



# INDUSTRY 4.0



## Technical Topics in "SPEEDAM 2018"

### T1 - Power Electronics

- \_ Power Electronic Devices
- \_ Converter Topologies, Modelling and Control
- \_ Multilevel converters
- \_ High Frequency Power Converters
- \_ Soft switching
- \_ Renewable Energy Applications
- \_ Fault Tolerant Configurations
- \_ UPS
- \_ Aerospace Applications
- \_ Converter Topologies in PET Applications

### T2 - Electrical Machines & Drives

- \_ Modelling, Analysis & Design of Electric Machines
- \_ Finite Element Analysis
- \_ Special Electric Machines & Actuators
- \_ Micromotors
- \_ Electrical Drives Control
- \_ Transformers and coils
- \_ Vibrations and acoustic noise
- \_ Multi-Motor Drive Systems
- \_ High Speed Drives
- \_ Sensorless Control for Electrical Drives
- \_ High Efficiency Drives
- \_ Diagnostics in Electrical Machines & Drives
- \_ Identification Problems
- \_ Integrated Systems
- \_ Inductive Power Transfer
- \_ Home and Low Power Appliances
- \_ High Performance Drives for Aerospace Applications

### T3 - Smart-Grids Issues

- \_ Concept and Structure of Smart Grids
- \_ Distributed Generation Problems
- \_ Power Electronics in Smart Grids
- \_ Integration of Green Energy Technologies
- \_ Integrated Energy and Communications
- \_ MicroGrids
- \_ PET Integration in Smart Grids

### T4 - Electrical Power Quality

- \_ Active Filters and Front-Ends
- \_ ElectroMagnetic Compatibility (EMC) and Interference (EMI)
- \_ Power Line Conditioners
- \_ Perturbation Effects
- \_ Power Quality Measurements
- \_ Supply Continuity and Reliability

### T5 - Electrical Traction

- \_ Traction Systems
- \_ Traction Drives
- \_ Linear Motor Drives
- \_ Superconductivity Applications
- \_ Contactless Energy Transmission
- \_ Diagnostics, Reliability, Dependability
- \_ Communication Systems
- \_ PET Sizing and Design in Railway Systems

### T6 - Industrial Automation

- \_ Smart factory
- \_ Field Bus and Communication Systems
- \_ Mechatronic Systems
- \_ Sensing and Testing Techniques
- \_ Intelligent Control and Signal Processing
- \_ Flexible Manufacturing Systems
- \_ Manufacturing and Process Automation Systems

### T7 - Renewable Sources of Energy and Cogeneration

- \_ Integration of Power Systems
- \_ Energy Saving
- \_ Cogeneration (CHP) and Trigeneration (CCHP) Systems
- \_ Hybrid Systems
- \_ Solar, Wind and Geothermal Energy
- \_ Ocean and Wave Energy
- \_ Biomass and Harvesting Energy

### T8 - Energy Storage

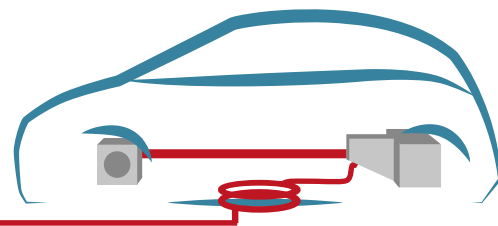
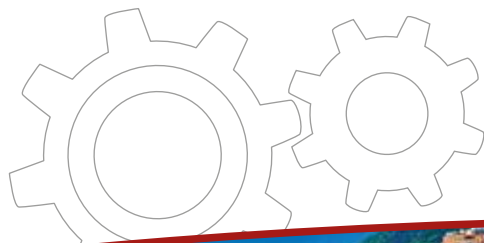
- \_ Storage Battery Systems
- \_ Supercapacitive Energy Storage
- \_ Battery and Supercapacitors Management Systems
- \_ High Speed Flywheels

### T9 - Road Electrical Vehicles

- \_ On-Board Energy Storage and Advanced Batteries
- \_ Hybrid Configurations
- \_ Drives for Road Vehicles
- \_ Plug-in Electric and Hybrid Vehicles
- \_ Battery Charging Infrastructures
- \_ Inductive Wireless Charging
- \_ Automotive Power Electronics
- \_ Fuel Cells Vehicles

### T10 - Marine and Aerospace Applications

- \_ All Electric Ship
- \_ All Electric Aircraft
- \_ Aircraft EMActuators



## DEADLINES

**\$\$<sup>v</sup> December 2017:**  
provisional full paper  
submission

**20<sup>th</sup> February 2018:**  
acceptance notification

**30<sup>th</sup> April 2018:**  
final full paper  
submission

