

# 1. Sino-German Academic Forum „Intelligent Manufacturing“

## Morning Session: Room Aula

**Moderator: Prof. Dr. H. Opperskalski**

- 09:00          Opening by Prof. Dr. Th. Reiner, Dean of Engineering School, UAS KL
- 09:10          Welcome, Prof Dr. H. Opperskalski, Head of Institute „Energy Efficient Systems“, UAS KL
- 09:20          **Prof. Dr. Wen. Wind turbine blade surface inspection based on deep learning and UAV-taken images+ Q&A**
- 09:40          Prof. Dr. H. Opperskalski, UAS KL: OPC-UA, new communication standard+Q&A
- 10:00          Mr. Jakub Pawlak, M. Eng., TU KL: Possibilities of AI + Q&A
- 10:30          **Prof. Dr. Wang. The Application of Intelligent Manufacturing System in Electrical Machinery Manufacturing Industry + Q&A**
- 10:50          Tea / Coffee break
- 11:00          Prof. Dr. S. Urschel, Head of research area “Highly efficient technical systems” UAS KL: Research at University of Applied Science Kaiserslautern+Q&A
- 11:20          Bold, Sebastian, M.Eng., UAS KL: PhD Thesis: Research project: Reliable state detection of induction motor driven rotating machines via voltage and current+Q&A
- 11:40          **Dr. Guangfei Liang: Brief introduction about Postgraduates Education of SDJU + Q&A**
- 12:00          Lunch, Mensa**

**Afternoon Session 1: E1.020**  
**Intelligent Manufacturing Technology**  
**Moderator: Prof. Dr. H. Opperskalski**

- 13:30      Design and Implementation of High Voltage Automatic Detection System Based on PROFINET (teacher: Xiaoming Ren)
- 13:50      OPC communication (student: Maicy Volnhals)
- 14:10      Application of Machine Learning Algorithms in Literature Review - Taking Wind Power Research as an Example (students: Yang Yang)
- 14:30      Short-term Wind Power Prediction Based on Improved Firefly Algorithm (student: Jiale Ding)
- 14:50      Tea / Coffee break/ Poster
- 15:10      Battery Technologies (student: Franck Djomo Sanwouo)
- 15:30      Capacity Optimization Based on Energy Storage to Restrain Severe Fluctuation of Wind Power (students: Xiaolin Fu)
- 15:50      The need of digitalization (students PPT)
- 16:10      Prof. Dr. H. Opperskalski: Summery and conclusion

**Afternoon Session 2: Room E0.008**  
**Electromobility & Smart Grids**  
**Moderator: Prof. Dr. Ch. Wen**

- 13:30      Robust  $H_{\infty}$  Control for Discrete Switched Systems with Random Sensor and Actuator Faults (teacher Yonhui Liu)
- 13:50      Data-Driven Optimization Based on Random Forest (students: Yuan Zheng)
- 14:10      OCPP: Standard for charging (student: Johannes Klag)
- 14:30      Research on photovoltaic energy storage system using decommissioned power battery (Students: Lu Yan)
- 14:50      Tea / Coffee break
- 15:10      Field oriented control (student: Benjamin Zacher)
- 15:30      Test platform of embedded controller based on Matlab/Simulink (students: Haohao Xu)
- 15:50      Battery technologies (student: Bedel Kossonou)
- 16:10      Prof. Dr. Ch. Wen: Summary & conclusion