



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
	• 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
	• 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
	• 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) • 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 Rajsky, 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, Germany) • 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)
5:30 pm	End Day 1
7:00 pm	Evening Event





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Day 2 - Thursday, June 12, 2025

Time	Session
8:30 am	Morning Coffee
9:00 am	Session D (Oral) Standardization Aspects • 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 • 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 Day 2

