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1: ABB AB, Sweden; 2: ABB S.p.A, Italy

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1: ABB, Italy; 2: Duferco Travi e Profilati, Italy

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1: TECNALIA, Spain; 2: RED ELECTRICA

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1: Optics11, Netherlands; 2: EDF, France

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1: HIGHVOLT Prueftechnik Dresden GmbH, Germany; 2: Polycentrum Research Kft., Hungary; 3: JDR Cable Systems Ltd.

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1: Universidade Federal de Santa Catarina, Brazil; 2: Celesc Distribuição

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1: Innovation Center of the Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia, Serbia; 2: Netico Solutions d.o.o., Niš, Serbia; 3: Faculty of Electronic Engineering, University of Niš, Niš, Serbia

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1: Universidade Federal de Santa Maria, Brazil; 2: Universidade Federal do Pampa, Brazil

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1: National Physical Laboratory, United Kingdom; 2: SSEN Distribution

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1: Elvia AS, Norway; 2: Energea AS, Norway; 3: Skivdal Data AS, Norway; 4: Studer Innotec SA, Switzerland

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1: Ormazabal; 2: e-distribución (Enel/Endesa)

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Thomas SCHWIERZ* (1), Daniel FEISMANN (1), Steven EICH (2), Daniel HOLTSCHULTE (3), Christan REHTANZ (1)
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Muhammad Fazli NOZLAN*, Mohd Faris ARIFFIN
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Maurizio VASSALLO* (1), Adrien BOLLAND (1), Alireza BAHMANYAR (2), Raphaël FONTENEAU (1), Anthony MAIO (1), Julien CALLEC (3), Dorian FOURNIRET (4), Damien ERNST (1)
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Daniel FEISMANN*, Johannes BAO, Sebastian PETER, Marius STAUDT, Christian REHTANZ
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Julian MONSCHEIDT*, Achraf KHARRAT, Jano SCHUBERT, Edwin MORA, Mathias DUCKHEIM, Moritz WEBER, Philipp DOLCH, Patrick SPAETH
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Andrej VILHAR* (1), Taja BREMŠAK (1), Gianmarco SALAZAR GESELL (2), Kjell WAGNER (2), Frank AMAND (1), Andrej SOUVENT (1)
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1107 *Section-Wise Temperature Monitoring of MVAC Cable Circuits With Time-Domain Reflectometry: Field Validation And Application To Cyclic Ratings*

Alex KOLMUS* (1), Alejandra JIMENEZ-ROSALES (1), Daniël WOLDENDORP (1), Niels DE VISSER (1), Sander RIEKEN (1,2)
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Sima DAVARZANI*, Tim MANANDHAR
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1127 *Development of Time-Series Optimal Power Flow for Coordinated Converter and Storage Dispatch in Hybrid AC/DC Distribution Grids*

Bence BERECZKI*, Artem MEDVEDEV, Bálint HARTMANN, István VOKONY
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1128 *DynaNet: An AI-Based, Locally Resolved Network Tariff for Preventive Distribution-Grid Congestion Management*

Sara SCHÖN*, Kim JOST, Jasmia EGAMBERDIEVA, Saif ALI, Thomas BLEISTEIN
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1142 *System-supporting Battery Operation Under the New Austrian Regulatory Framework*

Florian SAMM* (1), Thomas STAMER (1), Maximilian PRASSER (2), Wolfgang HRIBERNIK (1), Thomas KIENBERGER (1)
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1190 *Grid-Scale vs. Residential Storage: A Comparative Assessment of their Impacts on Distribution Grids*

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1199 *From Repetitive Trips to Predictive Maintenance: Leveraging Digital Fault Data to Prevent Permanent Faults in MV Distribution Networks*

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1202 *Weather-Informed State Estimation: Correcting Thermal Resistance Drift for Reliable Bad Data Detection*

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1210 *Flexibility Services to the Distribution Grid without ADMS*

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1218 *Advanced Under-frequency Load Shedding in Distribution Grid with Distributed Generation*

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1220 *Operationalising Outage Forecasting for Distribution Networks*

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1244 *Implementing Digital Grid Inspection At Scale: A Case Study From Brazil Using Drones And An AI-powered Image Analysis Platform*

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1261 *Assessing the Grid Impact of Heterogeneous Residential Responses to Electricity Tariffs*

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1274 *Scaling UAS-Based Visual and Thermal Inspection from MV to LV Overhead Lines: Deployment Challenges and Field Results at Distribution Network, TNB*

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1279 *Reliable Estimation of Feasible PQ Operating Envelopes at Distribution Network Buses*

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1298 *Field-Validated State Estimation of Loading and Losses in Unbalanced LV Networks Using Smart Meter Data*

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551 *Medium Voltage Monitoring System With Native Cyber-Secure Data Exchange And Plug&Play Commissioning*

Lorenzo VERNIANI*, Cristiane BELLENZIER PIAIA, Stefano MELZI
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560 *Automatic Detection and Classification of Traveling Waves in Fault Records Using AI for Single-Ended Fault Location*

Steven EHMKE*, Fabian BALTRUSCH, Cezary DZIENIS
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1: Elenia Verkko Oyj, Finland; 2: ABB OY; 3: Elenia Oy

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Arulselvan GOVINDARAJ* (1), Per-Gunnar ERIKSSON (2)
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Xiaoyong CAO*, Dong LIU, Fei CHEN, Jiaming WENG
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Jani VALTARI* (1), Mika LOUKKALAHTI (2), Mikko WILLMAN (1), Henry NIVERI (1)
1: ABB, Finland; 2: Helen Electricity Network, Finland

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Mayank NAGENDRAN*, Lorenzo ZANNI, Paolo ROMANO
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Jani VALTARI* (1), Bastien DESBOS (2), Florent CARLI (2), Aurelian POP (1), Erkka KETTUNEN (1)
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1037 *5G Wireless Process Bus in Digital Substations: Latency, Jitter, and Protection Performance*

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Jacob JOHN*, Daniel MÅNSSON
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Marko GOJIĆ*, Dora ŠEGOVIĆ, Jan ŠABEC
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1100 *Transient Coordinated Control Strategy for a Third-Order Grid-Forming PV/ES System Considering PV and Energy Storage Response Characteristics*

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1119 *Dynamic Voltage Control on Meshed Distribution Networks: Modelled Benefit and Trial Design on SP Manweb*

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1129 *Protection Coordination Considerations for Bipolar MMC-MVDC Links With Different DC Line Configurations*

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1133 *Enedis PCCV Project End-To-End PACS Engineering Using IEC 61850 Basic Application Profiles: From Functional Specification To Project Deployment*

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1149 *Application Limits of Control Procedures for Detuning the Arc Suppression Coils in Compensated Grids based on Rated Equipment Quantities*

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1156 *Architecture of a Co-Located Test Setup for Virtualised Protection*

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1160 *Inter-Substation Protection and Control Automation*

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1162 *A practical and early IEC 61850-8-3 demonstrator using Raspberry Pi*

René TROOST* (1), Alain STUIVENVOLT (2), Rik FONTEIJN (2), Davood SOORAN (4), Robert-Jan PETERS (3), René KLEIZEN (3), Willem BOOGERS (1), Alexander JUMELET (1)
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1163 *Non-Intrusive Real-Time Observability for VPAC*

Colin SMYTH (2), David KOZHAYA* (1), Christian GÖTTEL (1), Sandro SCHÖNBORN (1), Thanikesavan SIVANTHI (1), Philipp SCHOLL (1)
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1169 *Comparative Assessment of Travelling-Wave-Based and Incremental-Quantities-Based Fault Detection Methods in an MV Underground Cable Distribution Network*

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1179 *Systematic Assessment of On-Load Tap-Changer Performance in Future MV- and LV- Grids*

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1180 *An Automated Platform for Overcurrent Protection Coordination and Optimal Relay Settings in Distribution Networks*

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1: FGH e. V., Germany; 2: IAEW RWTH Aachen University

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1102 *Distribution Network Constraints Under Multiple Heat-Pump Renovation Scenarios: Evaluation of Flexibility and Reinforcement Strategies*

Samuele BODON*, Yoann CHICHE, Seddik Yassine ABDELOUADOUD, Robin GIRARD
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Hesam VAHIB*, Lassi AARNIOVUORI, Ville TIKKA
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1177 *Direct Current (DC) Distribution Network Planning and Assessment Framework in Malaysia*

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1184 *A Nationwide, Geographically Explicit Portfolio of Synthetic Medium Voltage Grid Models for Germany*

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Luca ZUANAZZI*, Elisa ALBANESE, Carlo TORNELLI
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Thomas SPENCER*, João GRAÇA GOMES, Michel-Alexandre CARDIN
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Britta HEIMBACH*, Alper UZUN, Iordanis MOURTIADIS, Roman SÜSSTRUNK, Jonas WÄFLER
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1223 *From Operational Risk Indicator to Network Development Driver: A Thermo-Structural Algorithmic Framework for addressing MV Network development in the new climate change scenario*

Valerio ARDILLO*, Alex LA COGNATA, Marco DI CLERICO, Fabio CAZZATO, Simone FERRERO, Gianluca DI FELICE
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1227 *Robust Or Adaptable? Evaluating Low-Voltage Network Modification Strategies Under Deep Demand Uncertainty Across Real Network Topologies*

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1230 *Identification Of Feeder And Phase Connection In low-Voltage Grids Using Smart-Meters Data*

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1234 *Real-Time Co-Simulation Framework for EV Charging Planning in Integrated Distribution Grid: An OPAL-RT and OpenDSS Approach*

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1238 *Hosting Capacity of Medium-Voltage Grids Under Truck Electrification: Effects of Logistics Charging Archetypes and Flexibility*

Idries URKENS*, Robbert CLAEYS, Jan DESMET
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1242 *E-REDES FlexPlan: Rethinking Distribution Network Planning Under Uncertainty Through Adaptive Investment*

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1245 *Towards a Flexible MVDC-Ring Reference Architecture: The OPHELIA Long Linear PV Collector Network*

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1254 *Flexpectation: Probabilistic Power Forecasts of Distribution Substations and Generators Out to 14 Days*

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1256 *Should DSOs Trust Flexibility? Grid Reinforcement Planning Under Uncertain Flexibility Availability*

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1270 *Flexibility from EV Charging Sites in MV Networks: The Case of Non-firm Connections*

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