

AGENDA



OPAL-RT's 14th International Conference on Real-Time Simulation

October 18 - 21, 2022

Le Westin, Montréal, Québec

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de Energias Renovables - UNAM, Mexico

DAY 1 - TUESDAY, OCTOBER 18th

WELCOME (ROOM: GRAND PLACE)

18:00 - 21:00 — WELCOME COCKTAIL / REGISTRATION

DAY 2 - WEDNESDAY, OCTOBER 19th

		WELCOME (R			
8:00 - 8:45		BREAKFAST			
8:45 - 9:15		WELCOME TO RT22 - DAY 2			
9:15 - 10:45		KEYNOTE - POWER SYSTEM			
10:45 - 11:00	—	BREAK 1			
		PRESENTATION (ROOMS)			
		<i>FORTIFICATION</i>	▼ST-ANTOINE▼	▼VILLE-MARIE▼	
		CYBERSECURITY	E-MOBILITY AND TRANSPORTATION	INVERTER BASED RENEWABLES INTEGRATION	
11:00 - 11:30	_	Coming soon!	Coming soon!	Coming soon!	
11:30 - 12:00	-	Coming soon!	Modelling Onboard chargers with High CLLC PWM resolution and Immunity to AC grid harmonics by Moctar Coulibaly, Valeo, France	Coming soon!	
12:00 - 13:00	_	LUNCH			
13:00 - 13:30	-	MG Simulation CHIL via FPGA IEC 61850 GOOSE Subject to Cyber-Attacks by Mike Mekkanen, University of Vaasa, Finland	Investigation of Ripple Currents in DC Ship Systems with Power Hardware-in- the-Loop by Christoph Klie, Hamburg University of Technology, Germany	Implementation of PMSG based Wind Turbine System using OPAL-RT Digital Controller by Mendi Balaji, NIT ROURKELA, India	
13:30 - 14:00		Microgrid active power diagnostic against cyber-physical attacks using NARX networks by Djaffar OULD ABDESLAM, University of Haute Alsace, France	Control Design for V2G-enable DC charging station with controller- hardware-in-loop (C-HIL) by Asal Zabetian Hosseini, McGill University, Canada	WAMS based Real-time Voltage Stability Monitoring for various Load Models and a Wind Farm by RAJU CHINTAKINDI, Visvesvaraya National Institute of Technology - Nagpur, India	
14:00 - 14:30	4	Defending Power Grids from Real-World Cyber-Attacks Using Network Digital Twins by Lloyd Wihl, Keysight, United States	DIL - Driver in the Loop EV Simulator by Chris Vespa, OPAL-RT TECHNOLOGIES, Canada	Testbed for Low Carbon Energy Systems under High Penetration of Power Electronics by HECTOR CHAVEZ, USACH, Chile	
14:30 - 15:00	-	TBA by Michel Lemaire, OPAL-RT TECHNOLOGIES, Canada	The real time application : digitalisation of the Iron Bird by Debiane Achour, Certia, France	Distributed Generation by Renewable Energy Conversion Systems through Power Electronics	



		PRESENTATION (ROOMS)		
		FORTIFICATION	▼ ST-ANTOINE▼	VILLE-MARIE
		MICROGRIDS	GRID OPERATION, STABILITY AND DIGITAL TWINS	PROTECTION AND CONTROL FOR POWER SYSTEMS
15:20 - 15:50	_	µController development active power managements and testing via CSIL-HIL Vaasa Harbour by Mike Mekkanen, University of Vaasa, Finland	TBA Digital Twins by OPAL-RT by AXES, OPAL-RT, Canada	Substation Automated Training Simulator (SATS) by Genesis Alvarez, Dominion Energy, USA
15:50 - 16:20	_	Co-Simulation of Power and Energy Systems by Anudeep Medam, Idaho National Laboratory, United States	Testing curative measures in extra-high and high-voltage grids by Martin Wolter, OvGU Magdeburg, Germany	Real Time Performance Analysis of Transformer Differential Protection based on IEC 61850-9 by Adriano Morais, Federal University of Santa Maria, Brazil
16:20 - 16:50	-	Dynamic Control of An Islanded Microgrid with Multi-distributed Energy Sources Basedon VSM by BINYU XIONG, Nanyang Technological University, Singapore	Software in the loop for on line dynamic security assessment of the power system by David Panchi, OPERADOR NACIONAL DE ELECTRICIDAD -CENACE, Ecuador	Novel strategy for Fault e-Diagnosis of WECS Using Wavelet based on Rt-Lab & Arduino by Abdeldjebar Hazzab, École de Technologie Supérieure de Montréal, Canada
16:50 - 17:20		Developing scalable, high-fidelity microgrid models for validating resilient controls by Aditya Ashok, Pacific Northwest National Laboratory, United States	TBA by Georgios Konstantinou, School of Electrical Engineering and Telecommunications, UNSW, Australia	Hardware-in-the-loop Simulation for Operational Test of Substation Protection and Control by Wagner Seizo Hokama, CPFL ENERGIA, Brazil

17:20 - 17:30 - RT22 - CLOSING DAY 2

DAY 3 - THURSDAY, OCTOBER 20th

WELCOME (ROOM: FORTIFICATION)				
8:00 - 9:00	_	BREAKFAST		
9:00 - 9:15	_	WELCOME TO RT22 - DAY 3		
9:15 - 10:45	—	KEYNOTE - E-MOBILITY & TRANSPORTATION		
10:45 - 11:00	—	BREAK 1		
		PRESENTATION (ROOMS)		
		FORTIFICATION	▼ST-ANTOINE▼	VILLE-MARIE
		ENERGY CONVERSION		
11:00 - 11:30	_	Variable Frequency Transformer real- time simulation performance evaluation with OPAL-RT by An Byeonghyeon, Mokpo National University, Republic of Korea	Coming soon!	Coming soon!
11:30 - 12:00	-	Real-Time Simulation for Modular Multilevel Converter in Maschinenfabrik Reinhausen (MR) by Ibrahim Elsabrouty, Maschinenfabrik Rinhausen GmbH (MR), Germany	Coming soon!	Coming soon!
12:00 - 13:00	-	LUNCH		



		PRESENTATION (ROOMS)		
		FORTIFICATION	V ST-ANTOINE V	VILLE-MARIE V
		MICROGRIDS	E-MOBILITY AND TRANSPORTATION	ADVANCES IN REAL-TIME SIMULATION TECHNOLOGY AND TECHNIQUES
13:00 - 13:30	_	Modeling and real time simulation of Jordan campus microgrid using RT-LAB platform by KHIAT MOUNIR, ENPO-MA, Algeria	Power Hardware-in-the-Loop: Improved capabilities for testing inverters by Uday Deshpande, D&V Electronics USA, United States	Efficient Hardware-in-the-Loop Techniques for Power Electronics Teaching and Research by Jahangeer Soomro, Sukkur IBA University, Pakistan
13:30 - 14:00	_	Digital-Twin of a Real Microgrid Project in Brazil by Thais Blasi, Federal University of Paraná, Brazil	Coming soon!	Possibilities for the Use of Single Board Computers in Hardware-in-the-Loop Systems by Philipp Schmitz, Hochschule Bonn- Rhein-Sieg, Germany
14:00 - 14:30	_	Real-Time Control of Power Take-Off using PDC3 Control by Ronald Matthews, Sandia National Laboratories, United States	How to build a complex HIL system for Aerospace with NI VeriStand and PXIe by Vincent Carpentier, Neosoft Technologies, Canada	Real-time Simulation: Opening up markets through human capital development by Adekunle OYENUSI, National Power Training Institute of Nigeria (NAPTIN), Nigeria
		FACTS & HVDC	POWER-HARDWARE-IN-THE-LOOP	
14:30 - 15:00	-	HIL MTDC test bench for the testing and validation of control and protection functions by Louis Filliot, SuperGrid Institute, France	EXPERIMENTAL MICROGRID TESTBED BASED ON OP4510 FOR THE UNIVERSIDAD DISTRITAL OF BOGOTÁ by Nelson Leonardo Diaz Aldana, Universidad Distrital Francisco José de Caldas, Colombia	Remote-Controlled Hardware-in- the-Loop Laboratory for Engineering Education by Derk Gonschor, Bonn-Rhein-Sieg University of Applied Sciences, Germany
15:00 - 15:20	—	BREAK 2		
15:20 - 15:50	-	MVDC Station design and Opal-RT Simulation performance evaluation by TaeHun Kim, Mokpo National University, Republic of Korea	PHIL for accelerating the energy transition - an overview of research applications at SGTL by Marcel Esser, TU Dortmund University, Germany	INVERTER BASED RENEWABLES INTEGRATION Real-Time T&D Co-Simulation for Testing Grid Impact of High DER Participation by Hossein Hooshyar, New York Power Authority, United States
15:50 - 16:20	_	Fault current limiting control for three- phase Dual-Active Bridge by Raphael Mencher, Power Generation and Storage Systems (PGS) at RWTH Aachen, Germany	Power Hardware-in-the-Loop (PHIL) for Microgrid Studies: Lucas-Nuelle Training Systems and OPAL-RT Microgrid Testbench by Fabian Schwarz, Lucas-Nülle GmbH, Germany	Grid Impact Analysis of Electric Vehicles Integration - A Real-Time Simulation Approach by Bright Tetteh, University of Cape Town, South Africa
16:20 - 16:50	-	Experimental Assessment of Modular Multilevel Converters for HVDC Transmission Systems by Matias Diaz, USACH, Chile	(16:20-17:20) Power Hardware-in-the- Loop: Considerations for the setup of a closed-loop test bench by Sebastian Hubschneider, OPAL-RT Germany GmbH. Germany	Time- versus Frequency-Domain Analyses of EMT Interactions and System Stability by Jian Sun, Rensselaer Polytechnic Institute, United States
16:50 - 17:20		Accelerating development of new multilevel converters using advanced real-time simulators by Liwei Wang, UBC Okanagan, Canada		Marine Renewable Energy for the grid: R&D challenge from France Energies Marines expertise by Florian Dupriez-Robin, France Energies Marines, France

CLOSING (ROOM: FORTIFICATION)

17:20 - 17:30

RT22 CLOSING DAY 3



COCKTAIL DINNER (LE PARQUET)

18:30 - 23:00

25TH ANNIVERSARY CELEBRATION!



DAY 4 - FRIDAY, OCTOBER 21st

VISIT (OPAL-RT)

11:00 - 14:00

OPAL-RT HEADQUARTERS VISIT & POSTER SESSIONS

THANK YOU FOR VISITING US AT RT22!

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