

RT24 UK the 28 & 29th of November 2024,
at Edinburgh International Conference Centre (EICC)

RT24
ELECTRIFYING THE WORLD
BEYOND REAL TIME

28th MORNING SCHEDULE

Keynote : Electrifying the World Beyond Real-Time

08:30 - 09:00 AM

Room : Lowther



Jean Bélanger

President and CTO
Opal-RT Technologies

Keynote : Pairing Wide Area Control and Real-time HiL

Simulation for Zero Carbon Grid Technology

09:00 - 09:30 AM

Room : Lowther



Douglas Wilson

Chief Scientist
GE Vernova

Keynote : Challenges and Opportunities for NESO in Modelling

Power Systems under Clean Power 2030

09:30 - 10:00 AM

Room : Lowther



Yuan Chen

Model Development Manager
NESO

Morning Break: "Take a bite at the Expo"

10:00 - 10:30 AM

Room : Platform 5 Café

Microgrid & DC Grids

Room : Lowther

Protection and Control for Power Systems

Room : Menteith

Tutorial & Training

Room : Ochil

Using OPAL-RT Simulators for HIL Testing of
MicroGrid Solutions - Practical Experience

10:30 - 11:00 AM

Oleg Bagleybter Senior Staff Engineering Manager
GE Vernova

An Innovative Approach to Hardware in Loop
Testing for Controlled Auto-Reclosing of
Transmission Lines

10:30 - 11:00 AM

Urmil Parikh Principal Engineer Power Systems and
Global Program Manager Controlled Switching
Hitachi Energy Sweden AB

TUTORIAL

Black-start in a highly
IBR-penetrated grid

10:30 - 11:30 AM

Short-Term Control of Heat Pumps Supporting
Power Grid Operation in Multi-Energy
Systems.

11:00-11:30 AM

Daniele Carta Group Leader Energy Systems Engineering
Forschungszentrum Jülich GmbH

Use of HiL in Development of Zonal
Autonomous Control for Power Systems

11:00-11:30 AM

Sean Norris Senior innovation application architect
GE Vernova

TUTORIAL

Chief Scientist
GE Vernova

Advanced Energy Solutions
New Solution Development Perspectives

11:30 - 12:00 PM

Bruce Ikenna Efika Head of Solution Development
BP Advanced Energy Solutions

Validation of Substation Automation using
Real-time simulator: a Blackstart use case

11:30-12:00 PM

Ngoc Bao Lai Principal Controls Engineer
Fluence Energy GmbH

TUTORIAL

Simplifying MMC
Simulation

11:30-12:30 PM

Combined real-world sites, RCP and P-HiL for
interoperable GFM validation in Microgrid

12:00-12:30 PM

Ron Brandi Team Leader
Fraunhofer IEE

Modelling and Control of Sequence
Decomposed Grid-Forming IBRs with CHIL
Validation

12:00-12:30 PM

Qian Liu PhD Student
University of Warwick

TUTORIAL

Team Lead Power
Electronics
Opal-RT Technologies

Lunch break with networking and visit of the demo & expo

12:30 - 01:30 PM

Room : Platform 5 Café

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28th AFTERNOON SCHEDULE



Power Hardware-in-the-Loop Room : Lowther

OPAL-RT Approach for PHIL and Motor Emulator
01:30-02:00 PM

Timo Roesch Market Development Director Power
Electronic Systems
OPAL-RT Technologies

Flexible Laboratory Setups for Grid-Forming
Control: Advances through RCP and P-HiL
02:00-02:30 PM

Jonas Steffen Group Leader
Fraunhofer IEE

On-line Admittance Identification in
IBR-Dominated Power Systems via
Power Hardware-in-the-Loop
02:30-03:00 PM

Yue Zhu Research Associate
Imperial College London

PHIL Instability Prediction Using Frequency
Domain Impedance Analysis and Prediction
03:00-03:30 PM

Frédéric Colas Research Engineer
L2EP/ENSAM

Power Electronics Room : Menteith

Railway traction system controllers
01:30-02:00 PM

Florent Chabrier Drivetrain Simulation Lead
SNCF Voyageurs

Parallel Topologies and Accuracy with
Parasitics in Real Time
02:00-02:30 PM

Martin Butcher Consulting Engineer
GE Power Conversion

Using OPAL-RT Simulators for Rapid Control
Prototyping of Finite Control Set-MPC and AI
02:30-03:00 PM

Paul Judge Reader in Power Electronics
Ning Li PhD Student
University of Edinburgh

How to accelerate Power Electronics R&D cycle
with PELab and OPAL-RT Real-Time Simulators
03:00-03:30 PM

Mubeen Abbas CEO
TechCore

Tutorial & Training Room : Ochil

TRAINING #1

HYPERSIM
01:30-03:30 PM

Vithuran Vilvarajah
Team Lead for
Support Europe
Opal-RT Technologies

Afternoon Break: "Tea Time !"

03:30 - 04:00 PM

Room : Platform 5 Café

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28th AFTERNOON SCHEDULE

Advances in Real Time Simulation Technology and Techniques Room : Lowther

Digital Power - Simulation Technologies to Accelerate Grid Evolution

04:00-04:30 PM

Ravinder Venugopal VP, BD and R&D EMEA
Opal-RT Technologies

Subject TBD

04:30 - 05:00 PM

First Name Last Name Job title
Company

Development of a Facility for MW-Scale Electrical Testing, Incorporating PHIL Techniques

05:00-05:30 PM

Max Parker Senior R&D Engineer, Power Electronics Machines and Drives PNDC
University of Strathclyde

Power Electronics

Room : Menteith

Success Story : Development of Digital Twin for New Soft Starter Offer Based on Hardware In the Loop

04:00-04:30 PM

Simon Gervais R&D Engineer
Schneider Electric



PHIL for Grid Forming Inverter Testing

04:30 - 05:00 PM

Sebastian Hubschneider R&D Engineer
Opal-RT Technologies

Success Story :

Special Features of OPAL-RT's Power Electronics Solutions to Ease Controller Testing

05:00-05:30 PM

Pierre-Yves Robert Strategic Technical Manager and Software Architect
Opal-RT Technologies



Tutorial & Training

Room : Ochil

TUTORIAL

Assessing Reliability of Hardware in Loop Test model for Controlled Switching of 400KV Shunt Reactor Compensated Transmission Line
04:00-05:00 PM

Urmil Parikh

Principal Engineer Power Systems and Global Program Manager
Controlled Switching
Hitachi Energy Sweden AB

TUTORIAL

The View of The Smart Inverter Library and Testing
05:00-05:30 PM

Mehrdad Kazemtabrizi

Smart Grid Simulation Specialist OPAL-RT Technologies
Nayeem Ninad
Research Engineer Canmet

OPAL-RT Technologies Dinner

After 07:00 PM



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29th MORNING SCHEDULE

Keynote : Grid Analysis Tools for TSOs: Needs and Projection

08:30 - 09:00 AM
Room : Lowther



Jean-Baptiste Heyberger
Architecture and System Director
Super Grid Institute

Keynote : National HVDC Centre-Experiences of Large Scale Real-Time Simulations, and Future Outlooking GB

09:00 - 09:30 AM
Room : Lowther



Ben Marshall
Technology Manager and Power System Engineer
The National HVDC Centre

Keynote : Lessons Learnt from 5 years of Operating a PHIL/CHIL Environment for Power System Studies

09:30 - 10:00 AM
Room : Lowther



Prof. Willem Leterme
University Professor
RWTH Aachen University

Coffee Break

10:00 - 10:30 AM

Room : Platform 5 Café

HVDC, MMC & FACTS
Room : Lowther

Cybersecurity and Digital Twins
Room : Menteith

Tutorial & Training
Room : Ochil

MTDC Grid Reconfiguration - Sequential Control Principles and First Applications

10:30 - 11:00 AM

Lucas Molina Barros R&D Engineer
SuperGrid Institute



Overview of Cybersecurity with OPAL-RT

10:30 - 11:00 AM

Frank Corry Technical Marketing Engineer at Keysight
Louis Raymond Market Development Manager Opal-RT

DIAMOND Sponsor

Co-simulation Opportunities for Large Area Models with HVDC Replicas

11:00-11:30 AM

Colin Foote Senior Simulation Engineer
The National HVDC Centre

Key Cybersecurity Research for Energy Systems: Insights from KASTEL Security Lab Energy

11:00-11:30 AM

Ghada Elbez Group Leader
Karlsruher Institut für Technologie (KIT)

TRAINING #2

HYPERSIM

10:30-12:30 PM

Vithuran Vilvarajah
Team Lead for Support Europe
Opal-RT Technologies

Real-time simulation for HVDC interoperability first experience with the InterOPERA project

11:30-12:00 AM

Benoit de Foucaud Electrical Engineer
RTE

TUTORIAL

Importance of Cybersecurity Simulation

11:30-12:00 PM

Steffen Vogel R&D & Software Engineer
OPAL-RT Technologies

Subject TBD

12:00-12:30 PM

Agusti Egea Alvarez Professor
Ning Yang Research Associate
University of Edinburgh / SP Energy Networks

Design of an adaptive digital twin to increase transparency in power grids

12:00-12:30 PM

Stephan Ruhe Research Associate
Fraunhofer IOSB-AST

Lunch break with networking and visit of the demo & expo

12:30 - 01:30 PM

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29th AFTERNOON SCHEDULE

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Inverter Based Energy Resources

Room : Lowther

Subject TBD

01:30-02:00 PM

Michael Smailes Principle Research Engineer
ORE Catapult

Cybersecurity and Digital Twins

Room : Menteith

Digital substation HIL co-simulation, challenges
and cybersecurity aspects

01:30-02:00 PM

Gergely Dürögő MSc Student
Máté Rózsa PhD Student
Budapest University of Technology and Economics

Tutorial & Training

Room : Ochil

TUTORIAL

How to make the
most out of your
eHS / FPGA
Simulation?

01:30-03:00 PM

Sebastien Cense
Director of FPGA Simulation
OPAL-RT Technologies

Role of Hardware-in-the-Loop Testing for
Fast Deployment of Grid-Forming Converters

02:00-02:30 PM

Sulav Ghimire Power Systems Engineer
Siemens Gamesa

Cyber-Physical Power Systems Digital
Simulation and Security Analysis

02:00-02:30 PM

Xin Zhang Professor
University of Sheffield

Power Hardware-in-the-Loop Control for Hybrid
Energy Storage Systems

02:30-03:00 PM

Masoome Maroufi PhD Researcher
Karlsruhe Institute of Technology

Seamless Real-Time co-simulation of Power
Systems: A Deep Dive into eMEGASIM &
ePHASORSIM

02:30-03:00 PM

Shailendra Singh Research Engineer R&T
LIST

Closing Session OPAL-RT

03:00 - 03:30 PM

Room : Lowther



Jean Belanger
President and CTO
Opal-RT Technologies