

Teaching Portfolio

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Teaching Philosophy

I approach teaching as a method to enable students to learn independently in a research oriented environment. A capacity which is required for research and later job activities. This requires the presentation of the fundamental basics to understand an approach or theory, but also the presentation of the central concepts. Based on these foundations, the students can interact with exercises, projects, seminars, and group discussions to explore methods. I encourage them to not only apply the method and see its advantages, but also try to open a perspective for implications which are not directly connected to the application. Also, limitations and misconceptions can in my experience be best taught by exploring them actively.

Teaching and supervision

Adaptive embodied locomotion control systems (E18)

Jan-Matthias Braun

01/09/2018 → 31/01/2019

Artificial Intelligence for Healthcare Data - Summer School

, Manuella Lech Cantuaria & Jan-Matthias Braun

09/08/2021 → 20/08/2023

Branching sequence prediction with liquid state machines

Jan-Matthias Braun

01/09/2018 → 30/09/2019

Closed loop motor control using EMG signals and feedback from interaction with the environment

Jan-Matthias Braun

01/09/2019 → 01/06/2020

Collision Detection

Jan-Matthias Braun

01/02/2019 → 31/05/2019

Cybersecurity

Jan-Matthias Braun

01/09/2021 → 31/01/2024

Epilepsy Detection with Deep Neural Network

Jan-Matthias Braun

01/02/2023 → 01/06/2023

Epileptic Seizure Prediction using EEG Signals

Jan-Matthias Braun
01/02/2022 → 01/09/2022

Estimating polyp size detected with Camera Capsule Endoscopy (CCE)

Jan-Matthias Braun
01/02/2023 → 01/06/2023

Estimating polyp size on images from Camera Capsule Endoscopy

Jan-Matthias Braun
01/02/2023 → 01/06/2023

Evaluating predictive EMG features towards enhancing the motion range of prosthetic patients

Jan-Matthias Braun
01/09/2018 → ...

Programming of Robots and other Physical Devices (F18)

Jan-Matthias Braun
01/02/2018 → 30/06/2018

Reactive control for smooth object approaching of a mobile robot

Jan-Matthias Braun
01/09/2018 → 31/05/2019

SCS - Security in computer systems

Jan-Matthias Braun &
01/09/2018 → 31/01/2019

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01/09/2019 → 31/01/2020

Security in computer systems

Jan-Matthias Braun
01/09/2020 → 31/01/2024

Teaching Assistant for Introduction to Artificial Intelligence (E17)

Jan-Matthias Braun
01/09/2017 → 31/01/2018

Teaching Assistant for Introduction to Artificial Intelligence (E18)

Jan-Matthias Braun
01/09/2018 → 31/01/2019

Transformers for Time-Aware Decoding of Monkey Brain Recordings

Jan-Matthias Braun

01/09/2022 → 01/06/2023

Monocular Omnidirectional Visual Odometry for low power hardware' on UAVs

M.Sc. Thesis, 2018

Utilizing visual odometry with a novel SLAM approach for fast moving UAVs

B.Sc. Thesis, 2018

Learning Bipedal Balancing with the ICO-Rule

B.Sc. Thesis, 2018

Understanding Computational Abilities of Nonlinear Dynamical Systems by a Comparative Study

B.Sc. Thesis, 2017

Reflex and Model-based Approaches for Dynamic Walking of Humanoid Robots

M.Sc. Thesis, 2016

Towards Monocular Omnidirectional Visual Odometry for UAVs

M.Sc. Thesis, 2016

Map Merging For Autonomous Swarms

B.Sc. Thesis, 2016

Development of an Adaptive Neural PID Controller for UAVs

B.Sc. Thesis, 2016

Computational Neuroscience: Learning and Adaptive Algorithms II

Tutorial for B.Sc and M.Sc. students

01/10/2015 → 31/03/2016

Application of a Virtual Muscles Model on the two-dimensional biped robot "RunBot"

B.Sc. Thesis, 2015

Analysis of gait stability in a dynamic walker comparing rigid and compliant ankles

B.Sc. Thesis, 2015

Computational Neuroscience: Learning and Adaptive Algorithms II

Tutorial for B.Sc and M.Sc. students

01/10/2014 → 31/03/2015

Combining Visual and Inertial Odometry for Autonomous Navigation of the FlyPi Quadcopter

M.Sc. Thesis, 2014

An online SLAM approach based on Extended Kalman Filter Localization

B.Sc. Thesis, 2014

Computational Physics

Tutorial for M.Sc. students

01/04/2004 → 30/09/2006

Formal Pedagogical Training

In my previous employment at Göttingen University, I participated in courses by the local faculty for University Didactic, for example

- Two day workshop "Lehre in Technischen Fächern – eine didaktische Herausforderung" on the 23. and 24. of January 2015. ("Teaching in technical disciplines – a didactic challenge" on teaching especially maths, physics, and computer science.)
- The two day workshop "Zielsicher und stimmig Gespräche steuern in Seminaren und Sprechstunden" on the 26. and 27. of May 2014. ("Directing dialogs in seminars and counselling hours".)

Now, I am partaking in the Lecturer Training Programme (LTP).

Other Teaching Related Activities

In my previous employment, I was acting as student counsellor and for the specialisation "Computational Neuroscience" of the computer science faculty and took part in the development of the specialisation's study programme.