virtual vehicle

FIELDS OF ACTIVITY

SMART ENERGY & CHARGING SYSTEMS

Framework and tools for energy efficient operation and dimensioning of energy systems

OUR KEY EXPERTISE & USP

- Modelling & Optimization of Energy Systems incl. smart and bidirectional charging with prediction of user behavior
- Vehicle Energy Management & Comfort Improvement incl. Test Benches (climatic chambers, cooling lab)
- ML-based Prognostics and Health Management (PHM) for power electronics

TASKS, METHODS & TOOLS

- Simulation tools for stationary & vehicle-integrated PV-systems
- PV- and battery dimensioning tool „PV2Scale“
- Open source battery simulation framework for EV and stationary batteries
- Zero emission powertrain toolbox for model-based development
- Data-driven analytics for mobility and charging behaviour

SKILLS & RESOURCES

- Energy systems modelling & charging technologies
- Concepts for zero-emission powertrains
- Model-based development of thermal management and refrigeration systems
- Technical and economic feasibility studies
- 30 employees, mainly on senior level

KEY PARTNERS (excerpt)

KREISEL · SAL SILICON AUSTRIA LABS · MAGNA · KEBA · Infineon · NEUMAN ALUMINIUM · rosenbauer · HyCentA · mobility · LIEBHERR · SALZBURG AG · Stanford University

OUR OFFER ...

- Dimensioning and optimized operation strategies for industrial sites with PV-systems, battery storages and bidirectional charging
- Testbed measurements for cooling-, heating- and refrigeration systems
- Improved conditioning of components and systems based on latest research (battery, powertrain, cabin etc.)
- ML-based Prognostics and Health Management for electric powertrains (vehicles, trucks, ships etc.)

... AND YOUR BENEFITS

- Cost-savings and low payback-periods for renewable based energy systems
- Cost-savings through system validation in an early development phase (test beds)
- Reliable operation of components and systems close to their limits, improved thermal comfort
- Lifetime improvement, higher availability and lower costs due to predictive maintenance

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Find out more: