



Master thesis on Machine Learning for Converter Control (f/m/d)

At Hitachi Energy our purpose is advancing a sustainable energy future for all. We bring power to our homes, schools, hospitals and factories. Join us and work with fantastic people, while learning and developing yourself on projects that have a real impact to our communities and society. Bring your passion, bring your energy, and be part of a global team that appreciates a simple truth: Diversity + Collaboration = Great Innovation

Hitachi Energy Research, in close collaboration with the business, is developing the foundations for the next generation of products in the power grids industry. Hitachi Energy Research globally employs about 200 scientists, 50 of which are in the Swiss office close to Zurich.

A key element in the ongoing energy transition are power electronics converters, since they enable the integration of renewable energy into existing AC grid infrastructure. Their optimal control is particularly challenging, since it is both of discrete (switching) and stochastic nature.

Your responsibilities

We are looking for a student to work on his/her M.Sc. thesis on applying and advancing state of the art Machine Learning methods, while working on this demanding and important task. Possible directions to explore include (but are not limited to) Reinforcement Learning (RL), Imitation Learning, and Monte Carlo Tree Search (MCTS)

Your background

Currently setting up M.Sc. thesis in computer science, electrical engineering, physics, mathematics, or a related field

Experience with Machine Learning

Python and/or Julia skills

Preferable including state of the art Deep Learning frameworks (e.g. Tensorflow)

Strong drive to produce results on a technically demanding task

Proficiency in English

Team player with hands-on mentality

More about us

Hitachi Energy is a global technology leader that is advancing a sustainable energy future for all. We serve customers in the utility, industry and infrastructure sectors with innovative solutions and services across the value chain. Together with customers and partners, we pioneer technologies and enable the digital transformation required to accelerate the energy transition towards a carbon-neutral future. We are advancing the world's energy system to become more sustainable, flexible and secure whilst balancing social, environmental and economic value. Hitachi Energy has a proven track record and unparalleled installed base in more than 140 countries. Headquartered in Switzerland, we employ around 38,000 people in 90 countries and generate business volumes of approximately \$10 billion USD. www.hitachienergy.com

Interested in joining our team? If so, we look forward to receiving your full application (motivation letter, CV, references) only via our online careers tool.

Hitachi Energy Switzerland Ltd.

Peter Pankaczi

Talent Acquisition

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