



Reference: **SYMP_KYO_2022**



Type:

Symposia

Title:

Symposium Kyoto - 2022

- 1-1 **017** Improvements to the efficiency of inspection patrols to identify nest-building on power distribution equipment, through the application of AI
- 1-2 **048** Inspection and Anomaly Detection Technologies of Electric Power Equipment using Drones
- 1-3 **051** Microwave Wireless Fading Prediction Using AI Technology
- 1-4 **061** Utilization of Drones for Facility Inspection and Surveying
- 1-5 **159** Development of automatic drone navigation system for power facilities inspection
- 2-1 **068** A Novel Concept for Dynamic Network Reduction Dedicated to Real-Time Application
- 2-2 **121** Machine Learning Applied to Capital Planning at Power Utilities
- 2-3 **189** Distribution Grid Phase Identification based on Unsupervised Learning
- 3-1 **003** Challenges with harmonic emission compliance assessment of inverter-based resources - an international review
- 3-2 **033** Statistical impacts of renewable energy generation on power system harmonic distortion
- 3-3 **076** A Strategic Harmonic Planning and Management Framework for Transmission Systems
- 3-4 **095** Use of PV inverters to mitigate harmonic levels on distribution systems
- 4-1 **069** Impact of Cyber-Attacks on Process Bus and Time Synchronisation Communication at Substations
- 4-2 **115** Power Control System Security Incident Response and Recovery
- 4-3 **124** Cybersecurity Issues Posed by The Digitalization of Power Systems: Potential Solutions Modelling
- 4-4 **142** Cyber security in the MPLS-TP networks
- 4-5 **146** Supply Chain Cyber Attack Detection for Power Grids

- 4-6 **154** The importance of synchronization availability on power grid operation: a comparison between traditional and network-clock approach to time distribution.
- 5-1 **001** Reconstruction of Waveforms of Lightning Return-Stroke Channel-Base Current From Electromagnetic Field Waveforms Degraded by Propagation Effects
- 5-2 **002** FDTD Electromagnetic and Thermal Analysis of a ZnO Element of Transmission-Line Surge Arrester for Lightning Impulse Currents
- 5-3 **037** Performance Evaluation of Transmission Line Surge Arrester in North Eastern Region (NER) Grid of India
- 5-4 **078** Case Studies of Lightning Parameters Observed by The Newly Designed Lightning Location System Named LENTRA
- 5-5 **091** Study on Lightning Overvoltage Analysis for EHV Transformer Considering Operating Conditions
- 5-6 **145** Features of the operation of an extra-high voltage overhead power transmission line during ice formation on its lightning protection ropes
- 6-1 **026** Net Load Estimation of Distribution Grid Including Photovoltaic Systems
- 6-2 **036** Methodology Of Building A Water Heater Aggregated Model For Evaluating Energy Flexibility For Domestic Hot Water
- 6-3 **064** Hydro Energy Optimization Using Mixed Integer Linear Programming
- 6-4 **119** The Future Role of Active Distribution Load in Enhancing Reliability, Resilience and Security of the Electricity Grids
- 6-5 **153** Experience with DER Integration in Australia
- 6-6 **183** Distribution Management System Coordination for the Optimal Operation of Medium and Low Voltage Distribution Networks
- 7-1 **007** Improvements of FDTD-based electromagnetic transient simulations on the basis of the hybrid technique with transmission line theory and its application to simulations of electric power facilities
- 7-2 **019** EMT Analysis of Externally Gapped Line Arresters for Reducing Lightning Faults in 77 kV Transmission Lines
- 7-3 **020** Measurement Results of Flashover Voltage on Medium-voltage Insulators to Develop Flashover Model
- 7-4 **027** Assessment of Influence of Electromagnetic Pulse on Direct Lightning Overvoltage on a Medium Voltage Distribution Line Using the FDTD Method
- 7-5 **063** Estimated peak currents of negative subsequent return strokes grouped into flashes with multiple ground contacts
- 7-6 **079** Study on the Continuous Condition of Fault Arc Following Multi-Phase Flashover due to Lightning in Medium-Voltage Distribution Lines
- 8-1 **030** Development of Automatic Measurement System for Gas Leak Rate of Gas Insulated Transformer and Gas Insulated Reactor
- 8-2 **041** Resilience reinforcement of substations against flooding by preparation of mobile substations (77/33 kV)
- 8-3 **090** Advanced Condition Based Maintenance of The Internal Open Inspection by Systematization of Cumulative Breaking Current Management in GCB
- 8-4 **106** Development of advanced AI technologies for condition diagnosis of high voltage switchgear in substations
- 8-5 **130** Replacement of 500 kV Power Transformers to Extend the Lifetime of Substations and Improve Reliability and Maintainability
- 8-6 **172** Smart Digital Substation: empowering the transmission and distribution

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- 8-7 **175** Concepts and experiences in retrofitting substations with digital technologies
- 9-1 **008** A Study of the Centralized Voltage Control System for Distribution Power Networks with High Photovoltaic Penetration
- 9-2 **070** Construction of Middle and Low Voltage Distribution Network Models as Platforms for Quantitative Evaluation on Performance of Voltage Control Methods
- 9-3 **105** Abstract of Voltage Unbalance and Countermeasure in Distribution System due to Rapid PV Penetration
- 9-4 **126** Field Demonstration and Development of Centralized Voltage Control System
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- 10-1 **016** Transient stability assessment application using post-disturbance voltage fluctuations
- 10-2 **029** Development of basic technology for estimating system inertia in real time
- 10-3 **057** An Estimation Method of Rate of Change of Frequency by Wide-Area Phasor Measurements Based on Histogram of Its Candidates
- 10-4 **109** Possibility of Introducing Grid-Forming Inverter into Distribution Systems and Its Effect on the Power System Stability
- 10-5 **157** Current Performance and Issue of Protection IEDs from the Perspective of Emergency Frequency Control
- 10-6 **182** Practical Experience of Performing Grid Forming Test using Battery Energy Storage System - RINGO Black-start Test
- 11-1 **022** Development of Future DER Profile Scenarios Using Generative Adversarial Network for Stochastic Distribution Grid Planning
- 11-2 **094** How Small PV Plants can Participate in the Balancing Energy Market
- 11-3 **103** Effectiveness of applying flow battery system with synthetic inertia control to microgrid
- 11-4 **110** Microgrid System to Reduce Carbon Emissions in Maldives
- 11-5 **151** A Practical Method for Control of PV Generation in Microgrids
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- 12-3 **125** Operation results of “Keystone Japanese Coordinating system for energy balancing”
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- 12-7 **170** Infrastructure and setup for Automatic Generation Control in Indian Power

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- 13-2 **011** Flexibility Benefits for Power System Resilience
- 13-3 **050** Status of Renewable Energy Utilization in Hokkaido and Approaches to Expansion of Renewable Energy Utilization in Hokkaido
- 13-4 **073** Estimation of Japanese Grid in Carbon Neutral Era and Social-scale Challenges
- 13-5 **089** Approach to the introduction of wide-area procurement and operation of power reserve
- 13-6 **127** An Outlook on a Holistic Modelling Approach of the African Power System
- 14-1 **144** Deployment of Smart Inverter for Frequency and Voltage Quality Maintenance under Large Penetration of Photovoltaic Generation
- 14-2 **148** Scenarios and Countermeasures to Manage System Inertia under Massive Penetration of Renewable Energy in Japan
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- **056** Evaluation of the occurrence rate of multi-phase flashover in consideration of the V-t characteristics of lightning-protection equipment in the medium-voltage distribution line
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- **108** Profitability Analysis of Photovoltaics and Battery Storages Using Screening Curve Method: A Study on the Interaction Between PV/Battery Share and Prices of Electricity Spot Market
- **137** Basic study on Effect of Storage Battery Introduction on Merit-order-based Load Frequency Control
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- **012** Building an IP Network to Strengthen Resilience
- **013** Robust Optimization for Unit Commitment Problem Considering Suppression of Renewable Energy: Analysis of Numerical Experimental Results
- **014** Use Cases for On-site Video Streaming and Predictive Equipment Failure Detection in Japan
- **015** Intra-day PV Forecasting by Persistent Prediction of Quantile Deviation
- **032** Potential to Reduce Transmission Line Overloading owing to Photovoltaic Installation using a Traction Power Supply System and Storage Battery for Electric Vehicles
- **039** Measures to ensure power quality using DER on integration of distribution lines in rural areas
- **049** An approach of DERs utilization to satisfy both of VPP-EMS and distribution system control
- **052** A Method to Assess the Consumers Being Suitable for Dispatching a Demand Response in Advance by Using Concentration Inequality

- **055** Application of Software LTE Technology for electric power company.
- **058** Decision Support Model on Maintenance for Electrical Components in Distribution Network Using Their Inspection and Maintenance Records
- **066** Understand of the Impact of Automatic Volt-Var Control on System Protection in Off-Grid During a Disaster
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- **102** Multiple-Use Application between Distribution and CAISO market by Distribution attached Flow Battery Systems
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- **160** Key Technologies of a Virtual Power Plant for the Large-scale Introduction of Renewable Energy

More Informations :

File Size:127,3 MB **Study Committee :** B3, C1, C2, C4, C5, C6, D2 **Year:**2022 **Place:**JAPAN - Kyoto
