

Technical presentations

We kindly ask all oral presenters to observe the following recommendations to ensure a smooth and efficient conference program:

- Please use the PowerPoint template provided on the conference website for preparing your slides.
- All presentations must be uploaded in the Speaker Ready Room (Room C, second floor). The use of own notebooks, USB Sticks, etc. is not possible. The Speaker Ready Room is available daily from 08:30 to 17:00.
- Please submit your presentation the day before your assigned session to allow sufficient time for technical checks.
- Each oral presentation is allocated 15 minutes, consisting of 12 minutes for the presentation and 3 minutes for questions and discussion.

Tuesday, September 1

Technical Session 1 - Power Quality in DC grids

Chair: Roberto Langella

Room: Kunsthalle

16:05 - 16:20	74	Evaluation of a Power Quality Measurement Campaign in an Industrial 700 V DC Grid Ondrej Krpciar ; Robert Stiegler; Jan Meyer; Juergen Blum; Stefan Fierlbeck
16:20 - 16:35	146	DC Power Quality Issues in Next-Generation Railway Systems with Smart Traction Substations and Integrated Renewable Energy Sources Hamed Jafari Kaleybar ; Morris Brenna; Dario Zaninelli
16:35 - 16:50	91	Characterisation of Voltage and Current Distortion up to 150 kHz in a 325 V DC Home Laboratory Ondrej Krpciar; Ana Maria Blanco ; Jan Meyer; Hamish Avery; Neville Watson
16:50 - 17:05	127	Power Quality Characterization in LVDC Networks: Measurement Method Proposal for 0-9 kHz Distortions Yara Daaboul; Xavier Yang ; Ludovic Bertin; Yann Le Bihan; Daniela Istrate
17:05 - 17:20	71	Mitigation of DC Ripple Measurement Errors: Compensation Techniques for O/L Hall Transducers Guglielmo Frigo ; Adriano Demetrio; Christian Laurano; Sergio Toscani

Technical Session 2 - Emission of Electric Vehicle Charging and Data Centers

Chair: Paola Verde

Room: A

16:05 - 16:20	53	Assessment of harmonic and supraharmonic emission limits for V2G charging stations based on high frequency grid impedance measurements – a practical approach Bernhard Grasel ; Helmut Weiss; José Baptista; Daniel Csadek; Stefan Wilker
16:20 - 16:35	83	Preliminary Assessment of Harmonic Emissions from Electric Vehicle Charging Quang Bach Phan; Obaidur Rahman ; Sean Elphick; Duane Robinson
16:35 - 16:50	TP2	Data-Driven Probabilistic Modeling of EV Harmonic Emissions Based on Field Measurements Fayezeh Mahmoudnezhad; Araceli Hernández ; Pablo Rodríguez-Pajarón; Alberto Contreras; Jovica V. Milanović
16:50 - 17:05	108	Impact of Electric Vehicle Battery Chargers on Harmonic Levels in LV Residential Networks Haroon Zafar; Sasa Z. Djokic ; Roberto Langella
17:05 - 17:20	141	Analysis of Harmonic-Induced Skin-Effect Losses in Data Center Power Distribution under Dynamic Loads Ridvan Dogan; Liling Huang

Technical Session 3 - Trend Identification and Forecasting

Chair: Antonio Bracale

Room: B

16:05 - 16:20	114	Preprocessing Techniques Considering Trends and Seasonality to Improve Probabilistic Short-Term Harmonic Forecasting Antonio Bracale; Pierluigi Caramia; Pasquale De Falco ; Max Domagk; Jan Meyer
16:20 - 16:35	52	Analysis of Probabilistic Harmonic Distortion Trends in Industrial Medium Voltage Power Networks Sulaiman Elrajoubi ; Markus Faesing; Hans-Jörg Eckoldt; Ferdinanda Ponci; Antonello Monti
16:35 - 16:50	111	Analysis and Reporting of Power Quality Data: A Power Quality Compliance Audit Update Sean Elphick ; Gerrard Drury; Duane Robinson
16:50 - 17:05	24	Ensemble Forecasting of Power Quality Parameters Max Domagk ; Peter Feistel; Jan Meyer; Marco Lindner; Jako Kilter
17:05 - 17:20	115	Forecasting of Harmonic Current Emission in Tertiary Sector Building using an IoT PQ Sensor Juan-José González-Ramos ; Joaquín Garrido-Zafra; Aurora Gil-de-Castro; Francisco de-Larriva-Serrano; Rafael-David Rodriguez-Cantalejo; Antonio Moreno-Munoz

Technical Session 4 - Impedance Measurement Techniques

Chair: Sarath Perera

Room: Y

16:05 - 16:20	66	Voltage-based Frequency-dependent Impedance Measurement Method for Characterising Interconnected HVDC Systems Ceren Yurt ; Shrinath Kannan; Omar F. Jasim
16:20 - 16:35	86	Supraharmonic grid impedance analysis based on controlled switching and advanced digital signal processing Bernhard Grasel ; José Baptista; Juan Velasquez; Helmut Weiss; Manfred Tragner
16:35 - 16:50	134	Improving PRBS-Based Broadband Impedance Estimation via SNR-Driven Clock Combination André de Kock ; Fredrick Mwaniki
16:50 - 17:05	TP3	Characterization of the Long-Term Impedance Variations Due to Electric Vehicle Charging From 20 kHz to 500 kHz Jon González-Ramos ; Itziar Angulo; Igor Fernández; Bernhard Grasel; Alexander Gallarreta; Amaia Arrinda; David de la Vega
17:05 - 17:20	109	Impact of Background Voltage Distortion and Unbalances on Harmonic Emission due to Phase-Crossed-Frequency Coupling Wélington B. Rodrigues; Paulo F. Ribeiro; Fernando N. Belchior; Carlos A. Duque; Roberto Langella

Wednesday, September 2

Technical Session 5 - Requirements and Performance of Grid-forming Inverters

Chair: Neville Watson

Room: Kunsthalle

9:05 - 9:20	95	Review of functional specifications and requirements for grid-forming converters to support power quality Stefano Lodetti ; Peter Davis; Sakshi Chalia; Ana Maria Blanco; Jan Meyer
9:20 - 9:35	54	Requirements on Grid-Forming Converters: From Standards to a Laboratory Testbed Luiz Felipe A. Silveira ; Stefano Lodetti; Sharmistha Bhattacharyya; Gert Rietveld
9:35 - 9:50	118	Black-Box Harmonic Impedance Identification of Grid Forming Converters via Single-Tone Current Injections Rémy Prieur ; Sakshi Chalia; Jan Meyer; Xavier Guillaud; Frédéric Colas; Maria Veizaga; Sébastien Gouraud; Léonard Bacaud
9:50 - 10:05	143	Comparison of Harmonic Performance of a Commercial Inverter for Low Voltage Networks in Grid Following and Grid Forming Mode Santiago Tassin Wallace ; Sakshi Chalia; Jan Meyer
10:05 - 10:20	100	Harmonic mitigation using grid forming inverter-based resources Johan Beukes ; Males Tomlinson

Technical Session 6 - Connection Studies and Compliance Assessment

Chair: Jiri Drapela

Room: A

9:05 - 9:20	49	Multi-Point Analysis of "Destructive" and "Constructive" Harmonic Currents to the Voltage Quality in a Reference German MV Grid Kia Malekian Boroujeni ; Hisham Sherief; Fatemeh Abedini; Jens Teuscher
9:20 - 9:35	79	Application of prevailing phasors: a case for evaluating continuous assessment of harmonic emission Brandon Peterson ; Johan Rens; Gerhard Botha
9:35 - 9:50	106	Continuous Determination of Harmonic Emission at Industrial Customer Aljaz Spelko ; Anže Zaletel; Simon Podkoritnik; Klemen Spruk; Mattewos Tefferi
9:50 - 10:05	82	On the assessment of voltage flicker emission in distribution grids hosting renewable power plants Keegan Byleveldt; Johan Rens ; Brandon Peterson; Gerhard Botha
10:05 - 10:20	144	Integrated Approach for Identification and Assessment of Unbalance Voltage Sources Dmytro Kaliuzhnyi ; Jan Meyer; Davide Falabretti

Technical Session 7 - Advanced Simulation Techniques

Chair: Ana Maria Blanco

Room: B

9:05 - 9:20	63	Voltage Variation Analysis of Distribution Grids Using Probabilistic Load Modelling and Copulas Peter Wohlfart ; Christian Kresnik; Martina Schelander; Stephan Brandl; Herwig Renner
9:20 - 9:35	36	Harmonic Power Flow Mapping Model Based on Gaussian Process Regression Yinsheng Chen ; Ying Wang; Xianyong Xiao
9:35 - 9:50	113	Probabilistic Assessment of Harmonic Distortion under Harmonic Phase Diversity Using Monte Carlo Simulation Kelechi Anthony Aluge ; Jiri Drapela
9:50 - 10:05	128	A New Approach to Assess Uncertainty of Estimates in Harmonic State Estimation based on Synchronized Measurements Carlo Muscas; Paolo Attilio Pegoraro; Carlo Sitzia ; Antonio Vincenzo Solinas; Sara Sulis
10:05 - 10:20	88	A Proposed Holistic Harmonic Management and Compliance Process Victor Lo ; Steven Howell

Technical Session 8 - PMUs and Harmonic Phasor Estimation

Chair: Erik Sperling

Room: Y

9:05 - 9:20	19	Power Quality Disturbances and the Role of Phasor Measurement Units in Distribution Grids for Particle Accelerators: Insights from CERN Isabel Amundarain Argüello ; Nikolaos Sapountzoglou; Riccardo Vasapollo; Giuseppe Cappai; Paolo Romano; Mario Parodi; Jean-Paul Burnet
9:20 - 9:35	55	Applicability of Commercial PMUs for Rate of Change of Frequency Measurements Uku Salumäe; Mari Löper; Jako Kilter
9:35 - 9:50	72	Impact of Measurement Method on Harmonic Phasor Evaluation in Field Measurements Guglielmo Frigo ; Jan Meyer; Robert Stiegler
9:50 - 10:05	107	Performance of Harmonic Measurement during Dynamic Change of Frequency Lukas Duhme ; Jonathan Wittkop; Gerd Bumiller
10:05 - 10:20	16	Interpolated Filter Bank for Harmonic Phasor Estimation with Kalman Frequency Tracking Victor M. Ribeiro; Victor V. Morais; Ricardo R. Rapozo; Leandro R. M. Silva; Carlos A. Duque

Technical Session 9 - Characterization and Modelling of Inverter-Based Resources

Chair: Johan Beukes

Room: Kunsthalle

11:05 - 11:20	9	Data-Efficient Physics-Informed Learning to Model Synchro-Waveform Dynamics of Grid-Integrated Inverter-Based Resources Shivanshu Tripathi ; Hossein Mohsenzadeh Yazdi; Maziar Raissi; Hamed Mohsenian-Rad
11:20 - 11:35	46	Islanding Detection Method based on Notch Filter and Mathematical Morphology Ana Carolina A. A. Viana; Danton D. Ferreira ; Augusto S. Cerqueira; Robson R. de Lima; Erivelton G. Nepomuceno; Flávio Bezerra Costa
11:35 - 11:50	64	Experimental Evaluation of Sequence Separation for Power-Quality-Oriented LVRT in Grid-Following Inverters Benyamina Faycal ; Achour Yahia; Benrabah Abdeldjabar; Hafiz Ahmed; Benbouzid Mohamed
11:50 - 12:05	81	A Comparison of Transfer Function and Simulation Harmonic Impedance Models of a Two Parallel Grid-Connected Inverter System Efaf Bikdeli Mazlaghani; Duane A. Robinson ; Sean Elphick
12:05 - 12:20	101	EMT Simulation of Synchronization of Islands in Parallel Restoration of Converter Dominated Grids Hasini De Silva ; Mithulananthan Nadarajah; Mejbaul Haque; Scott Hagaman; Mobin Naderi; Hong Chen

Technical Session 10 - Harmonic Emission Limits and Allocation Methods

Chair: Igor Papic

Room: A

11:05 - 11:20	7	Implementation of EN 50160 by the Czech Transmission System Operator and Diagnostic of Harmonics Frantisek Rajskey ; Daniel Vesely
11:20 - 11:35	69	Unlocking Harmonic Headroom through a Novel Methodology Based on Weighted Individual Harmonic Allocation Yue Feng ; Afshin Pashaei; Ahmad Mosah; Tatiana Assis
11:35 - 11:50	73	Contemporary Harmonic Management Challenges in the England & Wales Transmission Network James Cooper ; Sai Sowmya Nagam
11:50 - 12:05	117	Harmonic Emission Limit Allocation Based on a Headroom Approach within the IEC/TR 61000-3-6 Framework Jude Suchithra ; Jason David; Duane A Robinson; Sean Elphick
12:05 - 12:20	136	Methodology for Harmonic Distortion Allocation in the Irish Transmission System Daphne Schwanz ; Mariana de Souza

Technical Session 11 - Distortion in Low Voltage Networks and Neutral Conductor Loading

Chair: Pasquale De Falco

Room: B

11:05 - 11:20	93	Preliminary Supraharmonics Observations in the Low Voltage Network in South Africa Gerrit Christiaan Oosthuizen ; Fredrick Mukundi Mwaniki
11:20 - 11:35	94	Measurement and analysis of harmonics in 400 V AC industrial grids - impact of frequency converters on grid quality Oliver Stamm ; Falk Liebold; Tom Künstler
11:35 - 11:50	87	Time Dependent Characteristics of the Fifth Harmonic in Japanese Downtown Distribution Networks Naotaka Okada
11:50 - 12:05	122	Triplen Harmonic Analysis of Low Voltage Networks at CERN Igor Sirotic
12:05 - 12:20	70	Waveform Distortion and Stray Currents in Irregular Earthing Interface at a Traction Converter Station LV Power Supply Connection Rafael S. Salles; Tommy Hjertberg ; Mats Wahlberg; Sarah K. Rönnberg

Technical Session 12 - Advanced Metrics and Measurement Methods

Chair: Dario Zaninelli

Room: Y

11:05 - 11:20	10	Assessment of Errors of Fundamental Frequency Estimation Methods in the Presence of Voltage Fluctuations and Distortions Antonio Bracale; Pasquale De Falco; Piotr Kuwałek ; Grzegorz Wiczyński
11:20 - 11:35	17	Toward an Ideology of Waveform Analytics: How to Automate Transient Point-on-Wave Analysis for Actionable Information Jeffrey A. Wischkaemper ; B. Don Russell; Carl Benner; Karthick Manivannan
11:35 - 11:50	35	A Portable Frequency-Response Analysis System for Voltage Measurement Systems Erik Sperling ; Roberto Schulze; Thomas Bischof; Felix Feustel
11:50 - 12:05	65	Portable-Meter-Calibrated THD Estimation at an Industrial PCC Using Smart-Meter Data Yifan Zhao ; Ying Wang; Yunzhu Chen; Shunyi Li
12:05 - 12:20	133	Differential Geometry Invariants as Power Quality Indices for Real-Time Event Identification Francisco G. Montoya; Jorge Ventura-Gil ; Francisco J. Moreno-Manzano

Technical Session 13 - Sub-synchronous Oscillations and Harmonic Stability

Chair: Duane Robinson

Room: Kunsthalle

16:05 - 16:20	149	Comparative Analysis of Grid Connection Requirements for Conventional Power Plants and Renewable Energy Sources in Romania Georgiana Balaban; George Cristian Lazaroiu ; Mariacristina Roscia; Alexandru Nistor
16:20 - 16:35	84	Reinforcement Learning Based Adaptive Smoothing Strategy for Enhancing Photovoltaic Power Quality and Mitigating Output Fluctuations Cheng-I Chen; Shao-Huai Wu ; Jen-Chieh Hsieh; Zi-Xuan Huang
16:35 - 16:50	121	Small-Signal Stability Analysis of Grid-Forming Inverters with Virtual Impedance Nicholas Peter ; Henru Hugo; Johan Beukes; Fredrick Mwaniki
16:50 - 17:05	137	Aggregation of windpark models for subsynchronous, supersynchronous and harmonic stability studies Heinrich Ellmann ; Sven Ratajczak; Simon Krah; Hanane Boutalakht
17:05 - 17:20	25	Sub-synchronous Oscillations and Interharmonics with High IBR Penetration - The Dutch 3.5 Hz Case T.M.H Slangen ; Aleksandar Boričić; Sam J. Frohn; M.Sjanssen; F.J Wensink

Technical Session 14 - Harmonic Modelling and Aggregation

Chair: Araceli Hernandez

Room: A

16:05 - 16:20	68	A Quasi-Monte Carlo Approach to Assessing Cumulative Harmonic and Supraharmonic Emissions from EV Charger Giovanni Mercurio Casolino; Antonio Bracale; Pierluigi Caramia; Pasquale De Falco; Iqrar Hussain; Varilone Pietro; Paola Verde
16:20 - 16:35	112	Harmonic Domain WECC Photovoltaic Plant Modeling and Simulation Abner Ramirez; Jesus Morales
16:35 - 16:50	135	Markov Chain Modelling of Wind Turbine Total Harmonic Emission Ida Natriello ; Vincenzo Di Giorgio; Roberto Langella; Sasa Z. Djokic
16:50 - 17:05	103	Harmonic Probability Model for Industrial Rectifier Load Considering Parameter Uncertainty Jinwen Xiang ; Amr Saad; Jef Beerten
17:05 - 17:20	147	Harmonic-Domain Machine Learning for Voltage-Dependent Current Waveform Reconstruction in Active-PFC LED Lamps Hasan Abdulmajeed ; Peter Kiss

Technical Session 15 - Sensitivity of Equipment

Chair: Cristian Lazaroiu

Room: B

16:05 - 16:20	41	Impact of Supply Voltage Magnitudes on Current Harmonics Generated by Household Appliances Dinidu Jeewandara ; Sean Elphick; Jeff Moscrop; Duane A. Robinson
16:20 - 16:35	47	Experimental Assessment of Electrical Characteristics in Residential Appliances under Sustained Supply Voltage Magnitudes Dinidu Jeewandara ; Sean Elphick; Jeff Moscrop; Duane A. Robinson
16:35 - 16:50	62	Experimental Evaluation of EV Charger Performance Under Supply Voltage Harmonics Obaidur Rahman ; Sean Elphick; Duane A. Robinson; Quang Bach Phan
16:50 - 17:05	77	Flicker of LED Lamps due to Wideband Interharmonic Emission from Active Front-End Systems Robert Stiegler ; Markus Alexander Lietzberg; Jan Meyer; Jiří Drápela; Roberto Langella; Leoš Kukačka
17:05 - 17:20	130	New Method for Evaluating Equipment Sensitivity to Single Voltage Dips and Dip Sequences Jinyue Liu; Qiqi Jin; Sasa Djokic ; Roberto Langella

Technical Session 16 - Reproducibility of Measurements and Sensor Accuracy

Chair: Alessandro Mingotti

Room: Y

16:05 - 16:20	15	Challenges in the Proper Metrological Verification of Smart Energy Meters Antonio Bracale; Jakub Janowicz; Piotr Kuwałek ; Grzegorz Wiczyński
16:20 - 16:35	26	Testbed for the Traceable Measurement of Supraharmonics (2 – 150 kHz) Angela Espin-Delgado; Tobias Bergsten ; Hanna Bergman; Stefan Svensson; David Svensson; Daniel Reimhult; Bernhard Grasel; Linus Krantz; Jürgen Blum
16:35 - 16:50	123	Capability of a P-HIL System to Reproduce Harmonic Emissions of Nonlinear Loads under Different Network Conditions Ana Maria Blanco; Jan Meyer; M. Adnan Shihab; Sergio Contreras ; Johanna Myrzik
16:50 - 17:05	57	Use of Rogowski Coils for Leakage Current Detection: Analysis and Case Studies Lukas Malfait ; Emile Clarisse; Colin Debruyne; Jos Knockaert; Jan Desmet
17:05 - 17:20	139	Overcoming the Limitations of Grid Voltage Sensors through Digital Filtering Gaurav Singh; Jason Johns ; Md. Maidul Islam

Thursday, September 3

Technical Session 17 - Harmonic Analysis and Mitigation Case Studies

Chair: Aurora Gil-de-Castro

Room: A

9:05 - 9:20	2	Practical approach for mitigating resonance in a seed growth chamber due to LED lighting Bart Verhelst ; Johan Rens; Jan Desmet; Jos Knockaert
9:20 - 9:35	21	Harmonic Analysis of an Industrial Green Ammonia Plant Supplied by Large- Scale Electrolyzers Katherine Andrade Acosta ; Alessandro Bosisio
9:35 - 9:50	96	Analysis of harmonic emissions and the performance of an active power filter in a wastewater treatment plant Falk Liebold; Oliver Stamm
9:50 - 10:05	44	Measurement and analysis of harmonic voltage disturbances at Vädermotet charging site Egil Schultz ; Alexander Wallberg; Lars Christoffersson; Karin Thomas
10:05 - 10:20	78	Harmonic Distortion in Distribution Grids: A Case Study on Electric Vehicle Integration Iraj Davood Abadi ; Vladimir Terzija; Matthew Deakin

Technical Session 18 - Hosting Capacity and Supply Voltage Management

Chair: Max Domagk

Room: B

9:05 - 9:20	104	EV Hosting Capacity and Voltage Quality: A Capability Chart Assessment of Modern Electric Systems Giovanni Mercurio Casolino; Iqar Hussain; Arturo Losi; Pietro Varilone; Paola Verde
9:20 - 9:35	31	Hosting capacity and reactive-power compensation for low and medium-voltage customers Math H.J Bollen ; Tais Tavares de Oliveira
9:35 - 9:50	6	A Series Voltage Buffer Unit for Medium-Voltage Distribution Networks: Loss-Aware Series Voltage Regulation under Power-Quality Constraints Xingyan Niu ; Jiao Zhang; Cheng Kang
9:50 - 10:05	45	A Power-Sharing Algorithm for Converter Groups in High-Power Charging Stations to Improve Energy Efficiency and Power Quality Szymon Wermiński ; Sebastian Kupp; Amirali Mahjoob; Andreas Ulbig
10:05 - 10:20	125	Reconfiguration of Unbalanced Distribution Network: Case Study IEEE 33 Bus Milad Rahimpour Behbahani ; Alireza Jalilian

Technical Session 19 - Analysis and Mitigation of Voltage Sags

Chair: Sharmistha Bhattacharyya

Room: Y

9:05 - 9:20	30	Optimized Configuration Method for Multi-Type Mitigation Devices against Voltage Sag Qiming Zhong ; Ying Wang; Xianyong Xiao; Shunyi Li; Shuyuan Zhang; Xuqing Tang
9:20 - 9:35	38	Enhancement of VFD Tolerance under Voltage Sag based on Designed Control System Shuyuan Zhang ; Ying Wang; Xianyong Xiao
9:35 - 9:50	126	Enhanced Voltage Ride Through Capability of Grid Connected Converters with Current Based Model Predictive Pulse Pattern Control Panagiotis Syrpas ; Ioannis Tsoumas
9:50 - 10:05	32	Voltage Sag Analysis at DC side of PV Inverter in the Large Scale PV Cluster Transmission System Qing Zhong; Hongyi Wu; Wei Huang ; Junjie Feng; Jianzhong Wu; Jan Meyer
10:05 - 10:20	29	Impact of Transformer Ratio and Line Parameters Uncertainty on Accuracy of Transient State Estimation Tomáš Šedivý ; Patrik Paclík; Jiří Drápela

Technical Session 20 - Power Metrics and Definitions under Nonsinusoidal Conditions

Chair: Mihaela Albu

Room: D

9:05 - 9:20	14	Why Fryze's Approach to Developing Power Theory has Failed? Leszek S. Czarnecki
9:20 - 9:35	34	IEEE Std 1459-2025: A Critical Analysis of Power Definitions That Admit Their Own Limitations Francisco G. Montoya ; Jorge Ventura; Alfredo Alcayde; Julio Gómez; Francisco M. Arrabal-Campos
9:35 - 9:50	12	Why Power Quality Billing Should Be Based on Currents Rather Than Powers Francisco G. Montoya ; Jorge Ventura; Alfredo Alcayde; Julio Gomez; Francisco M. Arrabal-Campos
9:50 - 10:20	92	Direction of Power Flow Based Power Definitions Gerd Bumiller ; Lukas Duhme

Technical Session 21 - Impedance Simulations and Measurement Campaigns

Chair: Fred Mukundi Mwaniki

Room: A

11:05 - 11:20	43	A Supraharmonic Impedance Measurement Campaign in Low-Voltage Networks and Recommendations for Propagation Studies Rafael S. Salles ; Manav Giri; Mats Wahlberg; Sarah K. Rönnberg; Jon González-Ramos; Igor Fernández; Itziar Angulo; David de La Vega
11:20 - 11:35	102	Analysis of Grid Impedance Resonances in the Presence of Power Electronic Converters in the 20-500 kHz Frequency Range Jon González-Ramos ; Itziar Angulo; Igor Fernández; David de la Vega; Rafael S. Salles; Sarah K. Rönnberg
11:35 - 11:50	80	Evaluation of Internal and External Parameter Variations on Inverter Harmonic Impedance Efaf Bikdeli Mazlaghani; Duane A. Robinson ; Sean Elphick
11:50 - 12:05	116	Impact of Distributed Generation Driven Network Reconfiguration on Harmonic Impedance and Disturbance Levels Christopher Goodwin ; Jan Meyer

Technical Session 22 - Harmonic Emission of Other Sources

Chair: Johanna Myrzik

Room: B

11:05 - 11:20	22	Harmonics and interference to railway signalling originating from DC traction rectifier open-arm fault Sahil Bhagat ; Andera Mariscotti
11:20 - 11:35	58	Quantifying Harmonic-Induced Active Power Losses in MV Cables Benjamin Jacobsen
11:35 - 11:50	97	A practical study on the impact of a large heat pump on harmonic distortion Ehsan Najafi ; Illia Diahovchenko; Rory O'Sullivan
11:50 - 12:05	TP1	Harmonic Anomalies Due to Geomagnetically Induced Currents as a Potential Cause of Protection Mal-Trips at the South Atlantic Anomaly Area Roger Alves de Oliveira ; Rafael S. Salles; Sarah K. Rönnerberg; Miguel Pires de Carli; Roberto Chouhy Leborgne

Technical Session 23 - Fault detection and location techniques and Continuity of Supply

Chair: Carlos Duque

Room: Y

11:05 - 11:20	56	Performance Degradation Analysis and Reformulation of a Hybrid Fault Locator for Distribution Networks with Distributed Generation Rui Sampaio dos Santos Cantuária ; Paulo Estevão Teixeira Martins; Moisés Junior Batista Borges Davi; Mário Oleskovicz
11:20 - 11:35	61	Selective Fault Detection in Wind Farm Collector Systems via Differential-Evolution-Optimized Thresholds and Neural Networks Matheus do V. Oliveira ; Moisés J. B. B. Davi; Mário Oleskovicz
11:35 - 11:50	85	Optimisation of Switch Placement in Distribution Networks Using a Genetic Algorithm Brodie Howson ; Duane Robinson; Sean Elphick; Edward Smith
11:50 - 12:05	TP4	"High-Impedance Fault Detection" Revisited: Why the Term Has Lost Its Meaning and Should Be Abandoned Jeffrey A. Wischkaemper ; Don Russell; Carl L. Benner; Karthick Manivannan

Technical Session 24 - Platforms and Methods for Large Data Analysis

Chair: Stefano Lodetti

Room: D

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- 11:05 - 11:20 **142** A Cloud-Edge-End Collaborative Control System for Distribution Network Power Quality with Wide- Frequency Sensing: Design and Application
Wang Tongxun; Ma Wenxiao; Feng Dandan; Wang Zhikai; Li Zhaoliang; Wang Yang
-
- 11:20 - 11:35 **59** Digital platform integrating high-reporting rate information for light Power Quality assessment
Radu Plamanescu; Anca Petruta Brincoveanu; Catalin Constantin; Ana-Maria Dumitrescu; **Mihaela Albu**
-
- 11:35 - 11:50 **50** Identification and Visualization of Correlation Structures in Large-Scale Power Quality Data
Max Domagk; Jan Meyer; Marco Lindner
-
- 11:50 - 12:05 **105** Implementation of a DTW-Based Novelty Detection Application on a Substation Edge Device for Power Quality Signals
Ana Luisa B. de Castro; Victor M. Ribeiro; Eder B. Kapisch; Leandro R. M. Silva; **Carlos A. Duque**
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Poster session

The interactive poster session is carried out in the room Kunsthalle on Wednesday, 2nd September 14:00 – 15:30. Each paper that is only presented in the poster session has the opportunity for a short pitch presentation. We hope this format will encourage lively discussions and provide additional opportunities for participants to connect with colleagues.

We kindly ask all poster presenters to observe the following recommendations to ensure a smooth and efficient session.

Poster setup

- All posters must be put up in the Kunsthalle on Wednesday from 8:00 to 9:00 AM. Please use only this time slot, as other presentations will be taking place in the room after this time slot.
- Paper numbers are indicated on each board. Please use only the board that is allocated to your paper.
- Please use only the provided tape and do not use pins.

Session procedure

The poster session consists of two parts:

1. Poster Pitches (14:00 – 14:40)
 - Authors whose papers are not part of the oral sessions can give a 1-minute pitch presentation.
 - The pitch presentation should briefly introduce the topic and main findings of the paper.
 - Presenters must prepare one slide containing the key information of their work for the pitch presentation. The slide must be upload not later than 9:00 on Wednesday in the speakers ready room (Room C).
2. Poster Discussion and Networking (remainder of the session)
 - Following the pitches, participants are invited to visit the posters and discuss the presented work with the authors.
 - Poster presenters are kindly requested to remain near their posters and be available for questions.

Poster removal

- Posters must be removed on Wednesday from 17:30 to 18:00.
- Posters remaining after 18:00 will be removed and discarded by the staff.

Posters will be accessible during the whole Wednesday including lunch and coffee breaks.

Posters with pitch presentation

- 5 A Comparative Study of TFA-based Power Quality Post-Processing Assessment for Nonstationary Waveforms
Gary Chang; **Wei-Yun Huang**; Guan-Yi Li
- 8 Suppression Method of Voltage Flicker by Automatic Adjustment of Frequency Feedback Gain for Interconnected Inverters in Distribution System
Kusaba Ayano; **Kawasaki Shoji**
- 11 Implementation of Three-phase Three-wire Shunt Active Power Filter Control Based on IEEE Standard 1459
Gary Chang; **Wei-Yun Huang**; Guan-Yi Li
- 18 Examples of Diagnostic Capabilities of Voltage Fluctuation Indices
Grzegorz Wiczynski
- 20 RMS-Based Fault Disturbance Characterization and Zone-Level Identification in Inverter-Dominated Wind Farm Collector Systems
Talita Mitsue Onose Araujo Cunha; Moisés Junior Batista Borges Davi; **Mário Oleskovicz**
- 23 Challenges with power quality at the DC side
Martin Pettersson; Abdallah Ammar Hoseny Uosef; Math Bollen; Manav Giri; Rafael De Souza Salles; Alyaa Abdelraouf Ali Shalabi; Alyaa Abdelraouf Ali Shalabi; Peter Haigh; Rajith Welikannage
- 27 Redistribution of Reactive Power Demand from Q(V) for Operating Point Optimization integrated on HEMS using Smart Meter Data
Julien Essers; Robin F.Herman; Eike Niehs; Bernd Engel
- 28 Modeling Harmonic Emissions of Battery Converters for Grid Simulations
Robin Herman; Christian Fröhlich; **Alexander Vanselow**; Julien Essers; Bernd Engel
- 37 Power Quality Disturbance Identification Using Gramian Angular Field-Based Two-Dimensional Feature Representation and Deep Learning framework
Sasan Dehghan; **Hamed Jafari Kaleybar**; Morris Brenna; Dario Zaninelli
- 39 Voltage Sag Mitigation Method in Industrial Parks Equipped with an Energy Storage System
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