RT26 KASSEL

## RT26 Conference Europe

# Programme overview

17-19 November, 2026

Kassel, Germany

Fraunhofer IEE Facilities

**5** Keynotes

**4** Tutorials

**4** Labs

## With the valued support of:

SPITZENBERGER SPIES

EGSTON POWER

Averna Powered by SPHEREA

REGATRON programmable power

cinergia

### TUESDAY, 17 NOVEMBER

- Lab circle tour
- Tutorials

### WEDNESDAY, 18 NOVEMBER



- Large loads | Data centers & SST
- MV Drive
- Co-simulation, Cyber-Physical & Digital Twins
- E-Mobility
- Large Scale Transmission Grid Simulation
- Transmission-level PE (HVDC, MMC, STATCOM)
- Innovation Spotlight

### THURSDAY, 19 NOVEMBER



- Protection Relay Testing & Digital Substations
- Test Benches & PHIL
- Energy Generation & Storage (BESS)
- SPS Software
- SysTec Lab Visit

# Tuesday, 17 November 2026

## Setup · Tutorials · Lab circle tour

RT 26 KASSEL

13:00 - Badge registration

| | Conference room Immerwahr<br>40 pax - 0.103 (EG) | Workshop room Zuse<br>20 pax · 1.310 (1. OG) | Lab Circle tour |
|---|---|---|---|
| | TUTORIALS | TUTORIALS | LAB VISIT |
| 14:00 - 15:30 | **Martin Suberski · TU Ilmenau Transfer**<br>From motor emulation to physical validation: De-risking inverter control development with PHiL | **Sebastian Hubschneider · OPAL-RT**<br>PPC testing for Grid-connected BESS applications: Integrating black-box inverter controllers into real-time simulation | **Lab Circle Tour (2 rounds)**<br>Guided tour through the Medium-Voltage and HIL laboratory, the control room Digital Energy and the District Heating Network Lab, showcasing digital twins, hardware-in-the-loop testing, grid operation technologies and innovative thermal energy systems |

15:30 - Coffee break

| | | | |
|---|---|---|---|
| 16:00 - 17:30 | **Marija Stevic · OPAL-RT**<br>Accelerating data center innovation: Hardware-in-the-Loop testing for solid-state transformers and advanced power electronics | **Steffen Vogel · OPAL-RT**<br>Performing continuous integration testing using the GIT version control systems and RT-LAB | |
| | WELCOME | | |
| 18:00 - 18:30 | Caroline Martel · General Manager - OPAL-RT<br>Growing together: OPAL-RT's growth strategy and R&D partnerships in Germany | | |

18:30 Welcome cocktail

OPAL-RT TECHNOLOGIES

# Wednesday, 18 November 2026

## Keynotes · Technical sessions · Industry insights

RT 26 KASSEL

08:30 - Coffee & tee

**KEYNOTES**

| | |
|---|---|
| 08:30 - 09:00 | Marco Jung · Fraunhofer IEE - Power electronics dominated grid. Future challenges and trends |
| 09:00 - 09:30 | Jay Ramachandran & Mahmoud Elkazaz · NESO - Operating grid towards net zero - Modelling and tool requirements and challenges |

**LARGE LOADS | DATA CENTERS & SST**

| | |
|---|---|
| 09:30 - 10:00 | François Tempez · OPAL-RT - HIL validation for data centers |

10:00 - Coffee break

| | Conference room Schmid-Cramer<br>80 pax · 0.104/0.105 (EG) | Conference room Immerwahr<br>40 pax - 0.103 (EG) |
|---|---|---|
| | **MV DRIVE** | **CO-SIMULATION, CYBER-PHYSICAL & DIGITAL TWINS** |
| 10:30 - 11:00 | **Dominik Hofmeyer · GE Vernova Berlin**<br>CHIL testing of MV converter controllers for variable speed pumped storage hydro applications | **Artem Kashtanov \| João Pedro Scherer Cipriani · Otto-von-Guericke Universität**<br>Real-Time power system testbeds: Automation validation and distributed co-simulation |
| 11:30 - 11:30 | **Valerio Salis · ABB Drive**<br>ACS5000 MV drive testing in HiL | **Yuqi Wang · University of Sheffield**<br>Cyber-physical power system simulation: Platform development and cybersecurity analysis |
| 11:30 - 12:00 | **Harold Ngueuongodia · GE Vernova Belfort**<br>Real-time simulator platform for medium-voltage power conversion and control systems | **Derk Gonschor · Hochschule Bonn-Rhein-Sieg**<br>Electrical and thermal real-time model of an ANPC photovoltaic inverter for digital twin application |

12:00 - Lunch

OPAL-RT TECHNOLOGIES

# Wednesday, 18 November 2026

## Keynotes · Technical sessions · Networking

RT 26 KASSEL

| | Conference room Schmid-Cramer<br>80 pax · 0.104/0.105 (EG) | Conference room Immerwahr<br>40 pax - 0.103 (EG) |
|---|---|---|
| | E-MOBILITY | LARGE SCALE TRANSMISSION GRID SIMULATION |
| 13:30 - 14:00 | **Timo Roesch · OPAL-RT**<br>Next generation BMS HiL testing: how virtualizing chipsets cuts cost while increasing test coverage | **Bernd Schweinshaut · Friedrich-Alexander-Universität (FAU)**<br>From Offline to Real-Time Simulation: An Automated Workflow for the Continental European Transmission Grid |
| 14:00 - 14:30 | **Andrey Popov · Keysight Technologies Deutschland**<br>From V2G to virtual power plants: Testing strategies for grid-interactive resources | **Dominik Frauenknecht · Friedrich-Alexander-Universität (FAU)**<br>Integration of Inverter-Based Resources into Real-Time Simulation of the Continental European Transmission Grig |
| 14:30 - 15:00 | **Martin Suberski · TU Ilmenau Transfer**<br>From virtual converter to physical grid: FPGA-based PHiL for early-stage grid-interaction testing | **Francisco Gonzalez-Longatt · fglongattLTD \| Loughborough University**<br>Bridging simulation and reality: Lessons learned from IEC 61850 and ANSI C37.118 applications in modern power systems |
| 15:00 - Coffee break | | |
| | TRANSMISSION-LEVEL PE (HVDC, MMC, STATCOM) | INNOVATION SPOTLIGHT |
| 15:30 - 16:00 | **Moritz Bengler & Ibrahim Elsabrouty · Reinhausen**<br>From OLTCs for transformers to MMC STATCOMs: Accelerating power electronics development through large-scale HiL testing with OPAL-RT | **César García Veloso · École polytechnique fédérale de Lausanne (EPFL)**<br>Advanced dual P+M IEEE/IEC Std. Compliant PMU library for real-time simulation |
| 16:00 - 16:30 | **Lorenz Graf · Siemens Energy**<br>DevOps with OPAL-RT simulators: an insight into Siemens Energy's control software release under the CI/CD approach | **Qian Liu · University of Warwick**<br>Enhanced current-limiting control design for grid-forming inverters under asymmetric grid disturbances with HiL validation |
| 16:30 - 17:00 | **Frédéric Colas · Arts et Métiers ParisTech - L2EP**<br>From Hardware-in-the-Loop to prototype: validating a trapezoidal energy-balancing control for an M2DC converter, and passing the method on through real-time simulation training | **TBC** |
| 18:30 Get-togehter dinner | | |

OPAL-RT TECHNOLOGIES

# Thursday, 19 November 2026

## Keynotes · Technical sessions · Industry insights

RT 26 KASSEL

| | | |
|---|---|---|
| | KEYNOTES | |
| 08:30 - 09:00 | Ravinder Venugopal · OPAL-RT - Accelerating Innovation - Electrical System Simulation for the Era of Big Energy | |
| 09:00 - 09:30 | Douglas Wilson · GE Vernova - Zonal Control with Synchrophasors: Unlocking Value from Distribution System Services | |
| 09:30 - 10:00 | Pedro Rodriguez · LIST - Grid-Forming Converters: Concepts, Grid-Code Requirements and Validation Challenges | |
| 10:00 - Coffee break | | |
| | Conference room Schmid-Cramer<br>80 pax · 0.104/0.105 (EG) | Conference room Immerwahr<br>40 pax - 0.103 (EG) |
| | PROTECTION RELAY TESTING & DIGITAL SUBSTATIONS | TEST BENCHES & PHIL |
| 10:30 - 11:00 | **Simon Nagy & Vladyslav Piskarov · Sprecher Automation**<br>Test automation with Hypersim and Python | **Adam Zuga & Florian Hans · Fraunhofer IWES**<br>Integrating multi-physics real-time simulations at test bench level |
| 11:00 - 11:30 | **Maté Rozsa · Budapest University of Technology and Economics (BME)**<br>Beyond power system simulation: Real-time cyber-physical testbeds for digital substation IDS evaluation | **Alexis Papandreou · ORE CATAPULT**<br>Converter-level testing for offshore wind turbine powertrains at ORE Catapult: How might we do it? |
| 11:30 - 12:00 | **Everton Alves · INESC TEC**<br>Real-time HiL validation of adaptive protection and voltage control for active medium-voltage distribution networks | **Gernot Pammer · AVL List**<br>Power-Hardware-in-the-Loop |
| 12:00 - Lunch | | |

OPAL-RT TECHNOLOGIES

RT 26 KASSEL

# Thursday, 19 November 2026

## Technical sessions · Industry insights · Lab visit

| | Conference room Schmid-Cramer<br>80 pax · 0.104/0.105 (EG) | LAB VISIT |
|---|---|---|
| | ENERGY GENERATION & STORAGE (BESS) | |
| 13:30 - 14:00 | **Pitambar Jankee · Siemens Energy**<br>Closing the loop before VDE-AR-N-4110 certification: CHIL-based validation of BESS controller using OPAL-RT | **13:30 – 15:00**<br>**SysTec lab visit**<br>**Limited seats** |
| 14:00 - 14:30 | **Bao Lai · Fluence Energy**<br>Development and validation of utility-scale battery energy storage control and automation systems using real-time simulation | |
| | SPS SOFTWARE | |
| 14:30 - 15:00 | **Louis Raymond · OPAL-RT**<br>SPS (SimPowerSystems, specialized power systems): The situation has evolved. | |
| 15:00 - 15:30 | Closing session | |

15:30 - Farewell coffee **See you in 2027!**

Please note that the programme is subject to change according to organizational requirements

OPAL-RT TECHNOLOGIES