Oberseminar
Digital Twin for Energy systems

Digital Twin (DT) is a way of modelling the real world assets into a virtual world for various use cases. For example, a DT of transformer provides the real time information about the transformer, thereby providing valuable insights into its operations. Likewise, interconnected assets and systems can also be adapted into DT to obtain extensive information about complex operations. A sample use case, but not limited to, is operational planning and observability for predictive maintenance. For the design and development of DT, the definitions of DT, data driven modelling approaches, data processing and data modelling approaches are vital and so needs to be explored.

In this Oberseminar, the students will be assigned the tasks of literature research on these topics within the context of energy systems and will also be encouraged to explore the DT area for implementation. Along the way, methods and methodologies of DT, latest trends, available open source DT solutions, data validation processes, etc., will have to be explored. At the end, a detailed documentation has to be submitted, in addition to a presentation / discussion.

Registration deadline: Starting from 01.05.2024 or later
Supervisors: Bharath Ravisankar, Sebastian Peter, Rajkumar Palaniappan, Ulf Häger
Max. participants: 6-8
Language: German or English

Contact:
Bharat Ravisankar
Martin-Schmeißer-Weg 12, Room 2.11
bharathwajanprabu.ravisankar@tu-dortmund.de
Tel.: +49 231 755 2693