3rd Training Event of DiTArtIS Project Combined with Sessions of AIE Workshop Program

Monday 20.5

9.00Start and coffeeOrg of the second	Nissi auditorium, Ankkuri building				
10.00-11.00 Keynote speece of AI, Physics, Computing, and Control for Energy Transformation (1) 10.00-11.00 Keynote speece of AI, Physics, Computing, and Control for Energy Transformation (1) Session-1: AI/ML for Smart Energy Systems Chair: Enio Costa Resende (1) (1) 11.00-11.20 Comparison between Symmetrical Short Circuit Current Contribution of Droop-Based Grid Forming Integrated Systems (1) 11.20-11.40 Fundamental Assessment of Oscillatory Performance of Grid-Forming Integrated Systems (1) 11.40-12.00 Alvored Approach to Prediction of the Transient Recovery Voltages in Shurt Reactor Circuit: Breakers and Determination of Hazardous Operation in High-Voltage Transmission Systems (1) 12.00-12.20 Analyzing the Performance of AC Microgrids in Stand-Alone Operation with Artificial Neural Network Controllers (1) 13.20-14.20 Keynote speech #2: Prof. Kevin Tansey, University of Leicester – AI and EO for Sustainability Monitoring (1) 14.20-14.40 Virtualized Intelligent Relaying of Smart Grid Over 5G Network (1) 14.20-15.00 Inverter Dynamic Response Simulation via Neural Ordinary Differential Equations (1) 15.00-15.20 Advancing Sustainable Maritime with AI/ML Enhanced Hardware-in- the-Loop Testing (1) 15.20-16.20 Coffee break at Oscar & Poster Session in Lobby (1)	9.00	Start and coffee	f Mor		
Session-1: AI/ML for Smart Energy Systems Comparison between Symmetrical Short Circuit Current Contribution of Droop-Based Grid Forming Converter and Synchronous Generator II.00-11.20 Comparison between Symmetrical Short Circuit Current Contribution of Droop-Based Grid Forming Converter and Synchronous Generator II.00-11.20 Fundamental Assessment of Oscillatory Performance of Grid-Forming Integrated Systems II.20-11.40 Fundamental Assessment of Oscillatory Performance of Grid-Forming Integrated Systems II.20-11.40 A Novel Approach to Prediction of the Transient Recovery Voltages in Shunt Reactor Circuit-Breakers and Determination of Hazardous Operation in High-Voltage Transmission Systems II.200-12.20 Analyzing the Performance of AC Microgrids in Stand-Alone Operation with Artificial Neural Network Controllers II.200-12.20 Lunch at restaurant August II.3.20-14.20 Keynote speech #2: Prof. Kevin Tansey, University of Leicester – AI and EO for Sustainabile Energy and Power Systems II.400-15.00 Inverter Dynamic Response Simulation via Neural Ordinary Differential Equations II.400-15.00 Inverter Dynamic Response Simulation via Neural Ordinary Differential Equations II.400-15.00 Inverter Dynamic Response Simulation via Neural Ordinary Differential Equations II.400-15.00 Inverter Dynamic Response Simulation via Neural Ordinary Differential Equations II.400-15.00 Inverter Dynamic Response Simulation via Neural Ordinary Differential Equations II.400-15.00 Inverter Dynamic Response Simulation via Neural Ordinary Differential Equations II.400-15.00 Inverter Dynamic	9.30		AIE rkshop n-site)		
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19.00 Cocktail event at Maaherrantalo (Koulukatu 2), sponsored by city of Vaasa	17.00	End of Day	AIE workshop (on-site)		
	19.00				

Tuesday 21.5	
Nissi auditorium, Ankkuri building	

Nissi auditorium, Ankkuri building					
9.00	Start and coffee & posters in lobby	AIE workshop (on-site)			
9.30-10:30	Keynote speech #3: Prof. Peter Palensky, TU Delft – Power Grid Resilience via Deep Learning Methods	DiTArtIS (Hybrid)			
_	Session-3: Secure & Intelligent, Control & Monitoring of Smart Energy Systems Chair: Muhammad Faheem				
10.30-10.50	Start and coffee & posters in lobby				
10.50-11.10	A Normal Behavior Model Based on Machine Learning for Wind Turbine Cyber-Attack Detection	AIE workshop (on-site)			
11.10-11.30	Towards a Model for Assessing the Effects of Social-Cyber-Physical Threats on the Future Power Grid – Review and Workshop Results				
11.30-11.50	Data-Driven Intermittent Earth Fault Detection Compensated and Isolated MV Networks				
11.50-12.20	Predictive Analysis of Transformer Faults Through Vibration Signatures and One-Dimensional Convolutional Neural Networks				
12.20	Lunch at August				
13.00-13.20	Industry presentation by WAPICE Ltd.				
13.20-13.40	Common Challenges and Solutions of AI Across Industries, Prof. Calina Ciuhu, Eindhoven University of Technology	DiTArtIS (Hybrid)			
13.40-14.30	Tutorial - Introduction to Julia (Luca Ferranti, Fabricio Oliveira)	AIE workshop (on-site)			
14.30-15.30	Tutorial - Machine learning with Flux (Luca Ferranti, Fabricio Oliveira)				
15.30-16-15	Coffee break at Oscar & Poster session in Lobby				
16.15-17.15	Tutorial - Scientific Machine Learning in Julia (Luca Ferranti, Fabricio Oliveira)				
17.15-18.00	Tutorial - Optimization in Julia with JuMP (Luca Ferranti, Fabricio Oliveira)				
18.00	End of Day				
19.00	Dinner at Strampen (Rantakatu 7, Vaasa)				

Wednesday 22.5 Nissi auditorium, Ankkuri building				
9.00	Start and coffee & posters in lobby	AIE v (o		
9.30	Keynote speech #4: Prof. Moustafa Youssef, American University in Cairo - Sensor-less Energy-free Sensing: The Future of Ubiquitous Context-Awareness for the IoT	AIE workshop (on-site)		
Session-4: AI/ML Based Forecasting Techniques for Smart Power Systems Chair: Amit K. Shukla				
10.30-10.50	Model Order Reduction for Waste Heat Recovery: An Integrated Autoencoder-LSTM Neural Network Approach			
10.50-11.10	Quantifying and Predicting Residential Building Flexibility Using Machine Learning Methods			
11.10-11.30	Anticipating Solar Photovoltaic Panel Output One Day in Advance with Gaussian Mixture Model	AIE (
11.30-11.50	Performance Evaluation of Sequence Model Architectures for Load Forecasting: A Comparative Study	AIE workshop (on-site)		
11.50-12.10	Rotodynamics Multi Fault Diagnosis Through Time Domain Parameter Analysis with MLP - A Comprehensive Study	qc		
12.10-12.30	Closing speeches			
12.30	Lunch at restaurant August			