

Teaching-CV

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Teaching experience

Has previously taught 3rd semester Mathematics for signal and systems in 2018 and 2019 in the mechatronics education. We had focus on: analysis of dynamical systems through Laplace, z-transform and Fourier transforms. Tools used: Matlab.

Teaching DSP - Digital Signal Processing since 2017 used in mechatronics and electronic education.

We have focus on: the understanding, specification, design and programming of basic digital signal processing algorithms on a computer. Tools used: Matlab and Labview

Teaching hydraulics - 2019 - used in the mechatronics education. We focused on the understanding of relationship between pressure and flow velocity, how incompressible fluids can be used as hydraulic gearing etc. & understanding of basic hydraulic schematics. Tools used: Matlab, simulink and Simscape fluids

Project supervision of several semester projects:

- Electronics semester project – Mechatronics education (F2017-F2020)
- Expert in teams - Mechatronics education and Engineering, Innovation and Business (E2019)
- Design of Embedded Architectures - Electronic education (F2020)
- Embedded Systems Semester Project - Mechatronics education (F2020)
- Electronics Design and Build - Electronic education (E2020)

Educational practice - Basis / values

I believe that teaching which, to the greatest possible extent involve, activate and motivate the students and give them responsibility, provides the best basis for a good learning outcome.

In my teaching practice, I try to take into account that students learn in different ways, therefore a healthy balance between theory and practical implementation is used. In my mind one learns the theory when using it, so I often use tools like Matlab or others for small project where the theory is used.

In semester projects I try to use real-life cases so that the students get motivated and by the end of the semester hopefully learned a lot about the subject.

Formal pedagogical training

- Supervision - roles and relations

Other activities related to teaching and teaching development

- Making the educations of CIE - Center for industrial electronics BSc and MSc

Publikationer

Battery storage analysis demands based on novel high temporal resolution weather data platform

Andersen, H., Paasch, K. M., Nymand, M. & Kjær, S. B., 18. sep. 2023, (Afsendt) *IEEE 40th European Photovoltaic Solar Energy Conference*. IEEE

Convolutional Neural Network battery pack classification - Gramian angular field vs. Markov Transition Field

Andersen, H. & Paasch, K. M., 2023, *7th E-Mobility Power System Integration Symposium (EMOB 2023)*. 18 udg. Institution of Engineering and Technology, s. 205-211

Winding loss optimization for boost inductor design

Mo, W. K., Paasch, K., Ebel, T. & Andersen, H., 10. okt. 2019, *2019 IEEE 13th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG)*. IEEE, 6 s.

