

### 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)	
• Ma	inufacturer Perspective (Nigel Shore, Hitachi Energy, United Kingdom)
• Gri	d 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



# ICU P workshop

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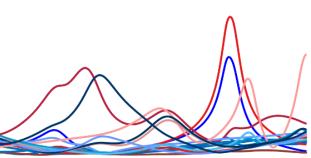
Time	Session
4:00 pm	Session C (Poster)

- 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 Arteche 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







# ICTOP workshop

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# Day 2 - Thursday, June 12, 2025

Time	Session
9:00 am	Session D (Oral) Standardization Aspects
	mpliance assessment issues in IEC/TR 61000-3-6:2008 (Vic Gosbell, University of ullongong, Australia)
	sessment between ETR 122 of G5/5 and the proposed EN 50745 for equipment ed > 75A (Seth Treasure, National Grid Electricity Distribution, United Kingdom)
	oduction of harmonic limit distribution method in China and suggestions discusnic (Tao Shun, North China Electric Power University, China)
	vising Power Quality Requirements and Analysis Methods in the Finnish Transmis- n System (Pauli Partinen, Fingrid Oyj, Finland)
• A u	tility strategy to mitigate harmonic issues (Sebastien Gouraud, EDF, France)
10:30 am	Coffee Break
11:00 am	Session E (Oral) Practical Case Studies
<ul> <li>Ensuring Harmonic Compliance for Grid-Connected Battery Energy Storage Stems: A Practical Approach to Renewable Integration (Ayesha Irfan, Enspec Fundamental Ltd, United Kingdom)</li> </ul>	
	e Impact of Grid Pre-distortion on AHF Performance: Insights from Simulations and se Studies (Henning Tischer, Maschinenfabrik Reinhausen, Germany)
	asurement of harmonic impedance and propagation in a 400-kV-network in rmany (Robert Stiegler, TUD Dresden University of Technology, Germany)
	rmonic compliance and mitigation of Battery and Solar PV connections to the UK d (Kah Leong Koo, PSC, United Kingdom)
• Me	asurement 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





