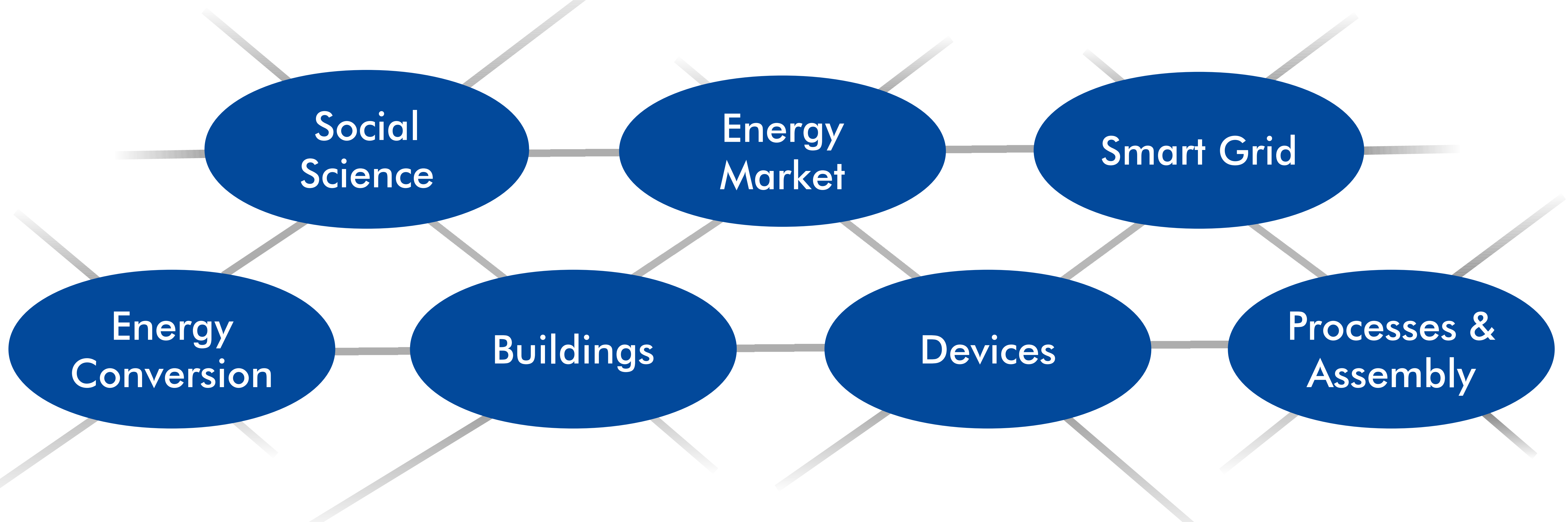


Small Scale Renewable Energy Systems (KleE) Graduate School

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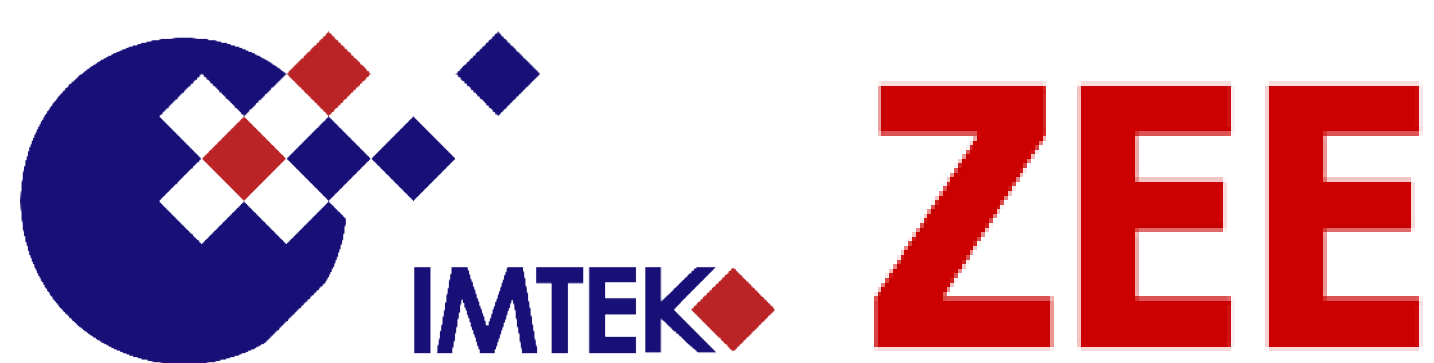


Idea of KleE

The KleE graduate school aims at shaping decentralized renewable energy supply concepts in Germany. Using a holistic approach, a scientific network of engineers, physicists, economists and environmental and social scientists work within a PhD program to develop elements of the next generation energy supply networks. Having started in 2011 the fifteen members use the frame of KleE to share and exchange experiences and knowledge. It is expected that KleE can contribute to a transition of power generation and distribution structure to achieve a more sustainable energy system.

Approaching the renewable energy supply from different points of view gives the members the ability to evaluate the system, its technologies as well as processes and methods in a more integrated way. Energy supply will require linking various fields of expertise from production, distribution, user integration, socio-economic aspects and societal acceptance.

Research Institutions



Department of Microsystem Engineering

Team Prof. Reindl: Electrical Instrumentation
KleE: Opt-powered Microsystems
Team Prof. Reinecke: Process Technology
KleE: Photorechargeable Microbattery-systems
Team Prof. Wöllenstein: Gas Sensor Systems
KleE: Detection of Contaminants in Biogas
Team Prof. Zacharias: Nanotechnology
KleE: Silicon Nanocrystals for Photovoltaic Applications

Department of Psychology

Team Prof. Spada: Cognition, Emotion, Communication
KleE: Societal Acceptance of Renewable Energy Systems

Centre for Renewable Energy

Team Prof. Oesten, Dr. C. Rupper-Winkel:
Socio-economics of renewable energies
KleE: Electricity Market Design

Institute for Energy System Techniques

Team Prof. Bollin: Sustainable Energy Conversion Techniques
KleE: Predictive Automation

Department of Mechanical and Process Engineering

Team Prof. Treffinger: Energy Conversion and Management
KleE: Modeling of Energy Systems

Department of Media and Information

Team Prof. Christ: Mobile Communication and Microwaves
KleE: Communication Networks for Smart Grids

Institute for Applied Research

Team Prof. Jansen: ASIC Design Center
KleE: Wireless Ultra Low Power Sensor Systems

Division of Thermal Systems and Buildings

Dr. Hans-Martin Henning
KleE: Low-Exergy Heating and Cooling Systems

Department of Smart Grids

Dr. Christof Wittwer
Team: Energy Management and Grids
KleE: Energy Agents in Smart Homes
Team: Communication Networks and e-Mobility
KleE: Communication, Distributed Control and Grid Integration of Scalable CPV-Plants

Division of Solar Thermal and Optics

Dr. Werner Platzer
KleE: Latent heat storage for CSP-Systems

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