# IFTOP workshop

# 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	Registration and Coffee	
9:30	Welcome Address	
9:40 am	Keynote Presentations	
Standardization Perspective (Mark Halpin, Auburn University, USA)		
<ul> <li>Manufacturer Perspective (Nigel Shore, Hitachi Energy, United Kingdom)</li> </ul>		
<ul> <li>Grid Operator Perspective (Daphne Schwanz, EirGrid, Ireland)</li> </ul>		
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)

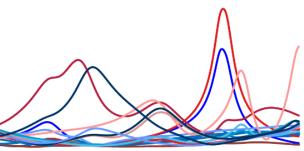
1:00 pm	Lunch
2:00 pm	Session B (Oral) Operational Aspects

- 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







### 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)
- 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)

7:00 pm Evening Event

### Day 2 - Thursday, June 12, 2025

Time	Session
9:00 am	Session D (Oral) Standardization Aspects
<ul> <li>Compliance assessment issues in IEC/TR 61000-3-6:2008 (Vic Gosbell, University of Wollongong, Australia)</li> <li>Assessment between ETR 122 of G5/5 and the proposed EN 50745 for equipment rated &gt; 75A (Seth Treasure, National Grid Electricity Distribution, United Kingdom)</li> <li>Introduction of harmonic limit distribution method in China and suggestions discussion (Tao Shun, North China Electric Power University, China)</li> <li>Revising Power Quality Requirements and Analysis Methods in the Finnish Transmission System (Pauli Partinen, Fingrid Oyj, Finland)</li> <li>A utility strategy to mitigate harmonic issues (Sebastien Gouraud, EDF, France)</li> </ul>	
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 Systems: A Practical Approach to Renewable Integration (Kerim Ozer, Enspec Power Ltd, United Kingdom)</li> <li>The Impact of Grid Pre-distortion on AHF Performance: Insights from Simulations and Case Studies (Henning Tischer, Maschinenfabrik Reinhausen, Germany)</li> </ul>	
<ul> <li>Challenges and real-world experiences in harmonic emission assessment when metrological aspects are not taken into consideration (Brandon Peterson, National Transmission Company, South Africa)</li> </ul>	
<ul> <li>Harmonic compliance and mitigation of Battery and Solar PV connections to the UK grid (Kah Leong Koo, PSC, United Kingdom)</li> </ul>	
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





