



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





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





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## Day 2 - Thursday, June 12, 2025

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

