

28th International Conference and Exhibition on Electricity Distribution (CIRED 2025)

IET Conference Publications 922

Geneva, Switzerland
16-19 June 2025

Part 1 of 5

ISBN: 979-8-3313-3218-1

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2025) by the Institution of Engineering and Technology
All rights reserved.

Printed with permission by Curran Associates, Inc. (2026)

For permission requests, please contact the Institution of Engineering and Technology
at the address below.

Institution of Engineering and Technology
Futures Place, Kings Way
Stevenage, Hertfordshire
U.K. SG1 2UA
United Kingdom

Phone: +44 (0)1438 313311

www.theiet.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

PART 1

Adaptive Dynamic Estimation on the Operational Capacity Margin of Distribution Transformers.....	1
<i>Xin Zheng, Long Xu, Yanqi Xu, Yu Xu, Pengcheng Lu, Xiao Liu</i>	
Development of a Single-Sided Fault Localization Method Using Travelling Waves	6
<i>Fabian Baltrusch, Cezary Dzienis, Lukas Scholz, Matthias Kereit</i>	
Grid-Aware EV Charging and Future-Proof Grid Design: Policy Decision-Making by a Dutch DSO	11
<i>Cihan Gercek, Jur Erbrink, Erik Schepens, Evert de Haan</i>	
Medium Voltage Cable Fault and Health Assessment Through Advanced Analytics.....	16
<i>Akshat Kulkarni, Ricardo Prata, Pratik Bajaria, Sanjeev Kumar</i>	
Development of Short-Circuit Currents with Increasing Meshing of the Medium-Voltage Grid.....	21
<i>Maxim Müllender, Linus Wasser, Antigona Selimaj, Julian Saat, Andreas Ulbig</i>	
Analysis of ANSI 67N Backup Protection Scheme for MV Grids	26
<i>Tomáš Škumát, Matúš Ludva</i>	
Phase Identification in Distribution Grids with Graph Neural Networks (GNN).....	31
<i>Chandra Sekhar Charan Dande, Nikolaos Efkarpidis, Anna Varbella, Damiano Toffanin, Giovanni Sansavini</i>	
Is CISPR Quasi-Peak an Appropriate Metric for Evaluating Power Line Communications?	36
<i>Alexander Gallarreta, Jon González-Ramos, Javier Vildósola-Arregui, Igor Fernández, Itziar Angulo, David de la Vega, Amaia Arrinda</i>	
Detecting Power Quality Trends and Thresholds: An Annual Analysis Using the Mann-Kendall Method	41
<i>Linda Rüegg, Adrian Rupp, Jürg Greuter</i>	
Digitalization of Medium Voltage Switchgears for Asset Management and Predictive Maintenance.....	46
<i>Jaime Revert Carbonell, Joaquín Timoneda Monfort, Daniel Valero Beltrá, Pedro Llovera Segovia</i>	
3D Modelling of Temperature Distribution of Underground Medium Voltage Cables in Practical Cases.....	51
<i>P. Navarrete-Rajadel, P. Llovera-Segovia, V. Fuster-Roig, A. Quijano-López</i>	
Visualisation of 15 Min Time Series for the Efficient Analysis of the Electricity Distribution Network.....	56
<i>Christoph Groß, Anna Viehhauser</i>	
Synthesis of the Different Technologies for SF6 Free Medium Voltage Switchgear.....	61
<i>Christophe Preve, Daniel Piccoz</i>	
Cost and Technical Optimized Use of Cables at Volatile Energy Transfer.....	66
<i>Mohamed Boussahmine, Ingo Ernst, Thomas Gräf</i>	

Novel Non-Invasive Flux-Based Airgap Eccentricity Detection for Induction Machines and Its Practical Validation.....	71
<i>Simi P. Valsan, Ajaz Hameed, Subhashish Dasgupta, Arinjai Gupta, Ranjeet Kumar</i>	
A Distribution Model with Batteries Scattered Among Users Vs a Model with Batteries Concentrated by the Distributor	76
<i>Alejandro Jurado, Edgardo Vinson, Fernando Nicchi</i>	
Ideal Sensor Placement and State Estimation in Distribution Grids.....	81
<i>Marc Dünser, Bharath-Varsh Rao, Sarah Reisenbauer</i>	
Overview of Smart Meter Use Cases in the Netherlands	86
<i>Bart Kers, Sharmistha Bhattacharyya, Jochem Bronkhorst, Duvilène Pieter</i>	
Cybersecurity of Distribution Networks Real-Time Monitoring: A Parameter Error Correction Model Against False Data Injection Attacks	91
<i>Arturo S. Bretas, Michel Caraballo, Nnamdi C. Ejiofor, Newton G. Bretas</i>	
Considerations on Harmonic Current Emission Limits in the Netherlands Illustrated with Two Case Studies	96
<i>Sharmistha Bhattacharyya, Jeroen van Tongeren, Levijne Nieuwenhuyzen, Jeroen van Waes</i>	
Efficient Computation Alternatives for IEC 61000-4-30 Supraharmonic Quasi-Peak Detector	101
<i>Philippe Blanchard, Manouane Caza-Szoka, Roger Bergeron, Daniel Massicotte</i>	
The Role of EEBUS Technology for Efficient Energy Management and Grid Interaction	106
<i>George Hallak, Annike Abromeit, Robert Böhm</i>	
Design, Testing and Installation of a Smart Transformer	111
<i>Paul S. Dyer, Dean Mason</i>	
Improving Industrial Planning of Overhead Line Renovations Using a Criticality Indicator Method Based on a Risk and Impact Estimation of Future Failures.....	116
<i>Cécile Dondé, Olivier Delmas, Hugo Dufay</i>	
Impact of Shifting Electric Passenger Car Charging to Public Infrastructure on Aggregated Load Profiles	121
<i>Nelly-Lee Fischer, Krzysztof Rudion</i>	
System Accuracy Test of LPIT-Based Metering Systems.....	126
<i>Michael Freiburg, Peter Menke, Mikhail Vassilyev</i>	
Optimal Connection Nodes Conceptualization for Battery Energy Storage Systems	131
<i>José Eduardo Sousa, Diogo Furtado Lopes, Luís Almeida, Rita Lopes Mourão, Alexandre Monteiro</i>	
Practical Solutions to Harmonic Assessment of Inverter-Based Resource Plants	137
<i>Wilsun Xu, Jing Yong</i>	
Reliability Verification of a High Voltage Grid for Urban Operation.....	142
<i>Pascal Bächler, Gustavo Valverde, Klaudia Madeira Bein, Britta Heimbach, Raffael La Fauci, Andri Casura, Gabriela Hug</i>	
AMI-Based Non-Firm LV Grid Connection for PV Generators: First Real-World Experiments.....	147
<i>Florent Cadoux, Ali Hamdan, Benoît Vinot</i>	

Distribution Network Development Amid Policy Actions: Regulatory Plans as a Steering Strategy.....	152
<i>Joel Seppälä, Pertti Järventausta</i>	
Use-Case-Based Evaluation and Holistic Testing of IEEE 2030.5 and IEC 61850 for Grid Integration of DER	157
<i>Zhiyu Lu, Christoph Kondzialka, Shuo Chen, Zhongran Zhang, Gerd Heilscher</i>	
Integrating Carbon Intensity in Electric Vehicle Charging at Office Parking Lots.....	162
<i>Leoni Winschermann, Gerwin Hoogsteen, Johann Hurink</i>	
Towards Industrial Agility: Control Architectures for Electricity-Intensive Facilities	166
<i>Daniel V. Pombo, Jacinta C. Conga</i>	
Power Switchgear Retrofitting: What We Can Learn from Our American Cousins	171
<i>John C. Webb, Davide Montorfano</i>	
Innovating for Safety: The Journey of Partial Discharge Measurement Tools at Hydro-Quebec.....	176
<i>Lionel Reynaud, Lucas Malo Bélanger, Marc-André Magnan, Michel Trépanier</i>	
Comparative Investigations at AC-Arcing Vs. DC-Arcing	181
<i>Thomas Gräff</i>	
Analysis and Evaluation of Ageing Phenomena of High-Power LV and HV Fuses Due to Longterm Operation.....	186
<i>Thomas Gräff</i>	
Development of Unbalanced Voltage Estimation Method Using Sensor Switches for Enhancing HC	191
<i>Naoyuki Takahashi</i>	
Wavelet Feature Analysis Based Induction Motor Internal Fault Identification Using Experimental Data	196
<i>Ranjeet Kumar, Arinjai Gupta</i>	
Decision-Making Support in the Presence of Uncertainty in Advanced Distribution Management Systems: A Wisdom Hierarchy-Based Perspective.....	201
<i>Željko N. Popović, Branislav S. Brbaklić, Vladan D. Krsman, Jovan S. Dojić</i>	
ECO-Label for Grid Assets	205
<i>Maike van Delft, Lance Coseart, Co den Hartog</i>	
Development of Simple Determination Method for Available Interconnection Capacity of PV Considering Voltage Stability	210
<i>Fusakazu Kondo, Naoyuki Takahashi, Hiroyuki Hatta</i>	
Analysing the Effect of Decentralised Low-Voltage Control by Grid Calculation.....	215
<i>Veronika Barta, Sonja Baumgartner, Stephanie Uhrig, Rolf Witzmann</i>	
Roadmap for Unleashing Large-Scale Energy Transition Potential by Fully Viable and Integrated Energy Communities	220
<i>Ilaria Losa, Albana Ilo, Antonio Iliceto, Santiago Gallego Amores</i>	
Evaluation for Necessary Power Demand for Electric Truck Charging on Motorways	225
<i>Daniel Feismann, Thomas Oberließen, Ulf Häger, Christian Rehtanz</i>	
Parameterisation of Superordinate Grid Representations in the Calculation of Feasible Operating Regions.....	229
<i>Felix Korff, Dulguun Baasankhuu, Manuel Schwenke, Jutta Hanson</i>	

The Effect of Solar Diversity Factor on the Capacity for Renewable Generation on the Distribution Network.....	234
<i>Alex Valenzuela, Anthony Chabrol, Ray Dorney</i>	
Leveraging Daily Smart Meter Data to Estimate the Peak Load of Distribution Transformers	239
<i>Florent Cadoux, Damien Frésier, Joris Garcia, Sébastien Julien, Sébastien Vallet</i>	
Development and Deployment of a Realtime Interface Customer Endpoint for Enhancing Grid Stability and Congestion Management in the Dutch Energy Sector.....	243
<i>Jeroen de Bruijn, Anaïs Wampack, Paul APR Mignot</i>	
Automated Grid Expansion and Decommissioning Planning of Low-Voltage and Low-Pressure Grids for Sector-Coupled Scenarios in an Existing German District	248
<i>Timo Mayregger, Nicole Barton, Markus Zdrallek</i>	
Improvement of Vacuum Circuit Breaker Model Based on Laboratory Results	253
<i>Raphaël Chassagnoux, Ibrahima Dia, Djamel Hadbi, Denis Sportiello, Sandrine Samso</i>	
Optimal Sensor Placement for State Estimation of Distribution Networks Using a Genetic Algorithm	258
<i>Rémi Lembeye, Kevin Mercier, Nicolas Cussigh, Dominique Croteau</i>	
Modelling Local Electricity Consumption by Incorporating Data of Social Media Using Natural Language Processing	263
<i>Yidi Huang, Muhammad Salman Shahid, Anne De Moliner, Benoit Delinchant, Pierre Cauchois</i>	
Impact of Reactive Power Transfer Among Transmission to Distribution Substations on the Transmission Network's Voltage	268
<i>Aghyles Graine, Jean-Paul Gaubert, Didier Larraillet</i>	
Observations and Clarifications of Measured Trends in PQ Disturbance Levels in the Dutch HV and EHV Grid.....	273
<i>Jeroen van Waes, Hans Wolse</i>	
Enhancing Efficiency of Arc Flash Simulation in Switchgear: Transitioning from 3D to 1D Model Using Matlab Simulink-Simscape	278
<i>Jaehyun Lee, Jeongsu Lee, Kilyoung Ahn, Jihoon Ma, Juhyun Kim, Seogang Ryu, Rokhyung Yoo, Wooin Park</i>	
Non-Discriminatory Distributed Grid Congestion Management for Low-Voltage Networks Considering Prosumer's Preferences: A Practical Approach	283
<i>Nane Zimmermann, Maximilian Kilthau, Ghayathri Suriyamoorthy, Felix Gehlhoff</i>	
Continuous Determination of Assets' Dynamic Loadability by Using Thermal Inertia and Real-Time Conditions	288
<i>Jochem Wildeboer, Jur Erbrink, Zino Kramer, Rory Leich</i>	
Investigating the LV Network Capacity for Flexible Energy Storages, Considering Energy Flexibility Provision and the Role of Local Flexibility	293
<i>Rajith E. Welikannage, Sarah K. Rönnberg</i>	
Touch Voltages in Ground Mounted PV Power Plants Caused by Earth Faults Or Lightning Strikes	298
<i>Benjamin Jauk, Katrin Friedl, Michael Hanner, Robert Schürhuber</i>	
A Thermal Twin of Medium-Voltage Switchgears for Predictive Maintenance	303
<i>Erhard Aumann, Mohamed Khalil, Mohamad Omar Naja</i>	

Versatile and Self-Adapting Smart Home Control	308
<i>Fabien Sanchez, Vincent Debusschere, Rémy Rigo-Mariani, Antoine Labonne</i>	
A Three-Dimensional Risk Matrix to Support Investment Strategies for Network Planning by Analyzing the Impact from Congestion on the Remaining Lifetime of Assets	313
<i>George Rouwhorst, Phuong H. Nguyen, Han Slootweg</i>	
Reducing the Data Size of Supraharmonic Measurements to Verify EMC Compliance	318
<i>Roger Bergeron, Manouane Caza-Szoka, Philippe Blanchard, Daniel Massicotte</i>	
Modelling and Evaluation of Global Earthing Systems Using Earth Potential Rise Criteria	323
<i>Christian Ehlert, Christin Schmoger</i>	
Groundinsight: Open-Source Software for Modeling and Analyzing Earthing Systems.....	328
<i>Christian Ehlert</i>	
Corrosion of Primary Substation Components and Distribution Pole in Tropical Marine Atmosphere Rich in H ₂ S Resulting from the Decomposition of Sargassum Algae	333
<i>Yves Denos, Morgan Porredon, Johan Becker, Francois Percebois, Livio Bouboune, Wilfried Lambourde, Jean Martinon</i>	
Improving LV Networks Hosting Capacity Via the Use of Batteries – a Monte-Carlo Analysis	338
<i>Karim Feys, Quentin Antoine, Hugues Halluin, Jonathan Rochet, Thomas Bertrand</i>	
Improving LV Networks Hosting Capacity Via Manual Phase Switching of Households – a Monte- Carlo Analysis	343
<i>Quentin Antoine, Karim Feys, Jonathan Rochet, Bart Van Wulpen, Kevin Ledune, Pierre Janssen</i>	
Evaluation of Earth Fault Current Estimation Method from Fault Records	348
<i>David Topolane, Viktor Jurak, Martin Fabian</i>	
High-Frequency Characteristics of Low Power Instrument Transformers (LPITs).....	353
<i>Matteos Tefferi, Nikola Ilic, Manish Shukla, Elisa Scala, Andrea Nalli, Nenad Uzelac</i>	
A Study on Improving HIF Detection Accuracy Through Automated Setting Based on Power Data.....	358
<i>Chungmin Lee, Yongseok Seon, Yoonhee Heo, Yongsam Kim, Haeyoung Jung</i>	
Study on the Characteristics of Large-Scale Fast Charging Loads and Their Impact on Power Quality in Distribution Networks Based on Field Measurements	363
<i>Peng Zhang, Chen Wang, Bing Shen, Xingang Yang, Qian Feng</i>	
Investigating the Bending Stiffness of Polymeric Cables.....	368
<i>Piet Soepboer, Tjeerd Broersma, Tom Looby, Jonathan Moens</i>	
Periodic Verification of DC EVCS: Results of the ProSafe2(protection, Safety and Efficiency of Electric Vehicle Charging Stations) Research Project	372
<i>Alexander Hinteregger, Daniel Stahleder, Stephan Ledinger, Daniel Herbst, Martin Fuernschuss, Thomas Stainer, Patrick Reicher</i>	
AI-Based Technology for Automatically Diagnosing Power Facilities In-Vehicle	377
<i>Jung In Kim, Young Sam Jang, Young Gi Hong, Seung Won Yoon</i>	
Inverter-Based Black Start of Domestic Loads: Behavior and Inrush Current.....	381
<i>Jane Marchand, Jérôme Buire, Vincent Debusschere, Jean Pompée, Iulia Ivan, Nouredine Hadjsaid</i>	

Congestion Management in Medium Voltage Networks in N and N-1 Situation.....	386
<i>Amritha Jayan, Irena Dukovska, Evelin Miedema-Bakos, Jerry Jinfeng Guo, Yu Xiang</i>	
Thermal Modelling of the Soil to Study the Impact of Climate Change on the Current Rating of Underground MV Cables.....	391
<i>Minh Nguyen Tuan, Marie-Laure Parussolo-Paupardin</i>	
Innovative Approach to Boosting DER Hosting Through a Combination of Distribution Transformers, Line Voltage Regulation and OT/IT Integration.....	396
<i>Frank Cornelius, Peter Noglik, Sigbert Reimann, Leyla Asgarieh</i>	
Communication Personas	401
<i>Danielle A. F. Carvalho, Beatriz S. Rodrigues, Yao Qing</i>	
A More Robust Reverse Blocking Scheme Using IEC61850 GOOSE Messaging	406
<i>Ahmad Farid Perdaus, Mohd Rusydi Shari, Mohd Noorfazly Noran</i>	
Neural-Network Assisted Modelling of Cable Ampacity for Dynamic Load Profiles	411
<i>Camilla Espedal, Svein M. Hellesø, André Kapelrud, Espen Eberg, Nina M. Thomsen</i>	
Passive Filter Design for Weak Distribution System with 24-Pulse Converter Load Using EMT Models.....	416
<i>Martin Švancar</i>	
PYORPS: An Open-Source Tool for Automated Power Line Routing.....	421
<i>Martin Hofmann, Thomas Stetz, Frank Kammer, Sami Repo</i>	
Algorithm to Estimate Hosting Capacity in a Radial Medium-Voltage-Grid	426
<i>Johannes Jargstorf, Jan Van de Vyver</i>	
Automated Greenfield-Planning of Integrated Low-Voltage Distribution Network Structures.....	430
<i>Eric Schulze Berge, Wiebke Gerth, Marius Güths, Markus Zdrallek</i>	
Categorizing Finnish Distribution System Operators by Combined Geographic Data and K-Means Clustering	434
<i>Joonas Kari, Joel Seppälä, Pertti Järventausta</i>	
Power Quality Modeling of PEA.....	439
<i>Anurak Choeichum, Jaturapat Suasongsin</i>	
Operational Limits and P-Q Capability Diagram Analysis of Grid-Forming Converters in Weak Grids.....	443
<i>Ziqian Zhang, Wendelin Angermann, Philipp Hackl, Robert Schuerhuber</i>	
Enhancing TSO-DSO Coordination: A Machine Learning Approach for Efficient Operations Planning.....	448
<i>Ali Z. Banatwala, Chenghong Gu, Xiaomei Pei</i>	
Supporting Transmission Grid Voltage Control with Active Distribution Grids Using Online Feedback Optimisation.....	453
<i>Manuel Schwenke, Felix Korff, Jutta Hanson</i>	
The Modern DSO – Addressing Challenges and Opportunities to Meet Tomorrows' Expectations.....	458
<i>Vincent Gliniewicz, Kristin Bobeck</i>	

Data-Driven Regionalisation of Nation-Wide Energy Scenarios for Local Grid Planning: A Case Study of Zurich's Distribution Network	463
<i>Nicolas Früh, David Hearn, Britta Heimbach, Raffael La Fauci</i>	
Analysis of Different Methods for the Application of Simultaneity Factors for Low-Voltage Network Planning.....	468
<i>Felix Talmond, Markus Zdrallek, Steffen Hetzel, Ulrik Dietzler</i>	
E-REDES Solution for Real-Time Overvoltage Monitoring in LV Grid Pilot Results.....	473
<i>Ricardo Matos, André Branco, Carolina Marques, Eduardo Francisco, Miguel Louro, Miguel Verissimo, Nuno Santos, Pedro Nunes, Rui Calçada</i>	
Frequency-Dependent Control of DERS and OLTCs in the Future Distribution Networks	478
<i>Hannu Laaksonen, Nikos Hatzargyriou</i>	
Extended Analysis of Power Transformer Conditions in the DACH Region: Comparative Study of Typical Gas Levels and Formation Rates	483
<i>Niklas Bäcker, Silas Selzer, Markus Zdrallek, Alexei Babizki, Karlheinz Lindl</i>	
Flexibility for Congestion Management in Low-Voltage Grids: An Automated Network Modeling Case Study on Multiple Flex Resources with Outlook 2025-2050.....	487
<i>Bjorn Brockhoven, An Thien Huu Nguyen, André van Gerven, Johan Morren</i>	
Estimating System Inertia in Sparsely Measured Dynamic Power Systems Using Graph Neural Networks	492
<i>Julius Frerk, Felix Flatter, Christian Trossen, Fabian Fäßer-Stock, Markus Zdrallek</i>	
Planning of the Lausanne Low Voltage Grid Via Probabilistic Load Flow Analysis	497
<i>James Germanier, Max Chevron, Pål Forr Austnes, Damien Chollet, Ana Vukicevic, Mario Paolone</i>	
Enhancing Power Quality: Investigation of Photovoltaic Systems in Microgrid Power Systems.....	502
<i>Amirali Mahjoob, Hussein Jaffal, Mahdi Koubaa, Andreas Ulbig</i>	
A Pre- And Post-Installation Analysis of the Impact of Industrial Photovoltaic Park Deployment on Power Quality Emissions	508
<i>Carina Lehmälä, Ziqian Zhang, Helmut Haslinger, Lothar Fickert, Robert Schürhuber</i>	
Unveiling the Dutch IEC 61850 DSO-DER Realtime Interface: Practical Insights and Experiences	513
<i>René Troost, Rik Fonteijn, Alain Stuivenvolt, Rob van Olst</i>	
3-Phase LV Network Load Balancing: Comparing Passive and Active Solutions	518
<i>Henri Grandjean, Pierre Fristot, Jean-Michel Fischbach</i>	
A Digital Solution to Enable Decarbonisation of Major Energy Demands and Acceleration of Energy Transition	523
<i>Liza Troshka</i>	
Detecting Potential Wasted Interventions on Customer Premises with Natural Language Processing	527
<i>Aurélie Lutton, Roman Hosch, Hacene Bellahmer</i>	
Real-Time Energy Monitoring Infrastructure for Residential Collective Self-Consumption Operations Using Linky Meter	531
<i>Jérôme Ferrari, Benoit Delinchant, Frédéric Wurtz, Olga Rouchouze</i>	

Structural Modelling of Corrugated Tank of Hermetically Sealed Transformers Under Dynamic Loading.....	536
<i>Jasim Jamil, Ali A. Abadi</i>	
DER Hosting Capacity for Distribution Networks: Definitions, Attributes, Use-Cases and Challenges	541
<i>Md. Umar Hashmi</i>	
A Permanent Phase-To-Phase Fault Identification Method for Distribution Line Based on Sequential Reclosing	547
<i>Huan Li, Zhongxue Chang, Guobing Song</i>	
How to Build an Efficient Virtual Training?.....	552
<i>Tomas Kozel, Giada Volpin, Marco Egman, Callisto Gatti</i>	
Advance Analytics Using Artificial Intelligence (AI) in Unmanned Aerial System (UAS) for Defect Detection in MV Overhead Line System Distribution Network TNB.....	556
<i>Muhammad Fazli Bin Nozlan, Mohd Faris Bin Ariffin</i>	
Economic Scalability of Local Energy and Flexibility Market Under Consideration of Medium Voltage Nodes.....	561
<i>Maximilian Kilthau, Martin Asman, Christian Derksen, Nils Loose, Thomas Gilster, Markus Zdrallek, Felix Gehlhoff, Alexander Fay</i>	
Aggregating Distributed Plug & Play Battery Storage Units: Effects on Local Grid Dynamics and Efficiency	566
<i>Fabien Berger, Myriam Kassoul</i>	
Charging Electric Vehicles, Eating Pizzas, and Safeguarding the Grid in 2025.....	570
<i>Gerwin Hoogsteen, Bart Nijenhuis, Kevin de Bont, Marisca Zweistra</i>	
An Accelerated Ageing Test Bench for Lifetime Assessment of New Generation of MV/LV Transformers.....	575
<i>Florimond Soriano, Djamel Hadbi, Mamadou-Lamine Coulibaly, François-Xavier Rommelard</i>	
Understanding the Small-Signal Stability of Low-Voltage DC Microgrid.....	579
<i>Qihao Guo, Jérôme Buire, David Frey, Patrick Chambon</i>	
Overhead Recloser Ratings for Strengthening the Grid Under Extreme Conditions.....	584
<i>Stefan Micic, Foster K. Pyle, Carlo Gemme</i>	
Preparing Dutch DSO-DER Interface for Large-Scale Role-Out Using IEC 61850 and WebSocket.....	588
<i>Alain Stuivenvolt, Rik Fonteijn, Davood Sooran, Robert-Jan Peters, René Troost, Willem Boogers, Alexander Jumelet</i>	
Enhanced Power Grid Reliability Through 14-Day Machine Learning Predictions for Proactive Fault Management.....	593
<i>Johan Mikkelsen, Kewin Erichsen</i>	
Enhancing the Attractiveness of Public EV Charging – from a Minor Role into a Real Deal Through Dynamic Pricing	598
<i>Toni Simolin, Tim Unterluggauer, Kalle Rauma, Pertti Järventausta</i>	
Management of Active Distribution Grids Using a Distributed Digital Twin Architecture.....	603
<i>Thomas Schwierz, Bharathwajanprabu Ravisankar, Ulf Häger, Christian Rehtanz</i>	

Efficient Testing of Fault Direction Algorithms Based on Design of Experiments Methods	608
<i>Kim Krawiec, Svenja Joseph, Ulf Häger, Christian Rehtanz, Erwin Burkhardt</i>	
Improving LV Networks Hosting Capacity Via the Use of PV and BESS Inverter Controls – a Monte-Carlo Analysis.....	613
<i>Loïc Maudoux, Quentin Antoine, Kristof Vliegen, Simon Gérard, Hugues Halluin, Thomas Bertrand</i>	
The Impact of Eco-Design on Transformer Temperatures in MV/LV Substations.....	618
<i>Nathalie Barnel, Fabienne Montel-Ragu, Jean-Pierre Gontier</i>	
Impact of New Uses on the Thermal Behaviour of a 30-40-Year-Old Distribution Transformer.....	623
<i>Nathalie Barnel, François-Xavier Rommelard, Djamel Hadbi</i>	
Sensitivity of the Accuracy of Long-Term Load Forecasting to Exogenous Variables	628
<i>Airam Perez Guillen, Jovica V. Milanović</i>	
Framework Conditions, Use Case Analysis and IT/OT Architecture for LV Management in Germany	633
<i>Shawki Ali, Ben Gernsäger, Carsten Böse, Roland Drewek, Bastian Pfarrherr</i>	
Accelerated Ageing of Medium Voltage Cold Shrink Joint Materials Under Combined Stresses.....	638
<i>Théo Vaytet, Olivier Gain, Fabrice Gouanvé, Eliane Espuche, Christophe Moreau, Morgane Broudin, Marie-Laure Parussolo-Paupardin, Joan Cauvet, Houssam Tanzeghti</i>	
End Users Flexibility Potential Estimation Under Differing Prosumers' Characteristics and Constraints.....	643
<i>Anibal Sanjab, Abhimanyu Kaushal, Tom Cuypers</i>	
Community DSO: Enabling Energy Communities to Balance Renewable Energy Generation and Demand to Improve Network Resilience	648
<i>Jeremy Harrison, Katharine Blacklaws, Clarissa Muliawan</i>	
Integrated Detection and Location Estimation Method for Open Conductor Faults in Distribution Systems.....	654
<i>JiSong Hong, SeokChan Lee, SangYun Yun</i>	
Influence of Air Conditioning to Voltage Sags.....	659
<i>Junbo Jia, Ying Wang, Xianrong Xiao, Yunzhun Chen, Wenxi Hu</i>	
Increased Reliability of Smart Distribution Transformers for Efficient Operation of LV Distribution Electric Grids.....	664
<i>Alvaro Camuñas, Pablo Cirujano, Alvaro Ortiz, Ibon Larracoechea</i>	
IDENTICAL Project: Increasing Distribution Network Hosting Capacity by Means of an Innovative Application of a Smart Transformer (with OLTC) Combined with Electric Distribution Digital Twins	668
<i>Jon Kobeaga, Alena Ulasenka, Luis Del Río, Rubén Carmona, Rafael Morán, Ivan Fernández, Esther Romero, Jose Antonio Rosendo, Antonio De La Villa</i>	
A Study on Optimizing Class a Power Quality Measurements for Low-End Devices Using Mixed Radix FFT Combined with Resampling	673
<i>Je-Ho Yoo, Jae-Jun Yun, Pan-Ryeol Kim, Sang-Tack Shin, Ki-Hwan Oh, Jin-Young Park</i>	

PART 2

Small-Scale Curtailment of PV Generation Under Non-Firm Connections	678
<i>Selina Kerscher, Eivind Gramme, Pablo Arboleya</i>	
Electrical Endurance Test at Nominal Current of Vacuum Interrupters.....	683
<i>Anthony Papillon, Christian Mombard, Renaud Carlen, Fedor Korolev</i>	
Implementation and Settings of Negative Sequence Current Protection in Distribution Systems with Integrated Inverters.....	689
<i>Lainser Sklab, Bertrand Raison, Manuel Billaud, Mahana Bernier, Benjamin Schuler</i>	
Analysis and Comparison of Congestion Management Solutions of Distribution Grids	695
<i>Sami Repo, Pertti Järventausta, Mehdi Attar, Kimmo Lummi</i>	
Impact of Electromagnetic Coupling on Common 110 KV/400 KV Overhead Lines on a 110 KV Grid.....	700
<i>Matthias Schilcher, Max Schulze, Frank Wirtz, Uwe Schmidt</i>	
Modelling Dynamic Network Usage in Network- And Operations Planning Using Stedin Energy Transition Impact Assessment Model (SETIAM)	705
<i>Anne van der Molen, Eveline Sahni, Carolien Arensman, Koen Kok, Phuong Nguyen, Peter van der Wielen</i>	
The Swedish Regulation on Designing Network Tariffs for an Efficient Utilization of the Power Grid.....	710
<i>Herlita Bobadilla Robles, Marie Swenman, Carl Johan Wallnerström</i>	
Potential Analysis of Renewable Distributed Energy Resources for Frequency Containment Reserve Provision.....	715
<i>Kiran N. Borse, Simon Uhlenbrock, Christian Rehtanz</i>	
Life Evaluation Method of Cast-Resin Transformer by Tan Delta Measurement: A Cast Study.....	720
<i>Ha-Young Lee, Jung-Hun Kwon, Hyun-Ho Kwon, Jin-Ho Lee</i>	
Application of Particle-Based Bayesian Inversion to Underground Medium Voltage Power Cables in the Netherlands.....	725
<i>Wouter G. van Harten, Dirk Heldens, Laura Scarabosio, Gabriel J. Lord, Sander Rieken</i>	
Next Generation Gas-Insulated Switchgears with Natural-Origin Gases for 40.5 kV Level.....	730
<i>Karthik Reddy Venna, Florian Wolfrum, Bernd Schüpferling</i>	
Grid Integration of DER - Grid Code Compliance Energizing Transformers in Wind Turbine Generators Industrialized Applications and Operation of Low-Power Instrument Transformers, Three-Pole Operated Vacuum Circuit Breakers and Controlled Switching Devices to Mitigate Transformer Inrush Currents and Voltage Dips	735
<i>Michail Theodoridis, Venkata Surya T, Vaclav Prokop, Lukas Cesky, Laurent Poutrain</i>	
Advanced Demand Side Management in Distribution Networks with Low Carbon Technologies.....	740
<i>Ali Ehsan, Zhenxuan Feng, Jelena Ponočko, Jovica V. Milanović</i>	
Development of a Thermal Performance Indicator Based on a Thermal Model for Oil-Immersed Distribution Transformers with Two-Stage Cooling.....	745
<i>Mauricio Cuevas, Damien Bortolotti, Jean-Philippe Argaud, Mohammed Zouiti</i>	

DIGITECHNETZ - A Flexible Testbed for Smart Grid Platforms Using Digital Twins of Low Voltage Grids	750
<i>Laura Fiedler, Maximilian Schmidt, Peter Schegner, Marco Weisenstein, Rico Böhme, Uwe Schmidt, Thomas Wagner, Holger Hänchen, Lea Braun, Lukas Menke</i>	
Investment on Overhead MV Network for a Better Resilience to Climate Hazard, a New Approach	754
<i>Simon Levaufre, Odilon Faivre, Kevin Guillaume, Augustin Iamundo, Nicolas Dunand</i>	
Semantic Interoperability: A Real Challenge for International Standardization.....	759
<i>Laurent Guise, Etienne Cailleau, Gilles Nativel, Nathalie Baumier, Boris Doley, Antonio Kung, Olivier Genest, Eric Lambert</i>	
Integrating Physics-Based Twins to Enhance Partial Discharge Evaluation	764
<i>Thomas Schmidt, Thomas Hammer, Sebastian Preuss</i>	
RE/SOURCED PILOT: Practical Implementation of a DC Microgrid	769
<i>Ward Ysebie, Hakim Azaïoud, Brecht Caers, Jan Desmet</i>	
Adaptive IEC 61850-Based Overcurrent Protection in Active Distribution Systems.....	774
<i>Yaser Raeisi-Gahrooei, Meysam Pashaei, Davide Pavanello, Kimmo Kauhaniemi, Hannu Laaksonen</i>	
Further Integrated Physical and Probabilistic Modelling of Low Voltage Cable Degradation with a View to Future Technologies and Asset Management Strategies	779
<i>Rosemary Tawn, Megan Taylor, Gordon McFadzean, Graeme Horne, Gruffudd Edwards, Charlie Watt, Ruth Augarde, Delroy Ainsworth, Ben Ingham</i>	
Integrated Modeling and Forecasting of EVs Charging Profiles Based on Real Data.....	784
<i>Octavio Ramos-Leanos, Hussein Suprême, Mouhamadou M. Dione, Daniel Chabot, Vincent Beaulieu</i>	
Benchmarking Methods for Identifying Representative Load Periods for Fast Distribution Network Analysis	788
<i>Hossein Fani, Md. Umar Hashmi, Geert Deconinck</i>	
Aging and Lifespan Prediction of Busbar Connection in GIS: A Detailed Study in SF6 Free Dry Air Atmosphere	793
<i>Keyur Tandel, Raimund Summer, Juan Carlos Perez</i>	
High-Accuracy Wideband LPCT for Advanced Grid Automation and PQ Metering.....	798
<i>Elisa Scala, Andrea Nalli</i>	
Application of Thermal Network Modelling for MV GIS Design Optimization.....	803
<i>Maciej Mruczek, Monika Zielińska</i>	
Paving the Way for Network Neighbourhood Batteries in Australia: A Business Case Assessment	808
<i>Peter K.C. Wong, Rob Catchlove, Benjy Lee, Thanh Bui</i>	
Intelligent IEMS for DSO Based on Cloud-Edge Collaboration Architecture	813
<i>Yang Yi, An Li, Xiaoye Huang, Shaoyun Meng, Chen Li, Xing Zhao, Qinglai Guo</i>	
Voltage Range Estimation in Low-Voltage Networks Including Unmeasured Points Through Voltage Distribution.....	817
<i>Jin Sol Hwang, Yun-Su Kim</i>	

Cost Consideration of Installing Facilities for Off-Grid Distribution System Supplied Only Inverter Power Sources	822
<i>Takaya Aneqawa, Atsushi Ishigame, Satoshi Takayama, Takumi Yoshioka, Daisuke Yamaguchi</i>	
Utilization of Smart Meter Systems for IoT Communication Infrastructure	827
<i>Satoshi Kurosawa, Atsufumi Fujita, Yukitoki Tsukamoto</i>	
Characteristics of Arcs in Air with Axial Blowing	832
<i>Yujin Ogawa, Tadashi Koshizuka, Kunihiro Hidaka</i>	
Fault Section Identification Method for Loop Distribution Systems in Korea	837
<i>Hyeonmyeong Lee, Lyun Yu</i>	
Solving Scalability Issues in PV Hosting Capacity Assessment Through Physics-Informed Neural Networks	842
<i>Furqan Azam, Md. Umar Hashmi, Chris Hermans, Geert Deconinck</i>	
Application Limits for Transient Earth-Fault Analysis of Symmetrical Components in Compensated Grids Under Unbalanced Conditions	847
<i>Matthias Robeischl, Lothar Fickert, Peter Dopplmair</i>	
New IEC Standardization Framework of Environmental Aspects Needs to Be Supported by the Digital Transformation	852
<i>Thierry Cormenier, Roselyne Thai, Takako Hiruta, Matthew Ferguson, François Trichon</i>	
Designing Demand- And Production-Side Tariffs to Mitigate Grid Expansion Costs Within the Swiss Regulation Scheme	857
<i>Florian Ess, Dominik Studer, Vincent Rits, Lukas Küng</i>	
Overlooked Factors in Transparent Hosting Capacity Calculations	862
<i>Marta Vanin, Ellen Beckstedde</i>	
Modern Transformer Concepts for Improved Resilience of Power Distribution Systems	867
<i>Radoslaw Szewczyk, Jean-Claude Duart, Anastasia O'Malley, Vinaybhai Patel, Robert Mayer, Ewald Schweiger</i>	
Low-Barrier Flexibility Agnostic Marketplace: GLocalFlex Market	873
<i>Stephan Mehnert, Robert Jahn, Pirkko Kuusela</i>	
Recent Updates in the Swedish Regulation on Voltage Quality	878
<i>Herlita Bobadilla Robles, Albin Emanuelsson, Carl Johan Walnerström, Maria Dalheim, Marcus Tjäder</i>	
The MicroResilience Solution: Mitigating Grid Outage Impacts for Rural Customers	883
<i>Andrew Webster, Bart DeLeeuw, Colin G. MacKenzie, Robert MacDonald, Flo Silver, Paul Glendinning</i>	
Empowering Microgrids with Adaptive Household Energy Management	888
<i>Niklas Sjöberg, Kristin Bobeck, Arne Berlin</i>	
Novel DER and OLTC Management During Islanded Operation of MV Microgrid	893
<i>Hannu Laaksonen, Nikos Hatziaargyriou</i>	
The Role of Asset and Network Resilience in Electricity System Restoration 'black Start'	898
<i>Peter Ferrier, Matthew Jones, David Cupples, Luke Douglas, Daniel Barlow, Jack Haynes</i>	

Boston SPA Energy Efficiency Trial - A Novel Method to Implement Conservation Voltage Reduction	901
<i>Francis Shillitoe, Susan Morgan, Mark Callum, Keith Jackson, Roger Lynn, Steve Webb, Vincent Thornley</i>	
Enhancing Low Voltage Flexibility Through Home Energy Management: A Co-Creation Approach with DSOs and Market Product Development	906
<i>Martje W. Wijnen, Tim J. P. Joosten, Joren M. van Lindert</i>	
Prioritization and Reports Processing Improves Maintenance Decisions.....	911
<i>Tomas Kozel, Anna Mazzoleni, Marco Egman, Callisto Gatti, Oliver Meili</i>	
Qualification of a 10kV MVDC Cable System Including Accessories	915
<i>Amjad Mouhaidali, Lina Ruiz, Ludovic Boyer, Raphael Guffond, Philippe Singleton, Marie-Helene Luton, Samuel Griot</i>	
Identification of Price Flexible Spot Contract Customers from Load Data Based on Extreme Events on Electricity Market.....	920
<i>Jouni Haapaniemi, Juha Haakana, Akseli Lamminpää, Jukka Lassila</i>	
Influence of a Virtual Impedance on the Dynamic Behaviour of the Grid-Forming Control of Inverter-Based Generation Plants	925
<i>Lukas Jung, Aaron Hebing, Anna Pfendler, Jutta Hanson</i>	
Assessing the Flexibility and Cost Dynamics of Hydrogen Systems in Integrated Energy Models for DSO Grid Planning.....	930
<i>Arjen Jongepier, Mathijs Bijkerk, Tjebbe Vroon, Alexander Wirtz</i>	
Investigating the Capabilities of Virtual Synchronous Machines to Provide Instantaneous Reserve in a Laboratory Environment.....	935
<i>Alexander Och, Irina Zettl, Alexander Winkens, Mourad Kharrat, Andreas Ulbig</i>	
Leveraging Overhead Powerline Inspection Using Drones and Digitalization	940
<i>Andre Coelho, Ricardo V. Santos, Rui M. Martins</i>	
Impact of Optimal Capacity of Storage Units in Residential Houses for P2P Energy Trading	945
<i>Victor Sam Moses Babu K., Pratyush Chakraborty, Mayukha Pal</i>	
Connection Phase Computation Using Linky Smart Meter PLC Communication Data	951
<i>Emmanuel Viallis, Thibault Chevalerias, Vincent Agnes</i>	
From 1 to 48 Hours: Preprocessing Strategies and Machine Learning Forecasting for Solar, Photovoltaic and Wind Power in the Spanish Intra-Day Electricity Market	955
<i>Jorge Cano-Martínez, Belén Arroyo-Torres, Marcos Carbonell-Mafé, Caterina Tormo-Doménech, Alfredo Quijano-López</i>	
From Isolation to Integration: Enhancing Shetland's Distribution System to Connect HVDC	960
<i>Viktor Mucsi, Matthew Gordon, Dimitris Konstantinidis, Nathan Coote</i>	
Addressing Operational Challenges in Low-Voltage Grids – E-REDES' Innovative Use of Geospatial Clustering and Smart Meter Data	965
<i>Carolina Marques, Miguel Veríssimo, Miguel Louro, Marina Miranda, Diogo Alexandre Ferreira, João Nunes Carreira, Ricardo Príncipe dos Santos, Rui Calçada</i>	
Arc Fault Detection Using LSTM Autoencoders and Isolation Forest in Electrical Distribution Networks	969
<i>Kriti Thakur, Yash Tiwari, Alivelu Manga Parimi, Mayukha Pal</i>	

The Role of Gender Diversity in the Technology Adoption of Outsourced Electric Distribution Enterprises: An Innovation Resisting Theory Approach	974
<i>Herick Morales, Mário Batalha, Roberto Martins, Roberto Tavares Neto, Rafael Seeberger, Gustavo Mendonça, Luana Gomes, Mauro Gonçalves, Bruno Gonçalves, Willamy Siqueira</i>	
Influence of the Grid Topology on the Grid Access Impedance in the 20-500 kHz Frequency Range	979
<i>Jon González-Ramos, Alexander Gallarreta, J. Vildósola, Bernhard Grasel, Itziar Angulo, Igor Fernández, David de la Vega, Amaia Arrinda</i>	
Sizing Optimization of Generator Sets for LV Grid Maintenance Interventions	984
<i>Pierre Achaichia, Jonathan Reynaud, Emmanuel Viallis, Maher Abou Jaoude, Iulia Ivan, Pierre Frayard, Florian-Thanh Nguyen</i>	
Strategic Integration of High-Pass Filters and Detuned Reactors for Effective Harmonic Mitigation and Resonance Shifting: A Case Study.....	989
<i>Zakaria S. Al-Soud</i>	
Effect of Distances from Aerial HV Energised Conductors Have on Impressed Voltages onto Vehicles and Machinery	994
<i>Stephen Lilley, Robert Knott</i>	
Accelerating E-Mobility Charging Integration with Dynamic Grid Capacity Management	998
<i>Daniel Hauer, Juliana Kainz, Ruben Liedy, Manuel Matzinger, Alfred Einfalt, Gerhard Engelbrecht, Sabine Kubicek, Roland Zoll</i>	
E-REDES Smart Metering Plus Solution for Real-Time Access to Meter Data Via Virtual HAN Interface.....	1003
<i>Roberto Barros, Pedro Daniel, Marco Anselmo, Rita Simão, Willamy Conde</i>	
Development and Field Demonstration of PLC Communication Bridge for Distribution Automation System	1007
<i>Chun-myung Son, Jung-ki Kim, Ki-tae Kim, Jae-yong Ahn</i>	
E-REDES Requirements for Simulation in Meeting RFG Compliance on Portuguese Distribution Grid Connections.....	1012
<i>Nathan Pereira, António Esteves, Tiago Rosa, Andreia Leiria, André Neves, Miguel Louro</i>	
Verification of Next Generation Process Bus Based Modular Substations.....	1017
<i>Yiming Wu, Per Kriewitz, Anders Johnsson</i>	
D-Suite: A Suite of Partially Rated Modular Power Electronics to Increase Low Voltage Network Capacity.....	1022
<i>Andrew Moon, Matthew Deakin, Wenlong Ming</i>	
Fast Network Developments Using Innovative Grid Technologies.....	1027
<i>Peter Hughes, Pablo Arboleya, Mark Norton, Ewan Ramsay, Yann Duclot</i>	
Extreme Weather Events: Measuring and Enhancing Resilience in Operational and Electric Grid Infrastructure	1032
<i>Carlos C. B. Oliveira, Andre Meffe, Denis Antonelli, Gustavo Sacchi, Mauricio R. Habert</i>	
Controllability, Visibility, Forecasting and Modelling Strategies to Increase Distributed Energy Resources Integration in Ireland.....	1037
<i>Martin Hickey, Claudio de Brito, Pedro S. Alves, Fiona O'Donnell, Ali Ahmadi</i>	

Redefining Grid Investment Planning: Leveraging Flexibility for Cost-Effective Integrated Distribution Networks	1042
<i>Tjebbe Vroon, Arjan M. van Voorden, Paul W. Bierling, Eveline I. Sahni</i>	
Algorithms for Intermittent Fault Detection with High-Impedance Neutral-To-Ground Regimes	1047
<i>António A. Costa, Pedro Carvalho, Ana Aleixo, Rui D. Jorge, João Peres, Ana Aleixo, Hugo Morais</i>	
Evaluation of Resilience of a Distribution Grid After Addition of Heat Pumps and Electric Vehicles as Home Automated Loads Operating Under Multiple Case Scenarios for All Households	1052
<i>Muhammad Hamza, Sami Repo, Jari Seppälä, Tomi Öster, Tommi Siintoharju</i>	
Dynamic Interconnection Limits: Key Principles and Implementation Considerations.....	1057
<i>Tanguy Hubert</i>	
Rural Electrification (RE) in Sarawak: Towards Achieving Full Statewide Electricity Coverage and Post Full Coverage Initiatives.....	1063
<i>Barry P. Y. Law</i>	
Evaluation of Degradation Degree of Artificially Degraded Silicone Rubber Surface	1067
<i>Yoshiki Nakayama, Kota Niwa, May Thin Khaing, Tatsuya Sakoda</i>	
Optimal V2G Scheduling Method for Individual EV Considering Departure Uncertainty and User Behavior Using Reinforcement Learning	1072
<i>Myeongseok Chae, Dongjun Han, Yeongsang Lee, Seoeun Rho, Dongjun Won</i>	
Improved Fault Cause Identification for Overhead Distribution Grid and Field Data Evaluation	1077
<i>Kota Inoue, Shogo Takeuchi, Takumi Yoshioka, Takaya Anegawa, Tetsushi Ono, Masato Shiga</i>	
Limiting Inrush Current in Power Transformers by Using a Pre-Magnetizing Transformer	1082
<i>Zoheb Akhtar, Luca Monti</i>	
Real-Time Monitoring of the LV Network with Smart Meter Alarms.....	1087
<i>Danijel Davidović, Dalibor Crnoja, Daniela Maksimović</i>	
Predictive Analytics for 11kV Underground Cables: Leveraging Advanced Analytics and Machine Learning to Reduce Breakdowns and Operational Costs	1091
<i>Muhammad A. J. Abdullah, Shashi R. S. Gopal</i>	
Practical Impact of Measured Seasonal Variations in Soil Resistivity	1096
<i>Christoph Prokop, Josef Schmidbauer, Christian Raunig, Hans-Jürgen Wernegger, Kevin Grilz, Martin Neuwersch</i>	
Dissolved Gas Analysis Associated with Electrical Degradation in MIDEI 7131 and Mineral Oil	1101
<i>Sehee Park, Chulsang Hwang, Jeonghyeon Jo, Taejin Kim, Youngwoo Youn</i>	
Consumption Alarms to Customers Using Smart Meters Real-Time Measurement.....	1105
<i>Anssi Vanhatalo, Tero Kivimäki</i>	
Earth-Fault Protection Challenges for Modern Distribution Power Systems	1110
<i>Zoran Gajić, Samir Aganović, Reijo Pajunen, Simon Peulić, Hamdy Faramawy, Marcin Krakowski</i>	
Tackling PV-Caused Overvoltages - Synthesis of Monte-Carlo Simulation Outputs and Multi-Criteria Assessment of Mitigation Measures	1116
<i>Quentin Antoine, Loïc Maudoux, Kristof Vliegen, Henri Grandjean, Jonathan Rochet, Thomas Bertrand</i>	

Advanced System for Automated Monitoring of Voltage Conditions Through the Analysis of Time Series from Power Plants in Distribution Network of the Republic of Croatia	1121
<i>Kristijan-Frano Čavar, Branimir Gabrić, Ivan Periša, Anton Marušić, Mladen Modrovčić</i>	
A Synchronized Current Source Control Method for Islanded Microgrids	1127
<i>Bingyin Xu, Maozeng Lu, Huabo Xu, Yanlei Zhao, Haotian Che, Jianfei Yu</i>	
Identification and Correction of Meter-Transformer Associations in Residential LV Networks	1132
<i>Eshan Karunarathne, Vincenzo Bassi, Luis F. Ochoa, Tansu Alpcan</i>	
Efficient and Sustainable Digitalisation of Smart Secondary Substations with Current and Voltage Sensors Integrated in Cable Connection Bushings	1137
<i>Bernd Schuepferling</i>	
TSO/DSO Collaboration to Solve Constraints Regarding Voltage in HV Networks and HV/MV On-Load Tap Changers	1142
<i>Jennifer Han, Josselin Fournel, Julien Cossonnet, Héloïse Baraffe, Housseem Kallala</i>	
Data-Model Hybrid-Driven Supply Restoration of Active Distribution Networks with SOP	1147
<i>Chenhai Li, Ziqi Zhang, Haoran Ji, Peng Li, Jinli Zhao, Lei Yu, Yinliang Liu, Zerui Yuanlv, Hao Yang</i>	
Complementarity of Residential, Industrial, and Municipal Participants in Local Energy Markets: A Real-Life Data Showcase	1152
<i>Sjoerd C. Doumen, Pepijn R. van de Water</i>	
Is There a Sustainable Future for Electrical Equipments Through Ecodesign?	1157
<i>Clémence Dumoulin, Solène Laurent, Eliott Perez, Christophe Perrier, Titouan Pissard-Gibollet, Frank Jacquier</i>	
Investigating the Influence of a Booking System Based on Dynamic Forecasting and Pricing on Power Flow Reliability	1162
<i>Ahmad Fayyaz Bakhsh, Florian Samm, Thomas Kienberger, Julia Vopava-Wrienz</i>	
Advantages of Using High DC Voltage in Large Scale Battery Energy Storage Systems Operated in Various Market Driven Scenarios	1167
<i>Martin Kiel, Daniel Galwas, Stefan H. Kempen</i>	
E-REDES a Pioneer & Automated Data Acquisition Process to Improve Asset Characterization	1172
<i>Mariana Maldonado, Ricardo Rodrigues, Jorge M. Santos, Maria Inês Verdelho</i>	
Implementation of Quantum Key Distribution in an Energy Control System Environment	1177
<i>Jasper Lammering, Lucas Steinhäuser, Markus Mirz, Tobias Pletzer, Florian Fröwis</i>	
PV Hosting Capability Calculation of Active Distribution Networks Based on Power Supply Path Matrix	1182
<i>Jiacheng Fang, Tianyu Chen, Hao Yu, Guanyu Song, Chengshan Wang, Shuyin Duan, Xinhao Lin, Lei Yu, Hao Yang</i>	
Reactive Power Estimation for Large-Scale Customers Using Machine Learning	1187
<i>Ensieh Hosseini, Bart Gips, Emil Eirola, Simon J. van Heeringen, Linda Schmeitz, Jacco Heres</i>	
Medium Voltage Joint Design Options for Higher Conductor Temperature (110 °C)	1192
<i>Gert Stauch, Robert Adam, Kai-Uwe Bentowski, Klaus-Dieter Haim</i>	

Enhancing Safety and Reliability in the Portuguese Subtransmission Network: E-REDES Cost-Effective Strategies for Managing Increased Short Circuit Levels.....	1197
<i>Miguel Louro, André Neves, Catarina S. Campos, Nathan Pereira, Luís M. Coelho, Inês Roça, Sara C. Ferreira, Francisco C. Branco</i>	
A Comparison of Forecasts Methods for the Calculation of Operating Envelopes	1202
<i>Fernando Lanas, Arthur Gonçalves Givisiez, Luis F. Ochoa</i>	
Influence of Grid Topology on the Operating Envelope Using Relaxed Three-Phase OPF	1207
<i>Lionel Delchambre, Patrick Hendrick, Pierre Henneaux</i>	
Implementing the Dutch IEC 61850 Realtime Interface: Direct Control of Individual Customers Through Virtualization in the SCADA Landscape	1212
<i>Alain Stuienvolt, Nick Matthijse, Rik Fonteijn</i>	
Design for Localisation Parameters for Sustainable Energy Access	1217
<i>Gaurav Sen, Pedro F. Torres, Wilson N. Macêdo, Joe Butchers, Saeed Jahdi, Abdul-Hadi Abulrub, Samuel J. Williamson</i>	
Dynamic Optimization-Based Method for Determining the Flexibility Potential at Vertical System Interconnections	1222
<i>Sharaf Alsharif, Danila Valko, Eric M. S. P. Veith</i>	
Effective Radial Thermal Conductivity for Bundles of Identical Insulated Single Core Cables	1227
<i>Julian Heger, Robert Adam, Thorsten Arnhold</i>	
E-REDES Solution to Monitor and Analyse Underfrequency Load Shedding Performance	1233
<i>António Eliseu, João F. Oliveira, Miguel Veríssimo, Miguel Louro, José V. Couto, Ricardo V. Fernandes</i>	
QUEST - An Overarching System Control Solution: Operational Trials	1237
<i>Mark Collins, David Conkie, Robert MacDonald, Andrew Howard, Chris Greenfield, Michael Keddy</i>	
Influence of the Coordination Between Transmission and Distribution Networks on the Allocation of Harmonic Emission Limits.....	1242
<i>Erik Ole Matthes, Ana Maria Blanco, Jan Meyer</i>	
Smart Algorithms for EV Charging in SMEs: A Flemish Case Study on Balancing Peak Demand Reduction and Dynamic Pricing.....	1247
<i>Toon Vanhove, Robbert Claey, Jan Desmet</i>	
Climate Change Impact on Distribution Network: Regulatory Tools for Resilience.....	1252
<i>Laura Pimpinella, Mariangela Di Napoli, Gabriele Licasale, Armando Massaro, Federico Cicero, Mario Ciancarini, Mariacristina Dota</i>	
E-REDES : A New Model, Based on EN 50522, to Manage Earthing Systems in Secondary Substations	1257
<i>Fernando Paulo, Rui Bandeirinha, António G. Diego, Gabriel P. Lopez, Andreia Leiria, Pedro Nunes</i>	
Operational Flexibility in Distribution Networks: Application of CNAIM to Facilitate Planned Outages.....	1262
<i>Leonard J. Barraclough, Shengji Tee, Gerard Boyd, Guy Shapland</i>	

Thermo-Electrical Ageing of Paper Insulated MVAC Cables: Experience from Laboratory Experiments.....	1267
<i>Anouk Somhorst, Pjotr Muis, Colin van Wijk, Sjoerd Nauta</i>	
Grid Code Certification by Simulation.....	1272
<i>Ali E. Rifai, Mustafa Hassan, Hannu Laaksonen, Kimmo Kauhaniemi</i>	
Modern AMR Meters an Invaluable Asset in Enabling a Flexible Power Grid.....	1277
<i>Antti Raassina, Mika Nousiainen</i>	
New Method for Arc Suppression Coil Tuning Using Optimal Frequency Current Injection.....	1282
<i>Saku Siermala, Janne Leminen, Janne Altonen</i>	
E-REDES Implements Machine Learning-Based Call Volume Forecasting in Order to Enhance Contact Center Efficiency	1287
<i>João C. Gonçalves, Nuno A. Silva, Mariana Queiroz, Joana R. Martins, Ana Delfino</i>	
Extreme Climate Events, Network Resilience and Quality of Supply as a Regulatory Issue.....	1293
<i>Sandra Hutter</i>	
ECOFLEX Project: Leveraging Flexibility from Low-Voltage Assets.....	1298
<i>Rémy Cleenwerck, Julian Ruddick, Gilles Van Kriekinghe, Saeed Naghdizadegan Jahromi, Muhammad Andy Putratama, Thierry Coosemans, Jan Desmet</i>	
Identification and Interpretation of the Signal from the Diverter Switch in the Vibro-Acoustic Measurements of the OLTC.....	1303
<i>Anatoli Saveliev, Andreas Kurz, Karsten Viereck, Roland Götz</i>	
Influencing Factors of the Development of Renewable Energy Communities on Power System Planning and Operation	1308
<i>Florian Strebl, David Reihls, Daniel Schwabeneder, Mark Stefan, Bernadette Fina</i>	
Monitoring Harmonic Voltage and Current Levels Using Smart Meters.....	1313
<i>David Svensson</i>	
Enhancing Reliability and Flexibility: The Kalasatama Smart Grid Project	1318
<i>Mika Loukkalahti, Karol Majer, Jani Valtari</i>	
Interoperable Line Differential Protection with Advanced Communication Supervision and Test Mode.....	1323
<i>Pasi Kujanpää, Petri Hovila, Henry Niveri</i>	
Short Circuit Level and Power Quality Variations	1328
<i>Shivananda Pukhrem, John Wallace, John Kelleher, Martin Campion</i>	
Assessing Data-Driven State Estimation Performance in Low-Voltage Distribution Grids	1333
<i>Jano Schubert, Leon Ellger, Edwin Mora, Mathias Duckheim, Stefan Niessen</i>	
Data Driven Condition Management in Urban Distribution System Operator.....	1338
<i>Matias Kinnunen, Mika Loukkalahti, Samuli Honkapuro</i>	
The Statistical Consistency Review of the Combination of VLF Tan δ Factors for the Diagnosis of Underground Cables	1343
<i>Keonhee Park, Munseop Lim, Beomsu Park, Sungmin Kim, Seungwon Lee, Jangseob Lim</i>	

Tracking Resistance and Breakdown Strength Evaluation of Eco-Friendly Insulation Materials for Overhead Line	1347
<i>Munseop Lim, Keonhee Park, Jangseob Lim</i>	

PART 3

Two-Dimensional Approach for Condition Assessment of High Voltage Air-Insulated Circuit Breakers.....	1351
<i>Korbinian Maurer, Alexei Babizki, Niklas Bäcker, Pascal Bolz, Max Bondorf, Markus Zdrallek, Thomas Brock</i>	
On Shunt-Based Sensing Technologies for Current Input Channels of Protection and Control IED's	1356
<i>Calogero Bona, Jimmy Kjellsson</i>	
Multibody Analysis of Dynamic Characteristics in Vacuum Circuit Breakers	1361
<i>Marie Grue, Felix Boy, Ståle Talmo, Pål Skryten, Elham Attar</i>	
On-Site Testing of Critical Cable Infra-Structure	1366
<i>Uwe Kaltenborn, Ondrej Musil, Michael Sowerby, Michael Hensel</i>	
Managing Uncertainty for DSOS	1371
<i>Ewan Ramsay, Mark Norton, Leo Richard, Peter Hughes, Pablo Arboleya</i>	
Scope Project: An Innovative Market-Based Solution to Deal with Injection Congestion	1376
<i>Thomas Buisseret, David Vangulick, Damien Ernst, Alireza Bahmanyar, Laurine Duchesne, Emeline Georges, Iason-Iraklis Avramidis</i>	
Development of Network Impedance Measurement Techniques for Low-Voltage Distribution Lines - Validation of Measurement Method Using Harmonics on a Full-Scale Experimental Distribution Line.....	1381
<i>Naotaka Okada, Kentaro Fukushima, Hiro Nakayama, Yohei Tanaka, Akihiro Takemura, Kyohei Kawamura</i>	
Protection of MV Networks Including Zig-Zag Grounding Transformers	1386
<i>Roberto Cimadevilla, Aitzol García, José Ángel G. Viosca, Carlos A. Domínguez</i>	
Reactive Power Services at DSO Level: A Market Approach on Belgian Network	1392
<i>Thomas Buisseret, David Vangulick, Maxime Kelder, Rik Vermeulen</i>	
Current Status and Challenges of Relay Protection Technologies in MVDC Distribution Networks	1397
<i>Bin Wang, Yuhang Zhang, Xinzhou Dong, Haitao Liu, Yu Xia, Xiong Xiong</i>	
Puffer-Type Load Break Switch for Medium Voltage Gas Insulated Switchgear Filled with Dry Air	1402
<i>Martin Kristoffersen, Maciej Mruczek, Magnus Nystad-Hansen</i>	
Smart Metering Data-Based Tools to Identify Flexible Medium Voltage Customers in a Distribution Network	1407
<i>Dan Telén, Juhani Lepistö, Kimmo Lummi, Pertti Järventausta</i>	
Asset Health Prediction Using Medium Voltage Breaker Travel Curve Data and Artificial Intelligence	1412
<i>Ralf Gitzel, Fabian Frech, Mona Fuhrländer, Aydin Boyaci</i>	
Enhancing Grounding System for Canal-Side Street Lighting: Preventing Electrical Leakage Hazards by the MEA, Thailand	1417
<i>Pornchai Sestasombut, Piyachai Sookplung</i>	

High Voltage Testing of Insulators for a Medium Voltage Superconducting Cable	1422
<i>Stefan Fink, Jörg Brand, Sven Lautensack, Daniel Nickel, Carsten Räch, Johann Willms, Volker Zwecker</i>	
Developing New Concepts for B2B2C Energy Flexibility Using Service Design Approach.....	1427
<i>Nikolas Kristović, Niall Shakeshaft, Ada Peiretti, Pirkko Kuusela, Gerhard Meidl</i>	
Field Validation of a Novel PMU-Based Fault Distance Estimation Solution for Distribution Networks	1432
<i>Mayank Nagendran, Lorenzo Zanni, Paolo Romano, Nabil Bahadi, Marin Mabboux-Fort</i>	
Using Smart Meters Data to Optimize Vertical Collective Connection Infrastructure (CCI).....	1437
<i>Pierre Mory, Mamoun Bennis, Sandrine Duprez, Florian-Thanh Nguyen, David Limthong</i>	
Optimizing Grid Stability: How Electric Vehicle Integration Can Address Challenges from Rapid Prosumer System Deployment	1442
<i>Marin Majstorović, Drago Bago, Sonja Sušac, Mia Previšić, Lucija Medić, Ivan Šimović</i>	
Enhancing Earth-Fault Protection in High Impedance Earthed Networks with Modern Low-Power Passive Voltage Transformers and Protection Relays	1447
<i>Ari Wahlroos, Janne Altonen, Frej Suomi, Radek Javora, Jaromir Podzemny</i>	
Electrical Phenomena Associated with Vegetation in Contact with Medium Voltage Conductors: Summary of Field Experiments	1452
<i>Jeffrey A. Wischkaemper, Carl L. Benner, B. Don Russell, Karthick Manivannan</i>	
Multi-Functional Earth-Fault Protection Scheme for Compensated MV-Networks Using Novel Touch Voltage and Admittance-Based Functions	1457
<i>Janne Altonen, Ari Wahlroos, Risto Pitkänen, Sakari Kauppinen, Toni Latvala</i>	
A Novel Modular Fault Limiting Strategy for LVDC Distribution Networks	1462
<i>Xiaoyong Cao, Dong Liu, Fei Chen, Jiaming Weng, Gaoming Li, Weinian Ouyang</i>	
Two-Stage Method for Optimal Placement and Integration of Distribution Substations in Low Voltage Networks	1466
<i>Tobias Rebentisch, Christoph Becker, Tobias Riedlinger, Markus Zdrallek, Alexander Tracht, Paul-Martin Körner</i>	
"E-REDES" Portal to Foster Collective Self-Consumption and Energy Communities	1471
<i>Pedro Faria, Ana Margarida Rodrigues, Gonçalo Saleiro, Nuno Ramos</i>	
Using High-Fidelity Waveform Data to Diagnose Medium-Voltage Protection Misoperations.....	1476
<i>Jeffrey A. Wischkaemper, Carl L. Benner, B. Don Russell, Karthick Manivannan</i>	
E-REDES Pilot Using Innovative and More Resilient LV Aerial Bundled Cable Accessories	1481
<i>Rui Bandeirinha, Jorge Mendes Santos, Bruno Machini, João Almeida</i>	
Leveraging Smart Meter Data and Monte Carlo Simulation for Peak Power Demand Estimation in Multi-Apartment Buildings	1486
<i>Aki Kortetmäki, Juho Ylipaino, Kari Kallioharju, Juha Koskela, Kimmo Lummi, Pertti Järventausta</i>	
Estimating Local Grid Losses: A Tool Enabling Daily Losses Estimation and Visualisation at Different Grid Levels, Fostering a Deeper Understanding of Them	1491
<i>Marie Flieller, Jonathan Reynaud, Aurel Garry</i>	

Practical Experience with Advanced Residual Current Compensation in a Resonance-Grounded MV Network in Australia for Bushfire Prevention.....	1496
<i>Andreas Aichhorn, Markus Aigner, Abdulnaser Alhafari, Chris Chapman, Michael Wiener</i>	
Optimized Mechanical Interface Solution for GIS Grid Components Applications.....	1501
<i>Francesco Santarello, Fabio Rota, Giovanni Malatesta, Lorenzo Mastronardi, Walter Salvatore Franco, Alessandro Stucchi, Marco Riva</i>	
Link-Chain Design Framework for a Performant TSO-DSO Coordination	1506
<i>Daniel-Leon Schultis, Ksenia Tolstrup</i>	
Energy Storage Technology for Power Automation Equipment: Progress and Prospects of Supercapacitor	1511
<i>Chengyu Gu, Xianliang Tong, Jingning Yang, Hailong Bao, Zhenbing Wang, Chengmeng Chen</i>	
Grid Analysis and Operation Optimization by Using Data from Smart Meters and Smart Secondary Substations	1516
<i>Jan Kula, Stanislav Hes, Radek Lamich</i>	
E-REDES Strategy for Evaluating the Technical Condition of Measurement Instrument Transformers.....	1521
<i>Paulo Gomes, Carlos Cura, Pedro Miguel Fernandes, Pedro Nunes</i>	
Integrating User Requirements in Uni-Directional Congestion Mitigation Algorithms for Smart Grids.....	1526
<i>Wouter van den Boer, Ivo A. M. Varenhorst, Gerwin Hoogsteen, Marco E. T. Gerards</i>	
Decreasing the MV Voltage Setpoint to Increase Hosting Capacity: Impact on the Grid Losses and Reactive Power.....	1531
<i>Emmanuel Gallet, Josselin Fournel, Cyril Gisbert</i>	
A Method for Aggregation of Harmonic Emission Characteristics of Power Electronics and Model Order Reduction	1536
<i>Xinru Wang, Ying Wang, Xianyong Xiao, Yunzhu Chen, Wenxi Hu</i>	
Efficient Asset Risk/Opportunity Management at TAURON Dystrybucja: A New Approach to Investment Optimization	1541
<i>Tomasz Gold, Andrzej Szyp, Tomasz Rodziewicz, Matthias Hopfensitz, Heiko Spitzer</i>	
Challenges and Lessons Learned Towards Digital Native Medium Voltage Switchgears.....	1546
<i>Jon Aguirre, Ian Gilbert, Juan José Carmona, Iñaki Apellaniz</i>	
Impact of Distributed Generation on the Blinding of an Overcurrent Relay in a Distribution Network.....	1551
<i>Frederik Gielnik, Omar Ismail, Michael Suriyah, Thomas Leibfried</i>	
Segmentation of Distribution Grids: Prescribing Automatic Reclosers as a Prescriptive Maintenance Strategy	1556
<i>Fabricio E. Viana, Jader K. M. Campo, Vicente L. Filho, Renan F. Moraes, Willamy S. Conde, Cecilia D. A. C. Cesar, Fernando V. Baldotto</i>	
Revolutionising Underfrequency Load Shedding Schemes - The E-REDES Initiative	1561
<i>João F. Oliveira, António Eliseu, Miguel Veríssimo, Miguel Louro, José V. Couto, Ricardo V. Fernandes</i>	

Online Condition Monitoring of On-Load Tap Changer in Power Transformers Based on an Electrical Analysis.....	1565
<i>Gonalo Santos, Rog�rio Duarte, Jorge Estima, Marco Ferreira</i>	
Implications of Smart Electric Water Heaters: A Detailed Analysis of Load Profiles and Aggregated Peak Load.....	1570
<i>Surya V. Pandiyan, �se L. S�rensen, Harald T. Walnum, Jayaprakash Rajasekharan</i>	
The Use of Phase Measurements for Understanding the State of the Low Voltage Power Distribution Grid.....	1575
<i>Henriette D. Rahbek, Carsten B. Nielsen, Amalie K. Hansen, Lea B. Thomassen</i>	
Considerations on Dielectric Design of MVDC Gas Insulated Switchgear	1580
<i>Igor Silva, Franois Gentils, R�mi Pascal, Jean-Michel Bonfils, Pavel Novak</i>	
A Universal Solution to the Detection of High Impedance Earth Faults – the Ultimate Retrofit.....	1585
<i>Hugh Borland, Tony Yip, Wojciech Petrowski, Bingyin Xu</i>	
Monitoring and Simulation Tool for Enhancing Reliability in the Power Distribution System	1590
<i>Roger Aguera, Andr� G. Nogueira, Guilherme P. Castanheira, Guilherme Saggioratto, Fabricio Viana, Fernando V. Baldotto</i>	
Preventive Automated Network Control: Enhancing Low Voltage Grid Management with Recurrent Neural Networks.....	1595
<i>Johanna E. Bauke, Kamil Korotkiewicz, Konrad Rogg, Denis Bytschkow</i>	
Utilising Synchronised Data for the Localisation of High Resistance Earth Faults Irrespective of Neutral Treatment Or Type of Load Connection	1600
<i>Tony Yip, Hugh Borland, Piotr Grygorczuk, Bingyin Xu</i>	
Distribution-PMU Deployment and Applications in Microgrids: The EPFL University Campus Case	1605
<i>Riccardo Vasapollo, Paolo Romano, Fr�d�ric Gy�ax, Mario Paolone</i>	
Developing a Geolocated Address Reference System Specifically Tailored for Energy Distribution Networks	1610
<i>Fabien Diot, Thibault Chevalerias, Lisa Cortey, L�ny Krolikowski, Anouar Mzouri, Yoann Soh</i>	
Hybrid, Centralized and Distributed, Control of MVDC Network for Linear PV Power Plant	1615
<i>Daniel Gomez A., Silvain Marache, Damiano Lanzarotto, Bruno Lefee, Franois Wallart, Piotr Dworakowski, Eric Lamard</i>	
“Greening” the Transformers Value Chain: Key Success Factors and Recent Advancements on Environmentally Optimized Transformer Designs with “greener” Materials.....	1620
<i>Ghazi Kablouti, Diana Gonzalez, Kareen Saunier</i>	
E-REDES - Low Voltage Fault and Restoration Detection with Smart Grid Infrastructure	1625
<i>Ant�nio Ferreira, B�rbara Cosme, David Fonseca, Tiago Redondo, Beatriz Vicente</i>	
SOLORMAX Project - A Real-Time Digital Twin Demonstrator for Renewable Curtailment Optimization in Low Voltage Networks Based on Grid State Estimation	1630
<i>Johanna Bauke, Arnaud Rouffignon, Xavier Bustamante, David Vangulick</i>	
Estimating Cable Temperature in Mixed Circuits with Time-Domain Reflectometry	1635
<i>Alejandra Jim�nez-Rosales, Ferran Faura Iglesias, Niek Eggink, Sander Rieken</i>	

Development and Validation of a Realistic Electric Boiler Model for Application in EMS Software	1640
<i>Freek Vercammen, Bart Homan, Richard P. van Leeuwen</i>	
Analysis of LV Monitoring Data for Application in Network Planning and Forecasting.....	1645
<i>Laura M. Brown, Abiye Dabagogo, Ruth Chitate, Neal Wade, Gillian Williamson</i>	
Implementation of a Real Flexibility Application on the Milan's Distribution Network: The Mindflex Approach.....	1650
<i>Alessandro Cirocco, Edoardo Daccò, Diego Raggini, Gaetano Iannarelli, Riccardo Lazzari, Alberto Vannoni, Alessandro Bosisio, Davide Falabretti, Luca Cavalletto</i>	
E-REDES Assessing the Value of STATCOM as an Investment Solution to Improve Low Voltage Network Stability	1655
<i>João Barbosa, Francisco Rodrigues, Mark Hibbert, Jorge Bessa, Pedro Ferreira</i>	
Sharing Electricity Distribution Data Via Energy Data Spaces with DATAMITE	1660
<i>Ricardo A. Henriques, Pedro Boto, Savvas Manikas, Konstantinos Kontodimas, Iason I. Panagos, Jordi A. Aroca, Vasileios Siopidis, Konstantinos Votis, Dimitrios Tzovaras, Valentin S. Pelayez, Ilknur Chulani, Silvia Castellvi, Sonia Jimenez</i>	
Parametric Analysis of Overvoltage Phenomenon During Single-Phase to Earth Faults in Medium-Voltage Grids	1665
<i>César A. Slongo, Dumitru Mecineanu, Benjamin Schuler, Jose Sanchez</i>	
EV Charging Stations Load Forecasting by BiLSTM and PatchTST.....	1670
<i>Ziyu Xu, Kuan Cao, Yutian Liu, Chunyi Wang</i>	
Flexible Energisation of EV Fleet Charging Load Using Dynamic Operating Envelopes	1674
<i>Peter Richardson, Shaun Tuyuri, Taehyung Kim, Daniel Pombo, Wei Ren</i>	
Early Fault Detection Using Smart Meter Voltage Readings.....	1679
<i>Phil Groves, Issy Middleton, Stephen Charlton, John Cunningham</i>	
Enhancement of Grid Capacity with Photovoltaic Peak Curtailment and Battery Usage: A Case Study in Bosnia and Herzegovina	1684
<i>Mia Previšić, Drago Bago, Sonja Sušac, Marin Majstorović, Lucija Medić, Ivan Šimović</i>	
Electric Vehicle Charging Station Placement Framework: Scenario Generation, Impact Assessment, and Placement.....	1688
<i>Hyeon Woo, Dongyob Shin, Jintae Cho, Sungyun Choi</i>	
Optimal Placement of Power Quality Monitors for Enhanced Observability with Fewer Devices.....	1693
<i>Markus de Koster, Patrick Lehnert, Patrick Mack, Eberhard Waffenschmidt, Ingo Stadler, Ahmad Bkira</i>	
Optimization of Multi-Energy Systems in Distribution Networks for Enhanced Voltage Management	1698
<i>Sahar Seyyedeh-Barhagh, Hosna Khajeh, Mazaher Karimi, Hannu Laaksonen</i>	
The Use of Ultra-Fast LVAC Fuses in DC Grids: State of Art, Testing and Recommendations.....	1703
<i>Frédéric Reymond-Laruina, Djamel Hadbi, Luis Chinchilla-Delgado, Kamel Sahnouni</i>	
Predicting Operational Failures in Low-Voltage Distribution Networks Using Machine Learning-Based Classification Models	1708
<i>Guilherme P. Castanheira, Guilherme Saggioratto, Ricardo H. Guembarovski, Carlos FM Almeida</i>	

Assessing the Impact of EHGV Charging on Distribution Network Infrastructure.....	1713
<i>Connor McGarry, Lewis Hunter, James Dixon, Stuart Galloway</i>	
E-REDES Foster Regulatory Sandbox for Flexible Connection, Allowing EV Charging in Collective Buildings	1718
<i>Eduardo Francisco, Roberto Barros, Pedro Ricardo Daniel, José Peixeiro, Pedro Ferreira</i>	
Integrated Vegetation Management in E-REDES: Compatible Occupatio	1723
<i>Inês Lopes, Inês Cândido Silva, Ana Lisboa, Ricardo Messias, João Torres</i>	
Assessing the Flicker Emission of Electric Arc Furnaces in CO ₂ -Neutral Steel Production: A Case Study.....	1728
<i>Robert Stiegler, Jan Meyer, Stefan Geigenmüller</i>	
Effects of System Contacts Between 400 kV and 110 kV Systems in Transmission and Distribution Networks	1733
<i>Max Schulze, J. Haensch, S. Hauschild, D. Watschinski, U. Schmidt</i>	
E-REDES Implement Advanced Analytics Applied to Satellite Imagery to Optimise Vegetation Management	1738
<i>Ana Lisboa, Ricardo Borges, Artur Figueiredo, Frederico Craveiro, Ricardo Messias, Daniel Pinto</i>	
Aggregation and Disaggregation of Distributed Flexibility for Transmission Network Needs: A Conceptual Framework	1743
<i>Md Umar Hashmi, Brida V. Mbuwir, Hussain Kazmi, Carlo Manna, Deepjyoti Deka</i>	
Investigation of the Relationship Between Power of a Boost-Type Converter Used as an Active Power Factor Corrector and Its Supraharmonic Emissions	1748
<i>Erzen Muharemi, Emmanuel De Jaeger, Jos Knockaert</i>	
Estimating the Plastic Elongation of Overhead Lines Using Clamp-On DLR-Sensors	1753
<i>Tom I. Pedersen, Maren Istad, Erling Solberg, Tommy Myrviik, Therese Åsheim, Erling Tønne</i>	
E-REDES: Using Legacy Technology to Foster Electricity Distribution Network Evolution	1758
<i>José A. Gonçalves, José Fernandes, João Romão, João Freire, Pedro S. Dias, Miguel Verissimo, André Agostinho, Ricardo Matos, Pedro J. Gonçalves, Rui S. Barbosa, António Rosa</i>	
A Parametrisation of the Operating Envelope Design Space.....	1763
<i>Archie C. Chapman, Marta Vanin, Donald Azuatalam, Frederik Geth</i>	
A Study on Mutual Impact Between AC and DC in AC/DC Hybrid Distribution Networks	1768
<i>Wookwon Kim, Seokwong Kim, Wookyu Chae, Juyong Kim</i>	
Analysis and Mitigation of Circulating Common Mode Current in Large-Scale PCS-Integrated ESS Sites	1773
<i>Jong-hyun Lee, Seung-yun Chu, Joon-ho Kim, Duck-su Lee, Yongsoon Park</i>	
General Outline About the Smart Meter System in Japan: Its History, Specification, Performance and Future Prospect	1778
<i>Yasuo Matsuura, Takahito Tomihari, Hitoshi Motojima, Daisuke Yamaguchi, Hidekazu Watanabe, Hideharu Oniki</i>	
Identification of Tree-Related High-Impedance Faults Using BiLSTM Model	1783
<i>Chunlan Yang, Junjian Wu, Yiwei Chen, Tao Wang, Xianyong Xiao, Wenhai Zhang</i>	

Design Strategy for Management System for MVDC Distribution Network.....	1788
<i>Jaeho Lee, Hwan Kim, Jongmin Lee, Yeonho Lee, Gihea Lee</i>	
Incorporating Inverters with Volt-Var/Watt Control in Distribution Network Constrained Optimisation.....	1793
<i>Frederik Geth, Kurt Lucas, Rahmat Heidari, Jordan Clark, Nanduni Nimalrisi</i>	
Design of an Optimization of Distribution Data Collection System for MVDC Distribution Network.....	1798
<i>Hyeonbin Shin, Jongmin Lee, Yeonho Lee, Hwan Kim</i>	
Locational Signal Methodology for Distributed Energy Resources	1803
<i>Guilherme Dantas, Cristiano Silveira, Francesco Giannelloni, Carlos Barioni, Djalma Falcão, Glauco Taranto, Maurício Habert, Hélio Jacob</i>	
Voltage Regulating Distribution Transformer (VRDT) – Utility’s Solution to Optimise the Hosting Capacity of Distribution System for the Future Energy Landscape in Malaysia.....	1808
<i>Muhammad Rasyidi Zainal Abidin, Mohd Azhar Bin Abdul Aziz, Young Zaidey Bin Yang Ghazali</i>	
Proposal of Platform for AC/DC Hybrid Distribution Network Operation.....	1812
<i>SeungHun Jeon, Hwan Kim, YeonHo Lee, Minji Han</i>	
Graph Theory-Based Topological and Nodal Analysis for Identifying Critical Points to Enhance Resilience in Electrical Distribution Systems.....	1817
<i>Paulo A. Espinoza-Arriagada, Gonzalo A. Ruz, Luis Gutierrez-Lagos</i>	
Advanced Asset Analytic Via Thermal & Partial Discharge Sensors on Primary Equipment in TNB Distribution Network.....	1823
<i>Ganesh K. Balakrishnan, Sharizal Shamuri, Avinash A. R. Raja Gopal, Nur S. Abdul Bahari</i>	
Active Method for Unintentional Islanding Detection and Associated Power Quality Issue in Japan	1828
<i>Satoru Akagi, Ryosuke Akiyoshi, Kazunari Ishibashi</i>	
Using Frequency Variations to Limit PV Production in Microgrid Powered by a Diesel Generator.....	1833
<i>Philippe Bertazzon, Nikola Stankovic, Frédéric Raymond-Laruina, Cristian Jecu, Florent Miquel</i>	
Frequency Response Feasible Region of DER Cluster Based on Tightened Convex Relaxation in Transformed Power Flow Space.....	1838
<i>Jiaqing Zhai, Li Guo, Zhongguan Wang, Xialin Li, Yixin Liu, Chengshan Wang</i>	
Long-Term Distribution Grid Planning Framework Leveraging Flexibility and DSO Digitalisation	1843
<i>Nermin Suljanović, Sreten Davidov, Miloš Maksić, Igor Podbelšek, Leon Maruša</i>	
Experiences in Piloting Virtualised Centralised Protection and 5G-Based Wide Area Protection in Real Live Distribution Network in UK	1849
<i>Ontrei Raipala, Anna Kulmala, Petri Hovila, Ibrahim Abdulhadi, Colin Scoble, Gustavo Leonardo, Oussama Yousfi</i>	
Coordinated Peer-To-Peer Transactions in Multiple Distribution Networks with Distributionally Robust Chance-Constrained Optimization	1854
<i>Dongwon Lee, Changhee Han, Seungmin Jung, Yeuntae Yoo, Gilsoo Jang</i>	
Probabilistic Generation of Topology Configurations for Reliable Expansion Planning of Distribution Grids.....	1859
<i>Luiza Voss De Gregorio, Paul Stursberg, Michael Metzger, Stefan Niessen</i>	

Ultra-Fast FLISR in Practice	1864
<i>Torbjörn Karlsson, Martin Mellbin, Juha Arvola</i>	
Dynamic Load Profiling for the Market: An Innovation Leveraging the Widespread Deployment of Linky Smart Meters.....	1869
<i>Olivier Chaouy, Sébastien Thaon</i>	
Electric Vehicles as a Resource to Balance the Price Peaks in Electricity Spot Markets - Case Finland.....	1874
<i>Juha Haakana, Jouni Haapaniemi, Akseli Lamminpää, Jukka Lassila</i>	
Leveraging on Common Information Model (CIM) for Big Data Analytics.....	1879
<i>Odilon Faivre, Mathieu Grelier, Laurent Makke</i>	
On the Need of Uncertainty Computation of Electrical Waveforms on a Sample-By-Sample Basis	1884
<i>Alexander Gallarreta, Heiko Füser, Yljon Seferi, Tezgül C. Öztürk, David de la Vega, Brian G. Stewart, Kruno Milicevic</i>	
Low Voltage Grid Resilience: Innovations in Active Control Strategies Based on Power Electronics	1889
<i>Jon Aguirre, Miren de la Cruz, Izaskun Zamakona, Juan Antonio Sanchez, Santiago Gutierrez, Iñaki Orue</i>	
Piloting Centralised Services for Remote Digital Substations	1894
<i>Anna Kulmala, Petri Hovila, Henry Niveri, Tomi Öster, Konsta Antikainen, Oskari Piispa</i>	
Comparison of Harmonics in a Microgrid When Operating in Island and Mainland Mode.....	1898
<i>Alexandra D. Garðarsdóttir, Marcus Seisay, Anna Nilsson, Jonas Persson, Yiming Wu</i>	
Individual Load Curves Generation and Personal Data Protection	1903
<i>Aboubakr Machrafi, Sofiane Bouibeb, Pierre Cauchois</i>	
Experimental Assessment of Cooling Concepts for Extending the Current Carrying Capacity for Future MW-Rectifier Systems	1908
<i>Michał Sokolowski, Robert Adam, Stephan Schlegel, Waissi Tello</i>	
Blackbox MILP Optimization Model for Industrial DSF Potential Assessment	1913
<i>David Gonzalez-Sanchez, Nerea Ruiz Carames, Joseba Jimeno Huarte, Maider Santos-Mugica</i>	
Cross-Sectoral Energy System Model for Hydrogen Valley Concept	1918
<i>Kari Mäki, Tomi Thomasson, Ashish Saini, Heidi Tuiskula</i>	
Success in Real Use-Cases of Low Voltage Network Automation to Accomplish the Integration of E-Mobility and DER.....	1923
<i>Miren de la Cruz, Iñaki Apellaniz, Juan Antonio Sánchez, Roberto Martínez, Koldobika Zuazo, Javier Cormanézana, Juan José Carmona</i>	
Interruption of MVDC Currents with HV Fuses	1929
<i>Oliver Benner, Dirk Wilhelm</i>	
Optimizing Renewable Energy Communities Through Ontology-Driven Energy Management Systems.....	1933
<i>Mark Stefan, Miloš Šipetić, Fabrizia Giordano, Clemens Korner, Lorenz Ray Payonga, Vieri Emiliani, Lorenzo Niccolai, Maria Aigner</i>	
A Time, Cost and Safety Optimized Approach for Cable Impedance Measurements	1938
<i>Josef Schmidbauer, Friedrich Almer</i>	

Study on the Arc Extinction Structure of the Low Voltage DC Switch Disconnecter	1943
<i>Han Baek Chung, Kyu Ho Lee, Woo Jin Park, Kil Young Ahn</i>	
Probabilistic Day-Ahead Power Forecasting in the Medium-Voltage Grid Using State Space Models	1947
<i>Michael Mesarcik, Jessica Loke, Jochem Wildeboer, Bob Lucassen</i>	
Protecting the National Electricity Grid Balance by Temporarily Limiting Residential Customers' Available Power: A Large-Scale Experiment	1952
<i>Erwan Blain, Sacha Duzelier, Amal Amellal, Yann Renaud</i>	
Prototyping Innovative Mechanisms for Incentive-Driven Explicit Flexibility in Residential Buildings	1957
<i>Kari Mäki, Matti Aro, Ismo Heimonen, Bernardo Di Chiara, Jan Jokelainen, Jussi Savola, Mikko Tuohimaa</i>	
Simplified Approach to PV Curtailment (border Determination) in Low Voltage Distribution Networks	1962
<i>Sreten Davidov, Nermin Suljanović, Igor Podbelšek</i>	
Transparent and Explainable AI for Fault Prediction in Distribution Networks.....	1967
<i>Ebrahim Balouji, Karl Bäckström, Fredrik Kjernald, Anna Kulmala, Petri Hovila</i>	
Cost-Effective Strategies for Enhancing DSO Flexibility: Exploring Sensor Rental and Virtual Sensors in DLR Systems	1972
<i>Levente Rác, Dávid Szabó, Gábor Göcsei, Bálint Németh</i>	
Next Generation Active Distribution Grid Operation Using Local Flexibility Markets.....	1977
<i>Sigurd Bjarghov, Daniel Stølsbotn, Katrine Utvik, Bernt O. Pedersen, Mathias F. Eliassen, Bjørn Sloth</i>	
Unsupervised Learning of Latent Features for Fault Root Cause Analysis	1982
<i>Jakob Lindqvist, Ebrahim Balouji, Viktor Olsson, Anna Kulmala, Petri Hovila</i>	
Can Community Scale Energy Storage and Grid-Aware Control Mitigate Distribution Grid Challenges?	1987
<i>David Reihs, Clemens Korner, Mark Stefan</i>	
Development of New Optimized Range of Medium Voltage Vacuum Interrupters.....	1992
<i>Christian Mombard, Anthony Papillon, Fedor Korolev, Renaud Carlen, Ioana Teleanu, Min Li, Lifeng Luo, Zhongjun Liu, Guangli He, Michael Bausmayer, Damien Canat, Xavier Godechot</i>	
Monitoring and Aging Evaluation in MV Smart Circuit Breaker for Special Applications	1996
<i>Catia Santini, Stefano Melzi, Luca Ravanelli, Carlo Taborelli</i>	
Improved Testing of Relays Under the Aegis of IEC 60255-1XX and a Comprehensive Study on Performance of Protection Functions	2001
<i>Arulsevan G., Bathala Teja, Vigneshwaran V., Chandra Shekar Pulikanti, Vigneshwar KR, Santhoshkumar Shanmugan</i>	
User Experiences with User-Friendly Emission Limit Allocation Tool	2006
<i>Henrik Kirkeby, Bjørn Inge Oftedal, Thor Holm, Tor Inge Reigstad, Stig J. Haugen, Pål E. Eriksen, Svjetlana P. Jeftic</i>	
Electric Vehicle (EV) Demand Profiling for Assessing Residential Load Patterns in Qatar	2011
<i>Ameena Fathima, Hazem Kasem, Selma K. E. Awadallah</i>	

Citiwatts: A Secure, Open-Source Platform for Regional Energy Planning	2016
<i>Alejandro Pena-Bello, Noémie Jeannin, Nicolas Wyrsh, David Wannier, Jakob Rager</i>	
Fault Classification for Medium Voltage Networks Connected with Conventional and Renewable Resources	2021
<i>Kukkala Likhitha, O.D. Naidu, Aarthi V., Marcin Krakowski</i>	

PART 4

E-REDES Analytics4Vegetation 2.0 – AI to Foster Advanced Vegetation Management in Overhead Lines	2027
<i>Ricardo Borges, Ana Lisboa, Artur Figueiredo, Frederico Silva, Ricardo Messias, Gonçalo Monteiro, Rui Calado, Ricardo Santos</i>	
Optimizing Rectifier Systems for Zurich’s Tramway: Assessing Harmonic Impact on the Medium Voltage Grid	2032
<i>Sandro Kellermüller, Nicolas Früh, Jürg Greuter, Britta Heimbach, Jan Meyer, Raffael La Fauci</i>	
Analysis of Cybersecurity Findings in Over 100 Energy Systems	2037
<i>Andreas Klien, Ozan Dayanc, Holger Skurk</i>	
Smart Medium Voltage Switchgear with LPITs and IEC 61850 – Experiences After 10 Years and the Next Evolution.....	2042
<i>Karol Majer, Vaclav Prokop, Martin Celko</i>	
Reactive Power Based Directional Protection for Distributed Generation During Undervoltage Conditions at PCC	2047
<i>Nilesh Dey, Chandra Shekar Pulikanti, Anoop Eluvathingal, AVSSR Sai</i>	
Comparison Between Conventional Current Transformers in Holmgreen Formation and Cable-Type Current Transformers in an Isolated Grid	2052
<i>Benjamin Cox, Friedrich Almer, Björn Cialla</i>	
Assessment of Low Voltage Load Profiles Considering Future End-Use Evolution.....	2056
<i>Anastasia Popiolek, Aurel Garry, Jennifer Han, Hugo Dufay</i>	
Utilization of Smart Measurement Technologies to Improve Medium Voltage Switchgear Sustainability	2061
<i>Roman Pernica, Karol Majer</i>	
Enhancing Distribution Grid Planning with Time Series-Based Analysis: A Case Study from Germany	2066
<i>Sebastian Brommer, Lars Bogner, Pascal Pflanz, Irene Witte, Oliver Deuschle</i>	
5G in Transition to Provide Services for Protection Communication	2071
<i>Heli Kokkonen-Tarkkanen, Seppo Horsmanheimo, Petra Raussi, Lotta Tuomimäki, Petri Hovila, Anna Kulmala</i>	
Digital Twin of the Tripping Coils for Health Monitoring and Diagnostics of Medium Voltage Circuit Breakers.....	2076
<i>Mona Fuhrländer, Jörg Gebhardt, Hadi Rahmeh, Aydın Boyacı</i>	
Characterization of Grid-Oriented Control of Heat Pumps Via SG-Ready	2081
<i>Sebastian Beichter, Anne-Christin Süß, Johannes Galenzowski, Jan Dillmann, Stefan Dietze, Ralf Mikut, Simon Waczowicz, Veit Hagenmeyer</i>	

Investigation of Transformer Tap-Changers for Thyristor-Based Electrolyzer System.....	2086
<i>Wen Jiang, Weichi Zhang, Bochen Liu, Jiuping Pan, Xiaobo Yang, Jan R. Svensson</i>	
Sequential Designs for Efficient Estimations of Voltage Percentiles in Breakdown Experiments	2091
<i>Sophie A. Spencer, Edgar A. Engel</i>	
Quantifying Residential Demand Flexibility: An Accessible Indicator Approach	2096
<i>Olga Rouchouze, Jonathan Coignard, Lasha Khubashvili, Frédéric Wurtz, Béatrice Roussillon</i>	
Performance of Breaker Technologies for LVDC Electrical Distribution Protection and Selectivity: Building Use Case	2101
<i>Thi-Thu-Ha Pham, David Corbet, Philippe Alibert</i>	
Coupled Material Selection and Shape Optimization for Efficient Sustainable Switchgear Design	2106
<i>Sebastian Stolte, Samuel Rader, Patrick Haberkern</i>	
Voltage Control in Distribution Networks Using a Model Free OLTC Transformer Based on Reinforcement Learning Techniques	2111
<i>Rafael Morán-Corbacho, Rubén Carmona-Pardo, Miguel Ángel González-Cagigal, Esther Romero-Ramos</i>	
Delta I Based Approach to Detect High Impedance Faults in Traction Systems	2116
<i>Nilesh Dey, AVSSR Sai</i>	
Integrated Protection and Control for MV/LV Substations	2121
<i>Tom Berry, Mathieu Lansoy, Jean-Luc Batard, Kenneth Alford</i>	
Challenges and Solutions of Harmonic Monitoring Application as Per IEEE 519 and IEC 61000-4- 30 Standards	2126
<i>Bathala Teja, A. V. S. S. R. Sai, Gurujith A</i>	
Primary Substation Planning Based on Network Spatial Analysis	2131
<i>Cesar Peinado Moraes, Jean-Philippe Cospérec, Manuel Billaud, Benoit George</i>	
Definition of Standard Tests for Medium Voltage DC SST in PV Application	2136
<i>Pierre Le Métayer, Christophe Hamond, Martin Guillet, Alexandre Mejean, Piotr Dworakowski</i>	
E-REDES Adopts EN 50522: Touch Voltages on Secondary Substations – Observability & Mitigation Solutions	2141
<i>Andreia Leiria, João Tarquinio, João Antunes, Pedro Nunes, Fernando Paulo, Rui Bandeirinha</i>	
Effect of Heat Pumps, Batteries, EVS and PV on Low-Voltage Feeders: Results from a Monte Carlo Study on 202,659 Flemish Smart Meter Profiles	2146
<i>Thijs Becker, Raf Smet, Bruno Macharis, Koen Vanthournout</i>	
Standardized Model-Based Systems Engineering Applied to Substation Automation Systems Testing	2151
<i>Ezekiel Yang, Jérôme Cantenot, Audrey Jardin, Benjamin Le Guenic, Gabriel Rufino Montenegro, Cyril Effantin, Sid Attia</i>	
Hybrid-Transformer for Advanced Management of Distribution Grids	2156
<i>Marko Mogorovic, Roberto Alves, Akif Z. Khan, Luigi Petrianni, Massimo Bartolucci, Samuele Giovannetti, Rey Sanchez, Juan Manuel, Gianni Andreella, Ludovico Spitillihor, Roberto Tamburi, Marco Piccinelli</i>	

E-REDES' Integration Tool for Distance Protection Tests	2161
<i>André Pereira, André Falcão, João Carvalho, João Gomes, Jonathan Nunez, Paulo Ribeiro</i>	
Line Lightning Protection Device as an Overhead Line Grid Resilient Instrument to Mitigate Transient Interruption Due to Lightning in TNB 33kV Overhead Line Distribution Network	2166
<i>Mohd Faris Ariffin, Muhammad Fazli Nozlan</i>	
Current Status of Pressure Calculation Methods for the Development of Relief Concepts in Buildings in the Event of Arc Faults in Type-Tested SF6-Free Switchgear	2171
<i>Heiko Hoffmann-Mucke, Damian Baron</i>	
Impacts of Extremely High and Low Electricity Prices on Low-Voltage Networks in Rural Areas of Finland.....	2176
<i>Akseli Lamminpää, Jouni Haapaniemi, Juha Haakana, Jukka Lassila</i>	
Point-On-Wave Voltage Sag Impact on AC Contactor Sensitivity: A Comparative Study	2181
<i>Khalis Mokhtar, Hazri Dahalan Md. Razip</i>	
DNO Open Data - A Case Study	2186
<i>Ryan L. Tomlin, Matthew A. Parry</i>	
Whole System Approaches in GB	2191
<i>Anna Muir, David Wells, Mark Goudie, Gareth Hislop</i>	
Improving Reliability and Performance of Transformers for Power Distribution Units in Data Centres.....	2195
<i>Radoslaw Szewczyk, Sailesh Purohit, Jean-Claude Duart</i>	
Local Transformer State Estimation: A Smart Way to Purify Non-Consistent Multiple Data Sources in Secondary Substations.....	2200
<i>Rubén Carmona-Pardo, Rafael Morán-Corbacho, Iván Fernández-Valencia, Paula Martínez- Navarro, Esther Romero-Ramos, Antonio de la Villa-Jaén, Catalina Gómez-Quiles</i>	
Power Quality Measurements Reveal Vehicle-To-Grid (V2G) Influence from Charging and Discharging	2205
<i>Heidi S. Nygård, Marie Eide Roalkvam, Thomas Martinsen</i>	
Increased Flexibility in the Swedish Regulation on Continuity of Supply Since 2024	2210
<i>Maria Dalheim, Malin Kindmark, Marcus Tjäder, Herlita Bobadilla Robles, Carl Johan Wallnerström, Albin Emanuelsson</i>	
Active Voltage Regulation to Enhance Energy Efficiency in Distribution Grids Operation	2215
<i>Mathias A. Berg, Gard Pedersen, Basanta R. Pokhrel, Irina Oleinikova, Kjell Sand, Arnt M. Forseth</i>	
Flexibility Services from Water Distribution Networks: The Demonstration Project of Gruppo Acea	2220
<i>Gabriele Fedele, Ercole De Luca, Angela Irlandese, Rossana Bellizzi, Stefano Creatini, Ciro Bianchi, Alberto Trotta, Federica Paccassoni, Leonardo Grossi, Federica Paciotta, Francesco Napolitano, Giuseppe Pirollo</i>	
Challenges of New Technologies Non-Based in SF6 for Operating and Protecting MV Power Transformers of Distribution Networks.....	2225
<i>José M. Inchausti, Joseba Arostegui, Sergio Sebastián</i>	
Oil Reclaiming - One Sustainable Way to Extend the Lifetime of Power Transformers.....	2230
<i>Anabela Peixoto, Cláudia Farinha, Ana Tropecêlo, Diogo Baptista, Rui Martins</i>	

Implementation of Common Information Model in Distribution System Operations: A Case Study	2235
<i>Bilal Amjad, George Sowerby, Ahsan T. Khan</i>	
Towards a Digital Twin: Operational Data Evaluation Techniques for Online Monitoring and Condition Assessment of Large Rotating Equipment.....	2240
<i>Sven Musielak, Nipun Dahra, Abhishek Sharma, Rahul Kumar Yadav, Hendrik Steins, Jan Hoffmann, Claus Rohr, Esteban Grau Sorarrain</i>	
EQUINOX: Learning from Developing and Trialling the Capability to Procure Flexibility from a Portfolio of Domestic Heat Pumps	2245
<i>Ewan A. Steen, Raeesa I. Hirji, Samantha H. Piller, Callum P. Coghlan, Ryan D. Huxtable, Luke S. Harker</i>	
Modeling Energy Demand and Load Profiles of Electric Truck Fleets in Urban Transport - A Case Study from Stuttgart	2250
<i>Charlotte Wagner, Krzysztof Rudion</i>	
Wide Area Network Twins for Enabling Energy Transition by Integration of Different Forecast Databases and AI Applications	2255
<i>Simi P. Valsan, Hida S</i>	
Smart Meters Phase Identification for Topology Verification: Practical Challenges and Insights from a Case Study	2260
<i>Thibaut Théate, Laurine Duchesne, Adrien Leerschool, Alireza Bahmanyar, Simon Gerard, Thomas Wehenkel, Damien Ernst</i>	
New Business Models Supported by Innovative Interoperable Solutions Enabled by the GLocalFlex Marketplace	2265
<i>David Gonzalez-Sanchez, Carlos Madina, Ines Gomez-Arriola, Pirkko Kuusela, Regine Belhomme, Arttu Tamminen, Maider Santos-Mugica</i>	
Roadmap for the Transition to a Flexible and Intelligent Power Grid in Norway by 2040	2270
<i>Susanne Sandell, Gerd H. Kjølle, Oddbjørn Gjerde, Maren Istad, Magnus Korpås</i>	
EDP Inovação - Speeding Up Underground Grids	2274
<i>Eugenio de Grado, Diana Nascimento, Vitor Cabral, Ruben Fernandes, Orlando Bento, Luis Arniella, Jesús Cobas, Jorge Costa, Pedro Ferreira, Nuno Pinto</i>	
Minimising Transformer Inrush Current Under Variable Load Conditions by Controlled Switching with Automatic Search	2279
<i>Johan Nohlert, Elisabeth Lindell, Jesper Magnusson, Mrunal Parekh</i>	
Evaluation of the Lifetime of Power Transformers Based on Decrease in the Strength of Insulators Supporting the Winding.....	2284
<i>Masanobu Yoshida, Hiroko Isaji</i>	
Prefabricated Modular Substations: Development Pilot Experiences	2289
<i>Simon Wennberg, Tor Johansson, Anders Johnsson</i>	
Forecasting and Mitigating the Impact of Electric Vehicle Integration on Local Distribution Grids: The São Miguel Island Case Study.....	2294
<i>Samuel Matias, Francisco Branco, João Mateus, Carlos Martins, Miguel Quinto, Pedro Ribeiro, Hugo Morais</i>	
Survey of Power Quality Disturbances Caused by Heat Pumps Connected to Low Voltage Networks	2299
<i>Victor Khokhlov, Lars Mühlberg, Jan Meyer</i>	

Tariff Sandboxes as a Tool for Modernizing the Tariff Structure of the Brazilian Power Sector	2304
<i>Roger Alves, Lindemberg Reis, Milton Marques, Rafael Gomes</i>	
Tool for Detecting External Hot Spots in a Low Voltage Switchboard to Facilitate Asset Management and Maintenance Tasks	2309
<i>Josep Manso, Iván Higuero, Vicente Fuster, Oier Aguirre, Alfredo Quijano</i>	
Influence of High Frequencies and Harmonic Distorted Voltages on Refractive Field Grading for Medium Voltage Cable Accessories	2314
<i>Jun Ting Loh, Mario Dreßler, Stefan Kornhuber, Irina Ovsyanko, Kai-Uwe Bentkowski</i>	
Analysis of the Impact of Small Solar Power Plants on Voltage Conditions in a Distribution Network with Pronounced Seasonal Load.....	2319
<i>Josip Srdanović, Domagoj Milun, Ante Čović</i>	
From Process Terminals to Control Center: Fully Automated Substation Automation System (SAS) Testing	2324
<i>Burak Tahincioglu, Onur Durak</i>	
Probabilistic Assessment of EV Charging Impacts on Distribution Grid Planning	2330
<i>Nikolaos Savvopoulos, Alexander Fuchs, Turhan Demiray</i>	
Enhancing Stochastic Network Planning for Future Energy Systems: The BKW ProgRÉS Explorer	2335
<i>Yamshid Farhat, Peter Esslinger</i>	
Integrated PV-Battery Design Mapping Strategies and Control in Decentralised Energy Communities for Enhanced Grid Congestion Relief	2340
<i>Samuel Cudjoe, Marten van der Laan, Koen Kok</i>	
The Transition from DNO to DSO for an Active System Operation in Austria	2346
<i>Robert Schmaranz, Leopold Fiedler, Roland Bergmayer, Thomas Schuster, Björn Frittm, Hannes Buzanich, Manuel Brüggel, Christian Ammer, Christian Zachs, Helmut Grünes</i>	
High Performance and High Reliability Low Power Voltage Transformers in Medium Voltage Accessories	2351
<i>Gunther Stollwerck, Jens Weichold, Mirco Gunjaca, Johannes Fink, Mark Gravermann, Sean Davis</i>	
Reliability Assessment of Photovoltaic Inverters Considering Volt/Var Control.....	2356
<i>Anastasis Charalambous, Markos Asprou, Lenos Hadjidemetriou</i>	
Planning the Distribution Network of the City of Omiš Conditioned by the Need to Build Electric Vehicle Charging Stations and Analysis of a Mobile Electro-Hydrogen Generator as an Alternative Solution	2361
<i>Josip Srdanović, Ivana Puljić, Ante Čović</i>	
Vacuum Contacts: Analysing Contact Lifespan for Enhanced Performance in Grids	2366
<i>Timo Meyer, Dietmar Gentsch, Michael Kurrat</i>	
Optimal D-PMU Placement for Improved Voltage-Based MV Earth Fault Localization.....	2371
<i>Trung-Dung Le, Amine Mokhtari, Alexandre Bach, Marc Petit</i>	
Development of a Network Curtailment Assessment Tool to Accelerate Connection of Distributed Energy Resources	2376
<i>Minjiang Chen, Mark Collins, Ralph Eyre-Walker, Karan Batra, Milana Plecas, Sofia Cobo de Guzman, Kailash Singh</i>	

Probabilistic Load Flow Analysis Methods for the Integration of PV Generation	2381
<i>Peter Wohlfart, Herwig Renner, Christian Kresnik, Stephan Brandl</i>	
Energy Storage Sizing While Considering Flexible Loads in a Dutch Energy Community.....	2386
<i>Edmund Schaefer, Aditya Pappu, Gerwin Hoogsteen, Johann Hurink, Richard van Leeuwen</i>	
Enhancing Resilience and Prioritizing Critical Infrastructure Through Deep Reinforcement Learning-Based Network Reconfiguration in Islanded Microgrid Networks	2391
<i>Ajaz Hameed, Sunitha Rajan, Ashok Sankar</i>	
From Customers to Prosumers: PV Systems Impact on Residential Load Profiles, Peak Power, and Coincidence	2396
<i>Åse L. Sørensen, Jarand Hole, Daniel Bjerkehagen, Harald T. Walnum</i>	
Enhance Distribution Grid Observability	2401
<i>Martin Ruhhöft, Robert Schmaranz</i>	
Renewable Energy Management Systems - Methodological Aspects for Active Power Control.....	2405
<i>Paulo Viegas, Diego Bairrão, Luís Gonçalves, Jorge Pereira, Leonel Carvalho, José Simões, Pedro Silva, Susana Dias</i>	
Effect of Climate Change in Electricity Distribution Systems in Nordic Conditions.....	2410
<i>Otto Räisänen, Juha Haakana, Ahmed Saleem, Jukka Lassila, Ilari Lehtonen</i>	
Automated Assessment of Ireland's HV Distribution Network Forecasted Capacity.....	2415
<i>Adnan Samarji, Daniel Murray, Siobhán Quinn, James Brennan, Sinead Hanley, Cristina Coleman Kenny</i>	
Validation of Dynamic Line Rating Model Using IEEE738 with Digital Twin for a Power Grid.....	2420
<i>Aldrich Zeno, Basanta R. Pokhrel, Santiago S. Acevedo, Irina Oleinikova</i>	
Prototyping of Virtualized Central Adaptive Protection and Control: Performance Analysis and Resiliency	2425
<i>Mike Mekkanen, Duong Dang, Tero Vartiainen</i>	
Potential for EV Charging from PV: A Geographic Assessment	2430
<i>Noémie Jeannin, Alejandro Pena Bello, Jérémey Dumoulin, David Wannier, Christophe Ballif, Nicolas Wyrsh</i>	
GNN Deep Ensembles for N-1 Contingency Decisions.....	2435
<i>Charlotte Cambier van Nooten, Tom van de Poll, Tom Heskes, Yuliya Shapovalova</i>	
Climate Messaging and Free Energy: Are Demand-Side Flexibility Incentives Effective? Lessons from a UK Field Experiment	2440
<i>Sanaa Zannane, Clare Britton, Timothy Huty, Diarmid Roberts, Claire Quigley, Tracy Ross, Stuart Cockbill, Solomon Brown</i>	
VirtuozLab: An Advanced Testing Platform for Virtual IED and PAC Functions	2444
<i>Van-Hoa Nguyen, David Ramsey, Houda Abil, Thierry Coste, Rémi Thomas</i>	
EDP Inovação - Speeding Up Overhead Grids Construction	2449
<i>Eugenio de Grado, Diana Nascimento, Luis Diniz, Christopher Delgado, Ricardo Pina, Gonçalo Nunes, Pedro Furtado, Luis Arniella, Bernardo Sarrasqueiro, Pedro Ferreira, Nuno Pinto</i>	

Comparison and Recommendations on Earthing System Measurement and Simulation Techniques Including Staged Fault Method	2454
<i>Vaclav Vycital, David Topolánek, Viktor Jurak, Michal Ptacek</i>	
An Open-Source Tool for Generating Representative Dutch Distribution Grid Models Using Graph Similarity Measures and Open Data	2459
<i>Leo van Schooten, Gijs Verhoeven, Koen Kok, Johan Morren</i>	
New Method for Step and Touch Voltages Verification by Continuous Loop Impedance Monitoring.....	2464
<i>Antonio González, José L. Navarro, José R. Vidal, Abderrahim Khamlichi, Pascual Simón, Jorge Rovira, Asier Vicente</i>	
PAC Standardisation at a Swiss DSO - Journey, Lessons Learned and Benefits.....	2469
<i>Hervé Chiquet, Patrick Fragnière, Yannick Thiessoz</i>	
Distribution Grid Planning in Switzerland Considering Local Flexibilities.....	2474
<i>C. Yaman Evrenosoglu, Turhan Demiray, Phillippe Buchecker, Ana Nazaré, Deniz Incesu, Raphaël Tessier</i>	
Benefits on Implementing an Automation Testing Tool Based on IEC61850	2479
<i>Carlos Alberó, Yasmina Galve, Adrián Arroyo, Eduardo Martínez, Jose Saldana, David Hernando</i>	
A Review of UK and International Business Models for Rooftop Solar PV Systems to Optimise Solar Energy Adoption	2483
<i>Qiuyi Hong, Saman Nikkhah, Damian Giaouris, Vladimir Terzija, Shahab Dehghan</i>	
Design Selection of MV Submarine Cables for a More Resilient Distribution Network	2488
<i>Renato Čučić, Kruno Trupinić, Ante Višić, Hrvoje Jelić, Krešimir Ugarković, Ivan Orišak</i>	
Finite Element Analysis Methodology for Transportation-Induced Stress Mitigation in Electrical Distribution Network Component	2493
<i>Rohith D'sa, Hiteshkumar Patel</i>	
Digital Seismic Assessment for Primary Electrical Distribution Device Using Response Spectrum Technique	2498
<i>Hiteshkumar Patel, Rohith D'Sa</i>	
Dimensioning of Protection Devices for Medium Voltage Transformers and Shunt Reactors Against Very Fast Front Voltages.....	2503
<i>Constantin Balzer, Connie Ling-Gao, Alireza Khakpour</i>	
Strongly Reduced Computation Time of Thermal Modelling of Primary Components Using a Convolution-Based Approach.....	2508
<i>Ramon N. P. Creighton, Thijs van der Hoeven, Douwe S. de Bruijn</i>	
Distributed Asynchronous Energy Management for Dynamic Large-Scale Energy Networks	2513
<i>Aditya Pappu, Marco E. T. Gerards, Gerwin Hoogsteen, Johann L. Hurink</i>	
Influences of Different Planning Horizons on Strategic Grid Planning in Low-Voltage Grids	2518
<i>Clemens Korner, Roman Schwalbe, Thomas Wieland, Christian Kresnik, Maximilian Ortner, Helfried Brunner</i>	
Ten Point Plan to Accelerate the Energy Transition in Bavaria	2523
<i>Martin Uhrig, Simone Bockaj, Marco Wagler</i>	

Charge and Discharge Characteristics of ISO15118-20 Based AC and DC V2G System	2528
<i>Kijun Park, Sangok Kim, Dongwan Seo, Dongsik Jang</i>	
Power Quality Monitor Locations in Real Medium Voltage Distribution Network	2533
<i>Adnan Bosovic, Herwig Renner, Nedim Turkovic, Nedžad Hasanspahic</i>	
Energy Consumption Forecasting for Emerging Technologies	2538
<i>Jonas Wäfler, Joé Wengler, Shehroz Saif, Raffael La Fauci</i>	
Smart Metering Capability Towards Harnessing Distribution Network Flexibility: Gaps and Disparity Quantification	2543
<i>Matias A. Kippke Salomon, Md Umar Hashmi, Anne Blavette, Pablo Arbolea</i>	
Long-Term Planning in Distribution Networks: Combining Levers for Sizing Network Methods	2549
<i>Pierre-Etienne Testelin, Cyril Gisbert, Martin Hennebel, Marc Petit</i>	
Influence of the Expansion of Heat Pumps on the Distribution Grid	2554
<i>Andreas Beer, Ladislau Z. Reider, Yoann Moullet, Christoph Schaedeli, Maurus Bachmann</i>	
Impacts of Ground Source Heat Pumps on Peak Power in Apartment Buildings: A Case Study from Finland	2559
<i>Kari Kallioharju, Aki Kortetmäki, Juho Ylipaino, Juha Koskela, Pertti Järventausta</i>	
Whole System Thinking: Power Market Drivers for Releasing Benefit to the Whole System by Increasing Network Headroom	2564
<i>Laurence Hunter, Kate Thompson, Sanjay Rathod, Hannah Spurgeon</i>	
OPHELIA Project: Development of MVDC Network Architecture for Large Linear Photovoltaic Farms	2569
<i>Pavel Novak, Piotr Dworakowski, Eric Lamard, Lina Ruiz, Olivier Grellier, Philippe Lecoq</i>	
New Energy Cloud Digitalization Business Process Improves the Efficiency of China's Power Grid Services	2574
<i>Jinsong Liu, Xu Han, Chongjian Zhang, Chengzhen Lin, Hanyun Wang, Pengfei Guo, Jun Du, Xun Liu, Yang Yu, Yahui Wang</i>	
EV Smart Charging Strategies for Reduced Operating Costs and Grid Impact: A Case Study on Workplace Charging Infrastructure	2579
<i>Piersilvio Marcolin, Andrea Cazzaniga, Sara Salamone, Giuseppe Mauri</i>	
A Novel Planning Process Approach – Widening Flexibility Range	2584
<i>João Milheiro, Luís M. Coelho, Rui M. Bento</i>	
E-REDES Fosters the "Circular Economy Action Plan" with the E-REDONDO Project	2589
<i>Filipa Capela, Inês Silva, Ana Alvarez, Nieves Moriano, Tiago Dias</i>	
Investigating the Impact of RES Integration on Medium-Voltage Cable Joint Failures Based on Geographical Correlation Methods	2594
<i>Yifan Zhang, Niek Brekelmans, George Rouwhorst, Anne van der Molen, Phuong Nguyen, Peter van der Wielen</i>	
Low Voltage Investment Optimization in the Connection of Residential Buildings	2599
<i>Rui M. Bento, Jorge Ribeiro</i>	
Thermo-Electrical Ageing of 10kV Paper Insulated Lead Covered Cables: Experience from Field Experiments	2603
<i>Daniël Woldendorp, Colin van Wijk, Denny Harmsen, Stefan Lamboo</i>	

Evolution of Distribution Network Strategy for Overhead Lines to Reflect Changing Network Risks	2608
<i>Alexandra Campbell, Ailidh Meek, Sarah Buckley, Matthew Jones, Luke Douglas, David Cupples</i>	
Using the CNAIM Methodology for 10-20 kV PILC Cables	2613
<i>Jens Z. Hansen</i>	
Challenges of Climate Neutrality for the External Insulation of Vacuum Interrupter	2618
<i>Karen Flügel, Dietmar Gentsch, Michael Kurrat</i>	
High-Power Medium-Voltage Superconducting Cables for Europe's Energy Transition.....	2622
<i>Christian-Eric Bruzek, Adela Marian, Christophe Creusot, Marte Gammelsæter, Arnaud Allais</i>	
Deployment Strategy of Innovative Grid Technologies Across European Distribution Systems	2627
<i>Baptiste Gary, Léo Richard, Ewan Ramsay, Mark Norton, Pablo Arboleya</i>	
Sustainability Aspects of Dry-Type Transformers Applied to Solar Photovoltaic and BESS.....	2632
<i>Luiz F. de Oliveira, Carlos Kath, Müge Ozerten</i>	
Determining the Minimum Number of Measurement Sites for Voltage Quality Evaluation in Medium Voltage Networks	2637
<i>Etienne Gasch, Max Domagk, Jan Meyer, Karl Scheida, Rene Braunstein</i>	
Improved ADMS with an Operator Friendly Interface.....	2642
<i>Jorge Pereira, Clara Gouveia, Renan Portelinha, Paulo Viegas, José Simões, Pedro Silva, Susana Dias, Alexandre Rodrigues, Ana Pereira, Joana Faria, Gabriel Pino</i>	
Planning the Integration of Electric Mobility into the French Distribution Network: The Specificity of EV Charging in Multi-Unit Residential Buildings	2647
<i>Tristan Aubin, Eugénie Boubes</i>	
Enabling the Implementation of Intelligent Maintenance Processes by Efficient Data Integration	2652
<i>Maren Istad, Tom I. Pedersen, Hilde J. L. Haugse, Line Bergfjord</i>	
Qualification of SuperRail: The First Commercial Superconducting Cable System in the World to Be Operated on Railway Grid	2657
<i>Y. Duclot, A. Allais, N. Lallouet, L. Gervaise, G. Hajiri, S. Aboudrar, A. Jazzar, J. Capron, D. Ferandelle, H. Caron, K. Allweins, B. West, R. Goncalves, L. Terrien, K. Berger, L. Quéval</i>	
Advanced Cyber Incident Handling Techniques for OT in DSOs	2662
<i>Shyam Musunuri, Mika Loukkalahti, Roman Gruber, Joose Haapaniemi, Benjamin Mitsch</i>	
Bridging the Gap Between PV Generation and Demand: The Role of Energy Storage and Demand-Side Management in Local Energy Markets.....	2667
<i>Tania B. Lopez-Garcia, Sascha Kehrli, Yousra Sidqi</i>	
E4S Alliance – Integrated, Fully Digital, Smart Secondary Substation Concept	2672
<i>Marc Delandre, Valerie Layan, Dean Samara-Rubio, David Fry</i>	
A Two-Stage Management Strategy for the Control of Distributed Storage in a Low Voltage Network.....	2677
<i>Rémy Rigo-Mariani, Emeric Chazel, Hélène Schricke, Katrin Schulte, Timon Jungh, Bastian Steinhagen</i>	

PCBs Management Strategy of Pole Mounted Transformers – a Statistical Model Approach	2682
<i>ShengJi Tee, David Neilson, Matthew Jones, Malcolm Bebbington</i>	
Demystifying Distribution PMUs: A Comprehensive Guide for Distribution System Operators	2687
<i>Paolo Romano</i>	
How to Improve Semantic Interoperability? a Concrete Use Case Based on EUMED Metering Profile in the Context of Energy Data Space Projects	2692
<i>Bruno Traverson, Henon Mengistu Lamboro, Lina Nachabe, Fatma-Zohra Hannou, Marie Jubault, Lila Abes, Gilles Nativel, Eric Lambert</i>	
Innovation and Pilots as Important Steps for the Transition of the Electricity Distribution Grid.....	2697
<i>Maren Istad, Gerd Kjølle, Therese Åsheim</i>	

PART 5

Leveraging Large Language Models for a Resilient Electricity Supply System	2702
<i>Abdullah Binjos, Grégory Mermoud, Baoling Guo, Jérémie Vianin, Julien Pouget, David Wannier</i>	
Remote Power Flow Prediction Using PMU Data and Machine Learning for Enhanced DER Resilience in Communication Loss Scenarios.....	2707
<i>Matin Mahmood, Vinodh Jayakrishnan, Andreas Glatz, Yusef Fei, Ivan Martin, Maman Ahmad Khan, Richard Davey, Oussama Yousfi, Boris Yazadzhyan, James Mills, Mayamiko Hara, Tam Sokari-Briggs, Tim Manandhar, Douglas Wilson</i>	
Securing the Realtime DER Interface for the Netherlands: Key Takeaways from Protecting IEC 61850 MMS with IEC 62351	2712
<i>Nuno Pereira, Amber Cok, Michael Zillgith, Romina Roshani, Maxson Medeiros, Andreas Hetz, René Troost, René Kleizen, Alain Stuienvolt</i>	
Applied Intelligent Algorithms to Optimized Power Distribution Operation: Simulation of Switching and Fault Location Modules Integrated to Corporate IT Systems	2717
<i>Luiz H. L. Rosa, Nelson Kagan, Carlos F. M. Almeida, Renato Spalding, Renan C. Moura, Thiago S. Medeiros, Bruno G. Souza, Clarissa J. R. Alvarenga, Fabricio E. Viana, Gabriel H. A. Batista, Marcos. M. Otuka, Willamy S. Conde</i>	
Energy System Flexibility Through Scheduling Hot Water Heaters – Valley Filling Versus Reducing Peak Power Demand	2722
<i>Muhammad Tabish Parry, Heidi S. Nygård, Thomas Martinsen, Njål K. Olsen</i>	
Design of an Innovative SF6 Free Ring Main Unit with Direct Connection to Transformer	2727
<i>Naveen Kumar Budnar Venkatesh, Nirjhar Bajpai, Imran Khan Mohamed Stalin, Christophe Preve</i>	
Short-Term Forecasting of Peak Electrical Demand in Iceland: A Data-Driven Approach for Enhanced Grid Management	2732
<i>Óli P. Geirsson, Kári Hreinsson, Stefán Baxter, Andri V. Kristmannsson, Kristín S. Jónsdóttir, Kjartan R. Arnason</i>	
Performance and Interoperability Testing of a Modular Merging Unit and IEDs with 30 Sampled Value Streams.....	2738
<i>Bart Kloppenburg, Huug Brinkers, Sander Jansen, Edwin Melenhorst, Peter Hemmer</i>	

Possibilities and Requirements on Operation of Future MVDC Networks	2744
<i>Adriana Campos, Daniel Gomez A., Florian Errigo, Bruno Lefee, Pavel Novak, Philippe Alibert, Christophe Preve</i>	
Web/HTML5 Interfaces as a New Paradigm for SCADA Systems.....	2749
<i>Antonio Guglielmi, Julio Oliveira, Burhan Ahmad, Farzin Karimi, Naveen Kumar</i>	
Medium Voltage Direct Current Interruption Principles and Testing Methods in DC and AC Circuits	2754
<i>Pavel Novak, Juan-Carlos Perez-Quesada, Souleymane Dao, Samir Makhoulf, Wolfgang Grieshaber</i>	
Addressing Future Power System Stability Challenges as Distribution System Operators - Current Status and Priorities	2759
<i>Philipp Linnartz, Manuel Ostertag</i>	
Estimate Network Expansion Needs Through Correlations with Territorial Characteristics.....	2764
<i>Giacomo Viganò, Marco Rossi, Michelangeli Chiara, Sellitto Simona</i>	
Predictive and Real-Time Congestion Management to Enhance Grid Hosting Capacity	2769
<i>Mehdi Attar, Sami Repo, Anna Kulmala, Tomi Öster</i>	
Extended Reconfiguration of Passive Anti-Islanding Protections of RES Stations in Greek Distribution Network.....	2774
<i>Stefanos V. Papaefthymiou, Vasiliki Ntali, Georgios Andreacos, Fotios Gakis</i>	
Grid-Oriented Control of Flexibilities in the Low-Voltage Grid in Hungary, Germany, Sweden and the EU.....	2779
<i>Sonja Baumgartner, Viktória Alexandra Varga, Veronika Barta, Rebecca Samuelsson, László Gergely</i>	
Distributed Restart - Network Demonstrations	2784
<i>Jack Haynes, Eric Leavy, Julie Balch, Stephanie Hay</i>	
Data Access and Effective Social Engagement: A Pathway to Resilient and Consumer-Activated Communities	2790
<i>Mário Couto, Mariana Jimenez, Peter Richardson, Alessio Coccia, Alexandra Revez, Julia Blanke, Deirdre de Bhailís, Jonathan Sandham, John Walsh</i>	
Lightning Protection for Overhead Distribution Lines on a Wind Farm Power Plant: Implementation and Expected Performance	2795
<i>Anton Kharlamov, Jean-Baptiste Frain, Elizaveta Piskliukova, Margarita Chuykova, Jonathan Zahnbrecher, Matthieu Zinck, Thair Ibrahim Abdelhamid</i>	
Benefits and Application Limits of Optimisation Methods for Grid Expansion Planning in Distribution Grids Due to Future Uncertainties of Grid Utilisation	2800
<i>Carsten Graeve, Hendrik Vennegeerts</i>	
Effects of the Measurement Data Resolution on the Derivable Value of Information.....	2805
<i>Sebastian Storch, Daniel Fendt, Michael Finkel, Martin Uhrig, Michael Kreißl, Lothar Behringer</i>	
Considerations for Switching and Protective Device Combinations in MV/LV Transformer Station.....	2810
<i>Svenja Loos, Bruno Wartmann, Britta Heimbach</i>	
Supporting Local, Regional and National Energy Plans Through Targeted Electricity Network Planning Support	2815
<i>Oran McCarley, Robbie MacQuarrie, Mark Goudie, Nia Lowe</i>	

Assessment of Volt/Var Local Control Alternatives to Allow More Efficient Integration of Photovoltaic Generation in Long MV Feeders: A Hardware-In-Loop Approach	2819
<i>Carlos F. M. Almeida, Luiz H. L. Rosa, Nelson Kagan, Maurício B. C. Salles, Ananda Nascimento, Guilherme Broslavski, Juan Mateus, Raphael Toshio</i>	
Cyber-Physical Test Platform for Characterisation of DER Communications and Control Architectures	2824
<i>Terence O'Donnell, Ammar Malik, Hamed Heydari-doostabad, David Ryan, Darren Leniston, Jack Jackman, Conor Murphy, Shufang Chen, Ramy Ali, Ronan Meere</i>	
Towards Grid Code Revisions and Fault Behavior Insights for Modeling Grid-Forming Converters	2829
<i>Hussein Jaffal, Andreas Ulbig</i>	
Thirty Years of Learning About Distribution Earthing Design in Australia	2834
<i>Rowan McMurray, Stephen Palmer</i>	
E-REDES' Logic Interoperability Specification for PAS: Testing and Validation	2839
<i>Luís Nunes, Filipe Mendes, João Silva, Hugo Melo, André Neves, Miguel Marques, Celso Silva, André Pereira</i>	
A Comprehensive Analysis of Energy Theft in the UK.....	2844
<i>Yiwei Hu, Jianwei Li, Jennifer Fitzpatrick, Nigel Turvey, Furong Li</i>	
A Novel Multi-Pulse Fractional Rectifier System for Hydrogen Electrolyzers.....	2849
<i>Weichi Zhang, Wen Jiang, Xiaobo Yang, Nicklas Johansson, Jan R. Svensson, Xing Huang, Vijesh Jayan, Akif Zia Khan</i>	
Vibration-Measurement-Based Condition Monitoring of Power Transformers	2854
<i>Dominique Rolle, Beat Wolf, Charlie Junod, Samuele Gobbi, Joseph El Hayek, Pierre Favrat, Yvan Jacquat</i>	
Network Tariff Reform in the Republic of Ireland-Reviewing Electricity Distribution Network Tariffs for Customers in a Decarbonised, Decentralised and Digitalised Future.....	2859
<i>Karol OKane, Niamh McCarthy</i>	
Development of Geospatial Power System Planning Models	2864
<i>Nicholas Edwards, Freddie Wiles, Neil Murdoch</i>	
Estimating Network Topology and Hosting Capacity: A Multi-Level Approach	2869
<i>Adrien Godfraind, Adrien Leerschool, Manon Cornet, Loïc Perot, Alireza Bahmanyar, Laurine Duchesne, Simon Gerard, Thomas Wehenkel, Damien Ernst</i>	
Optimised Breaker to Enable New Substation Architecture with Centralised/Virtualised Protection.....	2874
<i>Santosh Mokkalpatty, Andreas Brandt, Jani Valtari</i>	
Approximation of Network Impedance for Defining Current Emission Limits in the Frequency Range Up to 150 kHz Based on Field Measurements	2879
<i>Victor Khokhlov, Robert Stiegler, Jan Meyer</i>	
On the Value of Estimated State Uncertainty in Distribution System State Estimation	2884
<i>Hugo Delesalle, Riccardo Vasapollo, Lorenzo Zanni, Ana Vukicevic, Damien Chollet</i>	
Evaluation of Network Balancing on PV Hosting Capacity and Voltage Excursions - Belgium Experiment	2889
<i>Romain Bailly, Chloé Lucas Montfort, Clémentine Benoit, Alain Versyp</i>	

Assessment of Stator Bars by Four Diagnostic Methods.....	2894
<i>Dominique Rolle, Pacifique Gendre, Lars-Ola Nilsson, Daniel Riesen</i>	
Automatic Identification of Low-Voltage Grids Switches States Using Smart-Meters Data - Grenoble Experiment.....	2899
<i>Benoît Colange, Noemi Vargha, Sébastien Julien, Damien Fresier</i>	
Introduction to IEC 62746-4 Communication for Demand Response.....	2904
<i>Scott Coe, Laurent Schmitt, Becky Iverson, Tom Berry</i>	
Optimizing Cable Size for Cyclic Loading Using Dynamic Cable Rating.....	2909
<i>Yasir Yaqoob, Johan Morren, Peter van der Wielen, J.G. Slootweg</i>	
Congestion Based Dynamic Pricing for Charging of EVS.....	2914
<i>Muhammad M. Usmani, Elahe Doroudchi, Hannu Laaksonen</i>	
Stability of Distribution Networks Under High Penetration of Inverter-Based Resources: Highlight of Novel Interactions	2919
<i>Fadi Kelada, Jérôme Buire, Nouredine Hadsaid</i>	
Emerging ICT Technologies to Improve Resilience of Power Grid Monitoring Systems.....	2924
<i>Luca Zuanazzi, Elisa Albanese, Carlo Tornelli</i>	
Detection of Broken Neutral Conductor in LV Networks to Ensure Customer Safety.....	2929
<i>João Campos, Guilherme Freire, Anish Babu, Shafiq Keddar, Ibrahim Abdulhadi</i>	
Probabilistic Charging Management of Electric Vehicles with Stochastic Optimization and Flexibility Analysis Under Consideration of Uncertainties.....	2933
<i>Kevin Kratz, Lea Bitterolf, Jannis Kartenberg, Krzysztof Rudion, Matthias Kreimeier</i>	
Community DSO: Coordinating Community Flexibility in the Low Voltage Network Considering Uncertainty	2938
<i>Gordon McFadzean, Owen Patrick, Harvey Dawson, Sarah Sheehy</i>	
Smart-Meter Phase Clustering in Low-Voltage Distribution Network.....	2943
<i>Pedro Carriço, Adriana Leal, Daniela Jordão, Bruno Galhardo</i>	
User-Friendly Current Capacity Rating for Power Cables Based on Finite Element Analysis.....	2948
<i>Espen Eberg, Svein M. Hellesø, Rune Jacobsen, Marius Engebretsen, Wojciech Poradowski</i>	
Predictive Control of eV Charging for Wide-Area Reduction in Grid Congestion	2953
<i>Diya Achi, Corentin Tissier, Rafael E. Carrillo, Pierre-Jean Alet</i>	
Improved Aggregated Distributed Energy Resource Operation Method for Distribution Network Considering Communication Losses	2957
<i>Dae-Sung Lee, Sung-Yong Son</i>	
Dynamic Safety Thresholds as a Measure to Mitigate Short-Term Load Forecasting (STLF) Errors for Distribution System Flexibility Services	2961
<i>Peter Lusiš, Adam Beilin, Oļegs Borščevskis, Armands Arājs</i>	
ResFlex: A Residential Load Profile Generator to Model Individual Demand Response in Distribution Grids.....	2965
<i>Thomas Stegen, Joakim Castiaux, Noé Diffels, Maxime Duchesne, Bertrand Cornélusse</i>	

Determining Temporary Admissible Transmission Loading Using Neural Networks.....	2970
<i>Teng Jiang, Benjamin Baum, Matthias Kahl, Luca Baral, Mihaela Kovacheska, Christoph John</i>	
OT Cybersecurity and Device Integration for an Electrical Utility Critical Infrastructure.....	2975
<i>Gleidson Mendes Costa, Rodrigo Rodrigues, Ronnie S. Loureiro, Karen Restrepo, Tatiana Navarro</i>	
An MPC-Based Energy Management System for Fast Shore Charging of Ferries at a Smart Port.....	2981
<i>F. D'Agostino, M. Gallo, F. Silvestro, S. Salamone, M. Sozzi, G. Mauri</i>	
An Optimization Framework for Time-Block Bound-Based Non-Firm Capacity Contracts for Congestion Management	2986
<i>Khawaja K. Mehmood, Ranier A. A. Moura, Anne v. d. Molen, Reinaldo Tonkoski, Peter v. d. Wielen, Phuong H. Nguyen</i>	
Optimal Management of Energy Communities Considering Electric Mobility	2991
<i>Larissa Montefusco, Tomás Glória, Cindy P. Guzman, Hugo Morais</i>	
Co-Simulation Approach for Optimizing Flexibility Usage in an Agent-Based Discrete-Event Simulation Environment.....	2996
<i>Johannes Bao, Sebastian Peter, Daniel Feismann, Thomas Oberließen, Christian Rehtanz</i>	
5G Communication Infrastructure for PMU-Based Monitoring and Control Systems	3001
<i>Elisa Albanese, Luca Zuanazzi, Renato Urban</i>	
Reducing Peak Demand of EV Fast Charging Stations Using Interconnected Solar-Powered Streetlights.....	3006
<i>Cephas Samende, Sivapriya M. Bhagavathy</i>	
E-REDES Test “zero Sequence Admittance Protection” Vs “directional Earth Fault Protection”	3011
<i>João Carvalho, João B. Gomes, André Neves, Luís Candeias, Miguel Louro</i>	
New Improved Method for Measuring the Earthfault-Distance in Non-Solid Grounded Networks	3016
<i>Gernot Druml, Robert Steinbichler, Bruno Wartmann, Christian Freund, Thomas Schinerl, Oliver Skrbinek, Jörg Meyer, Peter Schegner</i>	
Case Study for Reducing Voltage Sag Impacts in Industrial Clients	3021
<i>Gustavo Travassos A. da Silva, José Antonio de S Brito, Moira B. Prates</i>	
Transportable Multifunction Energy Storage System Using First and Second-Life Batteries for Supporting Outages and Seasonal Demand Peaks in the Distribution Network.....	3026
<i>Daniel O. Santos, Helena F. Napolini, Leonardo F. Pacheco, Lucas R. Nascimento, Vinicius Hirassaki, Matheus Hohmann, Aline K.V. Oliveira, Angelica Caús, João P. F. Abreu, Lucas H. S. Neto, Gustavo X. A. Pinto, Ivo Barbi, Ricardo Ruther</i>	
Comparison of MV Underground Cables Environmental Impacts Through a Careful Use of Life Cycle Analysis (LCA) Results Disclosed in Environmental Product Declarations (EPD).....	3031
<i>Anne Grau, Houssam Tanzeghti, Joan Cauvet, Marie-Laure Parussolo-Paupardin</i>	
Saturated Core Reactor Applied to Medium Voltage Distribution Networks	3036
<i>Gustavo T. A. da Silva, José Antonio de S Brito, Moira B. Prates, Paulo H. O. Rezende, José C. Oliveira, Ivan N. Santos</i>	
Congestion Management on LV Networks by Controlling Customer Assets Using a HEMS (SIBELBox) Developed by the Sibelga DSO.....	3041
<i>Thomas Bertrand, Jerry Falanka, Thibault Hermanns</i>	

Alternatives to PFAS for Nozzle Load Break Gas Switchgear.....	3046
<i>Andrés Laso, Roger Walker, Javier C. Cruz, Nenad Uzelac</i>	
New Results of Earth Fault Tests: Earthing the Faulted Phase in Isolated and Compensated Networks	3051
<i>Gernot Druml, Bruno Wartmann, Christian Freund, Robert Steinbichler, Thomas Schinerl, Oliver Skrbinek, Jörg Meyer, Peter Schegner</i>	
LV Grid Automation, Protection, Monitoring and Control: The Gridspertise Approach.....	3056
<i>Francesco Renna, Marco Menga, Gianpatrizio Bianco, Lucio Barbato, Antonio Dell'Angelo, Elia Manstretta, Gaia Arienti, Cristian Clerici, Gianluca Sapienza</i>	
An Automation for the Management of Fault Events in Islanded Grids Operated with a Ring Topology.....	3061
<i>Lucio Barbato, Gianpatrizio Bianco, Federico Brafa, Luca Delli Carpini, Lorenzo Foccoli, Elia Manstretta, Mayur S. Mirashi, Pietro Paulon, Nico Rosina, Gianluca Sapienza</i>	
Analysis of Influence of Low Voltage Cable Terminal Box on Magnetic Field Levels in the Apartment and Shielding Solutions.....	3066
<i>Maja Grbić, Aldo Canova, Luca Giaccone</i>	
Effects and Suppression of Fast Transient Overvoltages on Transformers Applied to Solar Photovoltaic and BESS.....	3071
<i>Luiz F. de Oliveira, Victor M. García-Chocano</i>	
Real-Time Iterative Validation of System Integrity Protection Scheme Architecture	3076
<i>Pratyush Das, Mohammad Arhum, Jirapa Kamsamrong, Dinesh Papal, Sebastian Lehnhoff, Sebastian Rohjans</i>	
Lessons Learned from Developing and Using Short-Term Congestion Forecasts for Active Power to Procure Local Services on Flexibility Markets	3081
<i>Emma Wiss, Yvonne Ruwaida</i>	
Data-Driven State Estimation and Smart Meter Data Privacy Preservation for Low-Voltage Distribution Grids.....	3086
<i>Nuran Cihangir Martin, Mitchell Scoop, Leon Kuiper</i>	
Multi-Market Optimization of PV-Integrated Hybrid Energy Storage Systems for Frequency Regulation and Energy Trading	3091
<i>Hossein Aghamohammadloo, Behnam Mohammadi-Ivatloo, Amir Safdarian, Gonçalo Pinto Mendes, Jamshid Aghaei</i>	
Interferences Mitigation in Partial Discharge Continuous Monitoring.....	3096
<i>Maxime Durand, Diego Alberto, Frank Joel Tene, Diana EL Khoury, Andrea Cavallini, François Gentils</i>	
Incentive Strategies for Active Consumers and Prosumers: Tata Power Delhi Distributions Approach	3101
<i>Himanshu Shekhar, Amit Arya, Devender Soni</i>	
Superconducting Microgrid to Support Transmission Between Solar PV Farms and Data Centers.....	3106
<i>Paul Bakhos, Yan Duclot, Arnaud Allais, Gabriel Hajiri, Nicolas Lallouet</i>	
Integrated Multi Energy Optimization for Sector Coupling Decarbonation.....	3110
<i>Jacques Wenger, Marie-Cécile Alvarez-Hérault, Bruno Lacarrière</i>	

Digitalization of Business (including Customer) Processes to Enhance Operational Efficiencies and Generating Error Free Billing.....	3115
<i>Amit Arya, Saurabh Kumar, Shubham Tyagi</i>	
Innovative Energy Sharing Schemes in Portugal: A Pilot Project by E-REDES Under a Regulatory Sandbox	3121
<i>Eduardo Francisco, Anderson Soares, Gonalo Ferreira Silva, Catarina Martins, Rui Bernardo</i>	
Regional and Seasonal Analysis of Publicly Available Data for VoLL Estimation When Missing Dedicated Survey	3124
<i>Tomislav Barievi, eljko Planti, Mladen Vuksani, Anelko Tunji</i>	
Self-Service Calculators for Sizing PVS and EV Charger for Home Use	3129
<i>Harri Salomki</i>	
Revenue Metering Based on LPITs Complying with the IEC 61869-10 and IEC 61869-11 Standards and Its Utilization in the Medium-Voltage Applications.....	3134
<i>Lukas Cesky, Michael Katz, Jiri Hula, Jiri Valek, Libor Jansky, Vaclav Prokop, Jaromir Podzemny, Petr Jakubik</i>	
Assessing the Temporal and Spatial Impact of Renewable Energy Integration on Medium Voltage Transformer Failures	3139
<i>Niek Brekelmans, Yifan Zhang, Phuong Nguyen, Anne van der Molen, Peter van der Wielen</i>	
New Design Criteria for MV Underground Feeders to Enhance Network Resilience in the Energy Transition and Climate Change ERA	3144
<i>Ivano Gentilini, Massimo Bartolucci, Roberto Calone, Angelo Chiarenza, Dario Dall'Acqua, Luigi D'Orazio, Gianluca Di Felice, Francesco Dura, Maria Carmen Esteban Santamaria, Luigi Grecchi, Marco Proietto</i>	
Implementation of Automatic Load Transfer in Medium Voltage Networks.....	3149
<i>Alan Wiener, Ricardo de Oliveira, Francisco Barbosa, Christian Alpoim</i>	
Low Voltage Monitors: Use Cases	3153
<i>Andres F. Moreno Jaramillo, Peter Glover</i>	
A Study on Service Providers' Financial and Technical Potential to Participate in Local and National Flexibility Markets.....	3158
<i>Yvonne Ruwaida, Emma Wiss, Cajsas Bartusch Ktting</i>	
Digital Product Passport for T&D Enabling IoT Integration and LCA	3163
<i>Thomas Drr, Uwe Kaltenborn, Daniel Staiger</i>	
Procedure Model for Techno-Economic Feasibility Assessment of BESS on Brownfield Sites in Switzerland.....	3168
<i>Marco Roscher, Pablo Frezzi</i>	
Day-Ahead Electricity Market Price Forecasting and Analysis: A BiLSTM-SHAP Approach	3173
<i>Yi Xu, Yixuan Min, Furong Li</i>	
Enhancing Hosting Capacity for Renewable Generation Projects: A Comparative Study of Quasi-Dynamic and Static Simulations in Planning Network Analyses	3178
<i>Alex Valenzuela, Robert Hall, Debora Scussiatto, Ivan Montalvo, Anthony Chabrol, Ray Dorney</i>	

Analysis of the Work of the Prosumer with Solar Power Plant and Heat Pump.....	3183
<i>Zoran J. Simendić, Goran S. Švenda</i>	
Droop-Based Co-Ordination of Grid-Forming and Grid-Following Inverters Ensuring Stability in a Microgrid.....	3188
<i>Nida Riaz, Lasse Peltonen, Sami Repo, Pertti Järventausta</i>	
The Effect of Interface Adhesion of Over-Moulded Polymer Materials for Electrical Components Used in Power Distribution Equipment.....	3193
<i>Ugo Nwaogu, Daniel Kelley, Janet Ache</i>	
Using Novel Technologies to Provide Flexibility to Distribution Systems by Exploiting a Market Portfolio Approach	3198
<i>Gary Howorth, Ivana Kockar</i>	
Mapping Electric Vehicle Load at the Distribution Substation Level in the UK: Challenges and Opportunities	3203
<i>Jennifer R. Fitzpatrick, Isaac Flower, Oliver J. Bostock, Nicolas Ostler, Furong Li, Phil Taylor</i>	
Accelerated Aging Tests for Smart MV Circuit Breaker Predictive Maintenance.....	3208
<i>Diana El Khoury, Jean-Pierre Meley, Diego Alberto, Zoé Bernard, Maya Alalam, Augustin Cathignol</i>	
Power Flow Management for the DSO: Advanced Techniques for Managing Voltage and Current in Distribution Networks	3213
<i>Saoussen Abidi, Tristan Basler, Simon Bayle, Nicolas Blandamour, Joachim Dublineau, Germain François, Paul Javal, Jean Jodeau, Olav Lafourcade, Pierre Mordant, Lucas Selini</i>	
Parallel Power System Restoration Planning at Distribution Level Considering Uncertainty of Renewable Generation.....	3217
<i>Yasir Shamim, Hendrik Vennegeerts</i>	
One of the Advanced Automation Solutions ("Self Healing") of MV Electric Distribution Network of the City of Belgrade	3222
<i>Dušan Vukotić, Nikola Čolović, Božidar Ćirić, Sunčica Cvetković, Stojan Šiškoski, Miloš Isailović</i>	
Scaling Demand Response Readiness Frameworks Through NLP Integration	3228
<i>Katya D. O. Soegiharto, David C. H. Wallom</i>	
Data Driven Analysis of Underground MV Joint Failure Phenomena in the Italian Distribution Grid	3233
<i>Ivano Gentilini, Luca Baresi, Lorenzo Bertolone Citin, Alberto Biloslavo, Dario Dall'Acqua, Giuseppe Dalla Costa, Gianluca Di Felice, Marco Ferrante, Samuele Forciniti, Andrea Leggio, Michele Lupino, Leonardo Melia, Marco Proietto, Roberto Rossi</i>	
Adoption of Soft Open Points for Increasing the Flexibility Perimeter Exploitation on Power Distribution Networks	3238
<i>Sara Carcangiu, Gianni Celli, Mansoor U. M. Parehar, Fabrizio Pilo</i>	
Current State and Future Needs of Load Forecasting for Distribution Planning – U.S. Perspective.....	3243
<i>Jouni Peppanen, Inalvis Alvarez-Fernandez</i>	
Loss of Neutral in Distribution Substation Transformers: Analysis of an Actual Event and Experimental Studies on a Reduced-Scale Distribution Network	3248
<i>Fábio Monteiro, Welisson da Costa, Vitor Batista, Rodrigo Gadelha, André Leão, João Paulo Vieira, Ghendy Junior, Nayara Ribeiro, Paulo Amora, Wesley Heringer, Francerday Pinheiro</i>	

Methodology and Assessment of Electrification Impacts on Residential Demand Characteristics	3253
<i>Jouni Peppanen, Brandon Johnson</i>	
Active Response: Operational Optimisation of Soft Power Bridges & Soft Open Points on Distribution Systems	3258
<i>Andrew Burton, Kevin Morrissey, Flo Silver, Mark Collins</i>	
Predicting Flexibility from LV Networks by Using Geospatial Forecasting and Synthetic Networks	3264
<i>Giuditta Pisano, Fabrizio Pilo, Simona Ruggeri</i>	
Use of Modular Power Flow Control to Improve Network Efficiency in the Distribution Network	3270
<i>Suresh Kumar Thiyagarajan, Camillo Banfi, Mark Norton, Peter Birkner</i>	
Assessment of the DSO's Flexibility Procurement Area	3275
<i>Gian Giuseppe Soma, Fabrizio Pilo, Gianni Celli, Giuditta Pisano, Simona Ruggeri</i>	
Dynamic Curtailment Strategies for Optimizing PV Hosting Capacity in Unbalanced Distribution Networks	3280
<i>Kamran Jalilpoor, Meysam Asadi, Remy Cleenwerck, Jan Desmet</i>	
Resilience and Reliability Analysis of Medium Voltage Distribution Network	3285
<i>Vit Krcal, Matej Vrtal, David Topolaneck, Petr Toman, Jan Koudelka</i>	
Enhancing Distribution System Hosting Capacity with Hydrogen Electrolyser Technology.....	3290
<i>Ali Hassan Kamlo, Simona Ruggeri, Fabrizio Pilo</i>	
Assessing the Impact of Low-Voltage Energy Communities on Grid Flexibility Provision	3295
<i>Susanna Mocci, Fabrizio Pilo, Simona Ruggeri</i>	
Aggregated Model of the Distribution System for Non-Market Based Redispatching and Costs Estimation.....	3300
<i>Jan Koudelka, Petr Toman</i>	
Temperature Rise Test and Analysis of Various Influencing Factors of a MV Switchgear	3305
<i>Maruthi Prasad Nagaraja, Sharath Pradhan</i>	
Possible Framework for EMC Coordination of Interharmonics in Low Voltage Distribution Networks	3311
<i>Jan Meyer, Jiri Drapela, Roberto Langella, Mark Halpin, Neville Watson</i>	
Sizing and Optimisation of Medium Voltage Direct Current Grid for Linear Photovoltaic Systems: A Practical Approach.....	3316
<i>Volana Randriantelomanana, Anthony Bier, Quoc Tuan Tran, Marc Petit</i>	
Influence of Subsidies on Future Load Time Series and Optimisation Possibilities at Low Voltage Grid Nodes	3321
<i>Michael Kreisköther, Bengisu Yilmaz</i>	
Rapid Voltage Changes and Their Evaluation in Comparison to IEC TR 61000-3-7 and EN 50160	3327
<i>Jan Petrásek, Karel Procházka, Jiří Drápela, Jaroslav Kloud, Zdeněk Hejpetr</i>	
How Can Electric Utilities Drive Their Investments in Digital Innovation?.....	3332
<i>Pierre-Jean Alet, Anton Angerer</i>	
A Comparative Assessment of the Treatment of Harmonic Resonance for Calculating Harmonic Emission Limits in US and Europe	3337
<i>Gaurav Singh, Jan Meyer, Md Maidul Islam</i>	

Greenfield Grid Planning Supporting the Energy Transition.....	3342
<i>Anuj Chhettri, Gavin Anderson, Ricardo Prata, Rimnesh Shah</i>	
Experience in PD Defect Detection and Location Using Smart Sensors with AI Deployed in Distribution Grid	3347
<i>Javier Ortego, José D. Bielva, Antonio González, Pelayo Hurlé</i>	
Dynamic Line Rating: Benefits and Challenges from Global Case Studies.....	3352
<i>Brian Berry, Alexandre Baré, Faraz Khan</i>	
Enabling Demand Reduction Through Voltage Control in Power Distribution Systems	3357
<i>Danish Khatri, Jianing Li, Ibrahim Usman, Abdullah Emhemed</i>	
Dynamic Behaviour of Generators During Short-Circuits and Its Impact on Directional Protection Systems.....	3362
<i>Loris Orzan</i>	
Electromagnetic Interference in the Frequency Range 2 kHz to 500 kHz - Key Findings of the 4th EMI Study Report Prepared by CENELEC TC219/WG11	3367
<i>Gerhard Bartak, Riccardo Fiorelli, Jan Meyer</i>	

Author Index