof. Mirić, Dr. Ohno)

Winter Semester

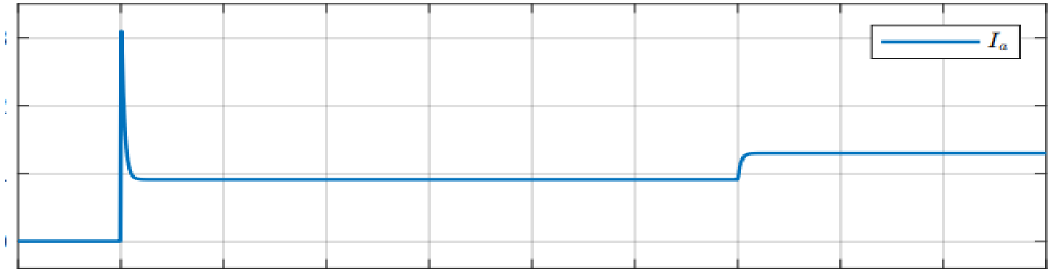
- 850620 VO Elektrische Antriebstechnik und Leistungselektronik (shared with iPEL)
- 850621 VO Elektrische Antriebstechnik und Leistungselektronik (shared with iPEL)
- 850711 PR Elektrische Antriebstechnik (Dr. Ohno)
- 850716 VO Elektrische Energie- und Antriebstechnik (Dr. Korbinian)
- 850717 VO Elektrische Energie- und Antriebstechnik (Dr. Korbinian)
- 850718 VU Spezielle Themen 1 (Prof. Mirić, Dr. Ohno)



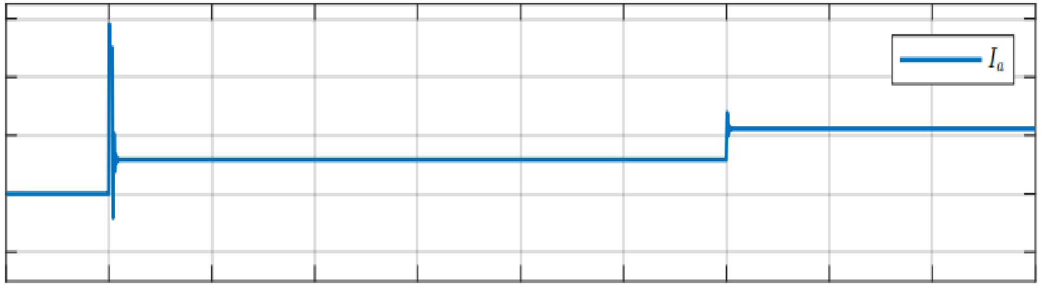
Lectures



Simulation mode

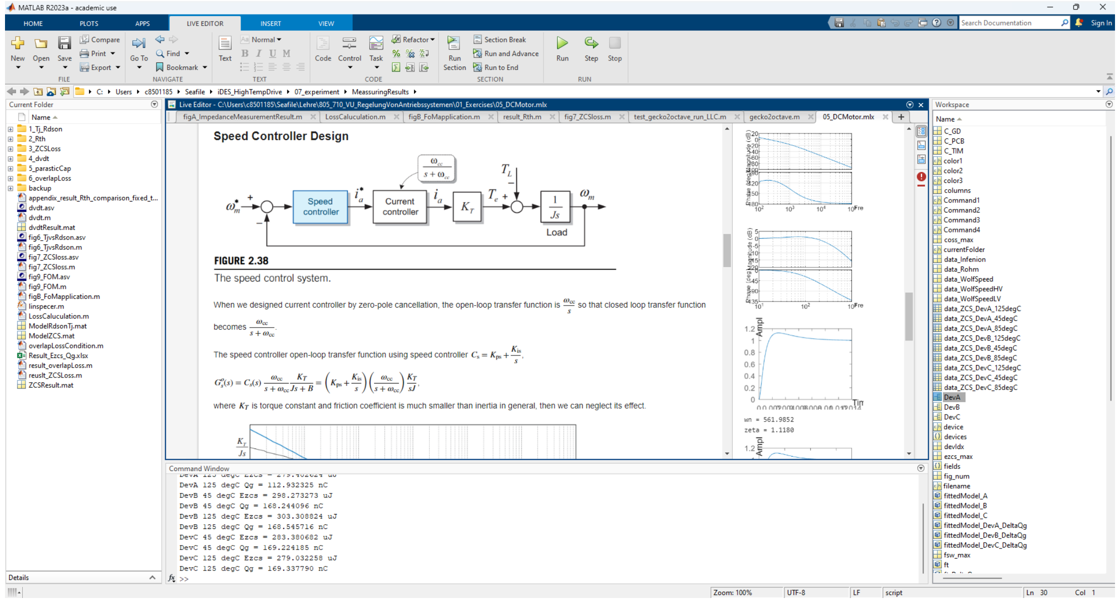


Hardware mode

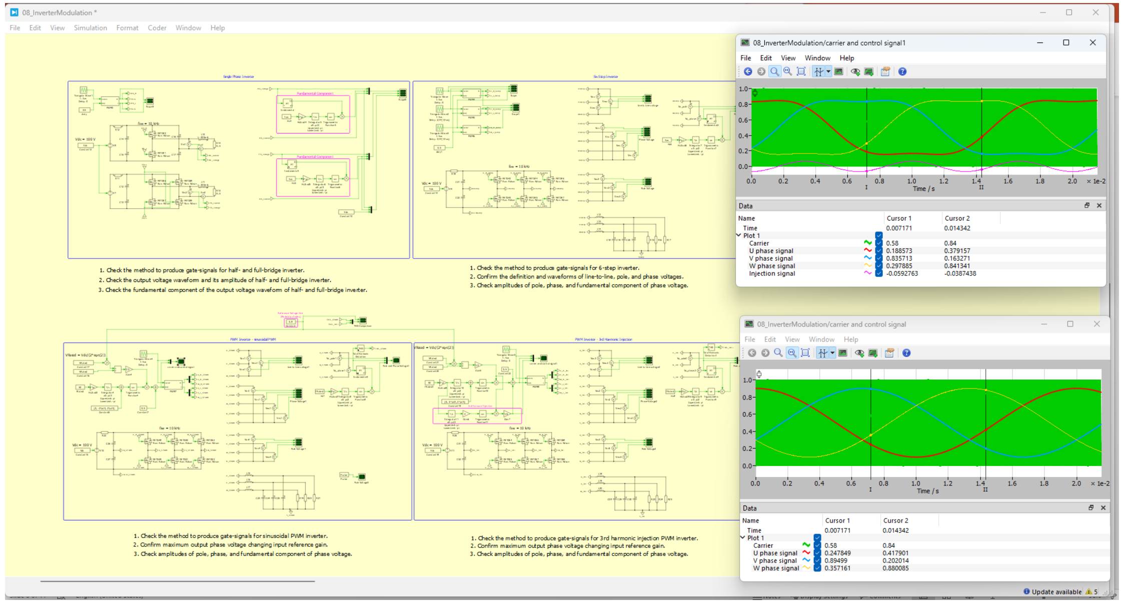


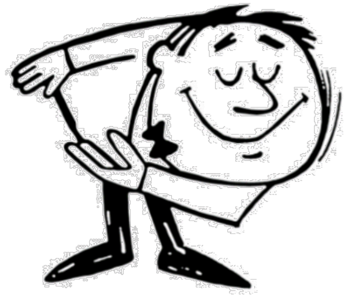
Lectures

Elektrische Machinen „Control of DC Machine“



Regelung von Antriebssystemen „Modulation Technics“





Thank you!