



1st ICHQP workshop

From Planning to Operation: Efficient Assessment of Harmonic Emission from Distorting Installations

King's College London, UK

June 11-12, 2025

PROGRAM

Day 1 - Wednesday, June 11, 2025

Time	Session
9:00 am	Registration and Coffee
9:30 am	Welcome Address
9:40 am	Keynote Presentations
	<ul style="list-style-type: none">• Standardization Perspective (Mark Halpin, Auburn University, USA)• Manufacturer Perspective (Nigel Shore, Hitachi Energy, United Kingdom)• Grid Operator Perspective (Daphne Schwanz, EirGrid, Ireland)
11:00 am	Coffee Break
11:30 am	Session A (Oral) Planning Aspects
	<ul style="list-style-type: none">• Calculation of background harmonic amplifications in large meshed grids using nodal admittance matrix (Xavier-Marie Viel, RTE, France)• Grid compliance on harmonics; challenges from a developers point of view (Daniël Vree, Energy Solutions B.V., Netherlands)• Fast Simulation Method for Harmonic Compliance within Grid-Connection Assessment (Maria Iversen, AFRY, Denmark)• Practical challenges on harmonic performance analysis for HVDC 2GW schemes from a HVDC manufacturer perspective (Shrinath Kannan, GE Vernova, Germany)• Study of harmonics propagation in meshed transmission network: A numerical modeling approach (Tomáš Šedivý, Brno University of Technology, Czech Republic)
1:00 pm	Lunch
2:00 pm	Session B (Oral) Operational Aspects
	<ul style="list-style-type: none">• Harmonic emission assessment in dynamic DC microgrids (Guglielmo Frigo, METAS, Switzerland)• Probabilistic Analysis and Modeling of Power Quality Impacts in Modern LV Residential Networks (Araceli Hernández, Universidad Politécnica de Madrid, Spain)• Interharmonic emissions from synchronous low frequency railway systems (Tommy Hjertberg, Luleå University of Technology, Sweden)• Aggregated Modelling of Large-Scale IBR-based Plants for Harmonic Studies (Roberto Langella, University of Campania "Luigi Vanvitelli", Italy)• Impact of network disturbances on power electronic based installations connected to the transmission network (Robert Dommerque, Amprion GmbH, Germany)
3:30 pm	Coffee Break





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4:00 pm	Session C (Poster) <ul style="list-style-type: none">• Assessing the Impact of Aliasing on Total Distortion Measurement in Power Systems (Mark Halpin, Auburn University, USA)• Advanced Indices for Assessing the Overall Distortion Impact on Distribution Networks due to Multiple Electric Vehicles during Charging (Paola Verde, University of Cassino, Italy)• Investigating the Propagation of 7th Harmonics on EHV Lines (Frantisek Rajskey, CESP a.s., Czech Republic)• Voltage Harmonic Measurements in the Swedish Power Transmission System (Carl Carlsson, Svenska kraftnät, Sweden)• Analysis of Voltage Harmonic Trends in the Estonian Transmission System (Max Domagk, TUD Dresden University of Technology)• UK Experiences of measuring power quality disturbance between 2 kHz and 150 kHz in distribution networks (Peter Davis, National Physical Laboratory, United Kingdom)• Assessing Transformer Contributions to Harmonic Emissions in Renewable Energy Plants (Manuel De La Hoz, Electrotécnica Artech Smart Grid, Spain)• Approximation of Network Impedance for Defining Current Emission limits in the Frequency Range up to 150 kHz based on field measurements (Victor Khokhlov, TUD Dresden University of Technology)• Mathematical derivation of calculating harmonic voltage emission budgets based on three types of allocation methods (Frans van Erp, Netherlands)• A Margin Indicator for Stability Boundary Assessment of Converter-Interfaced Power Systems (Hao Zhou, King's College London, United Kingdom)• Reactive Power-Based Synchronization in Grid-Following Inverters (Zehua Tang, King's College London, United Kingdom)
7:00 pm	Evening Event





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Day 2 - Thursday, June 12, 2025

Time	Session
9:00 am	Session D (Oral) Standardization Aspects
	<ul style="list-style-type: none"> • Compliance assessment issues in IEC/TR 61000-3-6:2008 (Vic Gosbell, University of Wollongong, Australia) • Assessment between ETR 122 of G5/5 and the proposed EN 50745 for equipment rated > 75A (Seth Treasure, National Grid Electricity Distribution, United Kingdom) • Introduction of harmonic limit distribution method in China and suggestions discussion (Tao Shun, North China Electric Power University, China) • Revising Power Quality Requirements and Analysis Methods in the Finnish Transmission System (Pauli Partinen, Fingrid Oyj, Finland) • A utility strategy to mitigate harmonic issues (Sebastien Gouraud, EDF, France)
10:30 am	Coffee Break
11:00 am	Session E (Oral) Practical Case Studies
	<ul style="list-style-type: none"> • Ensuring Harmonic Compliance for Grid-Connected Battery Energy Storage Systems: A Practical Approach to Renewable Integration (Ayesha Irfan, Enspect Power Ltd, United Kingdom) • The Impact of Grid Pre-distortion on AHF Performance: Insights from Simulations and Case Studies (Henning Tischer, Maschinenfabrik Reinhausen, Germany) • Measurement of harmonic impedance and propagation in a 400-kV-network in Germany (Robert Stiegler, TUD Dresden University of Technology, Germany) • Harmonic compliance and mitigation of Battery and Solar PV connections to the UK grid (Kah Leong Koo, PSC, United Kingdom) • Measurement challenges in Emission Assessment (Gaurav Singh, EPRI, USA)
12:30 pm	Lunch
1:30 pm	Session F (Round Table) The Future of Harmonic Emission Assessment
3:00 pm	End

