

## **Hiwi & Bachelor / Master Thesis**

### **Context**

In the SLEW<sup>1</sup> project, an interactive real-time simulation platform for students is being developed for the Power System Dynamics course. The platform enables to run experiments and perform analyses on the results for a more engaging learning experience and a deeper understanding of the complex phenomena.

Several open-source software projects serve as basis: DPsim<sup>2</sup> is applied as real-time simulator, VILLASweb<sup>3</sup> acts as visualization and control software and Jupyter<sup>4</sup> notebooks are used for the analysis of simulation results.

In this context, we are looking for student support:

### **Tasks**

- Support in designing interesting examples for the PSD exercise sessions
- Support in development of Jupyter notebooks for the analysis of simulation results
- Support in development of the real-time simulator

### **Requirements**

- Good knowledge and high interest in the field of power system dynamics
- Motivation to develop interesting teaching material
- Fundamental knowledge of programming (e.g. Matlab/Python/C++)

### **Benefits**

- Gain further experience in the field of power system dynamics
- Becoming part of open-source software projects

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<sup>1</sup> <https://www.acs.eonerc.rwth-aachen.de/go/id/mikmu/lidx/1>

<sup>2</sup> <https://dpsim.fein-aachen.org/>

<sup>3</sup> <https://fein-aachen.org/projects/villas-web/>

<sup>4</sup> <https://jupyter.rwth-aachen.de>

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