2026 14th International Conference on Smart Grid (icSmartGrid 2026)

Suceava, Romania
6-9 July 2026

IEEE Catalog Number: CFP26F97-POD
ISBN: 979-8-3195-4455-1

IEEE
Advancing Technology for Humanity

Copyright © 2026, IEEE

All Rights Reserved

Copyright and Reprint Permissions:

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP26F97-POD
ISBN (Print-On-Demand):	979-8-3195-4455-1
ISBN (Online):	979-8-3195-4454-4

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
E-mail:	curran@proceedings.com
Web:	www.proceedings.com



TABLE OF CONTENTS

Robust Type-2 Fuzzy Sliding Mode Control for Maximum Power Point Tracking for Wind Power Conversion Systems 28
Sebti Belkacem, Abdelaziz Belhait, Ghoulemallah Boukhalfa, Ilhami Colak

Opportunities, Characteristics and Challenges of Smart Grids 34
Moses Jeremiah Barasa Kabeyi, Oludolapo Akanni Olanrewaju

Smart Grids and Smart Microgrids in E-Mobility 46
Moses Jeremiah Barasa Kabeyi, Oludolapo Akanni Olanrewaju

Policy and Legal Foundations for Distributed Generation 66
Moses Jeremiah Barasa Kabeyi, Oludolapo Akanni Olanrewaju

Demand Side Management in Micro Grids Integration 78
Moses Jeremiah Barasa Kabeyi, Oludolapo Akanni Olanrewaju

YOLOv8n-Based End-to-End Solar Panel Inspection: Detection and Multi-Class Classification with SVM Comparison 96
Yakoub Nettari, Fella Berrimi

Dual-Framework Deep Learning Architectures for Electricity Consumption Forecasting: Hybrid LSTM-GRU and Convolutional-Temporal Networks 103
H. S. Shreyas, Dhruv Prrasana, Prajeesha, Anuradha M

Electrochemical Performance Prediction in Lithium-Ion Batteries Using Physics-Informed Features and Ensemble Learning 109
Samarth P Patel

Electricity Integration Efficiency Measures in The Conventional Grids 116
Moses Jeremiah Barasa Kabeyi, Oludolapo Akanni Olanrewaju

System-Level Energy Characterization of an Automotive PEM Fuel Cell Model Using Quasi-Steady Extraction and Local Sensitivity 130
Emil D. Maer, Daniel Fodorean, Mircea Răceanu, Elena Carcadea

Investigating the Impact of Humidity on the Electrical Performance of Floating Photovoltaic Systems 136
Andiso Pingilili, Ahmed Ali

Evaluating Decision Tree Regression and Light-GBM Models for Short-Term Solar Irradiance Forecasting 144
Lulutho S Ntsonkotha, Ahmed Ali

Evaluating Gradient Boosting and Random Forest Models for Short-Term Solar Irradiance Forecasting 149
Ahmed Ali

Comparative Performance Analysis of Gas and Smoke Sensors for Enhanced Safety in Student Accommodations 153
Donald Ntombela, Ahmed Ali

Smart Solar Surplus Energy Management System-AI: A Microcontroller-Based AI System for Surplus Solar Energy Management 162
Lulutho S Ntsonkotha, Ahmed Ali, Ramakrishna S S Nuvvula

European Energy Transition: A Comparative Analysis of Renewable Energy, Electricity Consumption, Emissions, and Energy Dependence in Romania and the European Union 167
Iavorschi Eugen, Milici Dan Laurențiu

Weather-Forecast-Linked Energy Management for PV-Assisted Mobile Base Stations in the Philippines 174
Junliang Xiao, Masaki Nakamura

International Validation of FDC as a Sizing tool for Small Hydropower Plants: Study case in Romania and Spain 179
Pedro-Manuel Gómez-Garrido, Constantin Ungureanu, Laurențiu-Dan Milici, Blas Ogayar-Fernández Andrés López-Valdivia

Comparative Analysis of Energy Consumption Patterns in Residential and Commercial Buildings for Sustainable Resource Management 188
Amad Ali, Shah Fahad, ASM Ashraf Mahmud, Abubakkar Siddiq, Zakir Ullah

MLP Neural Networks for short-term Electricity demand Prediction for Senelec's resilient power grid 193
Oumy Wagne, Alphousseyni Ndiaye, Daouda Gueye, El Hadji Mbaye Ndiaye, Mamadou Traoré Amadou BA

Power-Demand Driven Modeling: A Universal Data-Driven Circuit Framework for Diverse Photovoltaic Technologies 198
Aaron Shmaryahu, Roni Zakay, Ilan Aharon

Technical Analysis of Customer-Based and Grid-Topology-Aware Load Shifting in an Industrial Zone 202
Celal Ugurluyol, Umit Cetinkaya, Seda Kul, Ramazan Bayindir

BESS Sizing for Industrial Prosumers: A Grid-Dependency-Oriented Comparison of Combination-Based and Target-Oriented Approaches 207
Ahmet Korkmaz, Ümit Cetinkaya, Seda Kul, Ramazan Bayindir

Autonomous Vehicle Social Acceptance and Smart Mobility Integration: A Thematic Review of Public Trust, Shared Mobility, and Road Coexistence 212
Ercan Kayalıoğlu, Seyfettin Vadi, Hafize Nurgül Durmuş Şenyapar, Ramazan Bayındır

Autonomous Vehicle Acceptance and Construct-Level Fragmentation: Mapping Measurement Architecture in TAM- and UTAUT-Based Studies 223
Ercan Kayalıoğlu, Seyfettin Vadi, Hafize Nurgül Durmuş Şenyapar, Ramazan Bayındır

Deployment-Aware Evaluation of Short-Term PV Forecasting Models Using a Composite Efficiency-Accuracy Index for Smart Grids 231
Özge Çelik, Kadriye Filiz Balbal, Sebahattin İkikardeş

Validation of the dynamic performance of the perturb and observe type MPPT controller adapted to meteorological variations in the Sahelian region of Chad 236
Nadjibeye Odingar, Mbaitelbe Koularambaye, Alphousseyni Ndiaye, Abderahim Awat

A Consumer-Centric Approach to Energy Management System Modeling 242
Mirela Dobra, Ionut Dragos Roman, Mircea Raceanu

Multi-Scale Analysis of the Spatio-Temporal Complementarity of Solar and Wind Resources in West Africa: The Case of Guinea 248
Ousmane Barry, Alphouseyni Ndiaye, Cheikh Saliou Toure, Mamadou Traore

Analysis and Design of a Green Hydrogen Energy Storage Microgrid for Residential Applications 254
Adrian-Augustin Pop, Ferencz Havadi, Roland Policsek

Integrating Live Sensor Data and Machine Learning in Digital Twin Simulations 260
Khaja Akram Mohammed

Self-Optimizing Autonomous Network Framework for Intelligent Fault Detection and Recovery in 6G Systems 268
Kameswaran Arunachalam, Venkata Rama Uday Kiran Bokam

AI-Native Resource Allocation and Predictive Optimization in Ultra-Dense 6G Communication Networks 275
Kameswaran Arunachalam, Venkata Rama Uday Kiran Bokam

Real-time Optimization of a Dynamic System (PV-BESS) integrated into a Building for Self-Consumption 283
Amadou Seck, Daouda Gueye, Alphousseyni Ndiaye, El Hadji Mbaye Ndiaye, Abdoulaye Faye Oumy Wagne

Comparative Evaluation of Model-Free and Model-Based Predictive Control for a Wind-Battery DC Microgrid Supplying a Surface Water Heat Pump 292
Joyce Assaf, Mamadou-Baïlo Camara, Damien Guilbert, Brayima Dakyo

A Centralized MINLP-based MPC for Building Microgrid with Surface Water Heat Pump * 298
Nassima Ouali, Thomas Chevet, Nicolas Langlois

A Digitally Controlled Solid-State Transformer Architecture for Smart Grid-Oriented Low-Voltage DC Distribution Systems 304
Enver Ulusoy, Ceyda Cogal, Turgut Mert Aksoy, Hidir Duzkaya

Peak Demand Detection in PV-Integrated Building Energy Systems Using Isolation Forest and Consensus Voting: Seasonal Performance and Economic Viability 309
E. Shiva Prasad, Rameshkumar T, Yogesh Ramaswamy, Swarun Kumar Joginpelly, A Mutharasan, Jalaja.P

Hybrid Gradient Boosting and Anomaly Detection Framework for Autonomous Peak Demand Management in Commercial Building Energy Systems 317
Pruthvi Raj Seknametla, Hari Suresh Babu Gummadi, Sankalp M R, Mugunth Chandran, A Mutharasan Sushma Sunkollu Nagaraj

Comparative Evaluation of Metaheuristic Algorithms for Battery-Aware Energy Dispatch Optimization 324
E. Shiva Prasad, Shahebazkhan Pathan, Pavada Santosh, Uthej Mopathi, Yogesh Ramaswamy, Jalaja.P Vikas Marakini

A Multi-Objective Metaheuristic Framework for Demand-Side Management in Isolated Tropical Photovoltaic Microgrids: Performance Bounds and Battery Trade-off Analysis 331
Vinay Kulkarni, Palleti Jyothsna, Saranya SN, Krishnaveni Musku, Rajesh Mattaparthi Sushma Sunkollu Nagaraj

Neural Network Architectures for Building Energy Forecasting: A Head-to-Head Benchmark Against LightGBM with Sequence Length Optimisation 338
Madhukar Dharavath, S. Sri Nandhini Kowsalya, M Kiran Kumar, Venkat Kishore Yarram G. Soniya Priyatharsini, Sushma Sunkollu Nagaraj, Vikas Marakini

Machine Learning-Based Energy Consumption Prediction Using Integrated PV Generation and Dynamic Pricing in Research Facility Operations 344
Madhukar Dharavath, S. Sri Nandhini Kowsalya, M Kiran Kumar, E. Shiva Prasad, G. Soniya Priyatharsini Jalaja.P, Syed Riyaz Ahammed

A Data-Driven Framework for Rotational Grazing Management Based on Mixed-Effects Modeling of Reindeer Pastures 352
Svetlana Pchelintseva, Dmitry Evsyukov, Boris Potapov, Elena Suprun

Ensemble Learning for Hourly Energy Forecasting in PV-Integrated Research Buildings: Temporal Validation, VIF Optimization, and Peak Demand Classification 358
Yogesh Ramaswamy, Raghava M S, Vasamsetti Venkata Lakshmi, Sudheer Reddy. J Akhil Venkata Sai Madineni, Vikas Marakini, Syed Riyaz Ahammed

Eco-Efficiency Profiling of Artificial Intelligence Models: A Cluster-Based Analysis of Energy Consumption, CO_2 Emissions, and Performance Trade-offs 365
Umit Senturk, Onder Eyecioglu

Consensus-Based Anomaly Detection for PV-Integrated Building Energy Management: Seasonal Characterisation and Severity Stratification 372
Yogesh Ramaswamy, Narendra Chennupati, Harish K, Rameshkumar T, S. Sri Nandhini Kowsalya Pruthvi Raj Seknametla

Voltage-Based Islanding Control for Grid-Connected RES for Grid Stability Using Deep Learning 379
Remon Das, Akash Debnath, Ushna Das

Physics-Driven Graph Attention Network for Microgrids AC-OPF Considering Distributed Generator Availability 384
Amirhossein Adib, Onyema S. Nduka

Multi-Agent Deep Reinforcement Learning for Distributed Energy Management and Demand Response in Residential Microgrids 390
Mahesh Kumar N, Sampath Kumar S, Ahmed Ali

Reward-Augmented Deep Reinforcement Learning for Robust Battery Dispatch Optimization in Off-Grid Photovoltaic Microgrids 398
Naveen Vemulapalli, Narendra Kumar, Ahmed Ali

Deep Learning-Based Detection of Data Integrity Cyber-Attacks on SCADA Load Data in Smart Grids 403
Narendra Kumar, B. Mallikarjuna, Ahmed Ali

Predictive Energy Management of Standalone Solar Microgrids Using Machine Learning and Battery Stress Analysis 409
B. Mallikarjuna, Narendra Kumar, Ahmed Ali

Data-Driven Autonomous Voltage Control in Off-Grid PV Microgrids Using Soft Actor-Critic Reinforcement Learning 418
Nayana Shetty, Nandini S Patil, Ahmed Ali

Integrated Machine Learning–Based SOC Prediction, Regenerative Energy Optimization, and Battery Health Assessment for Urban Logistics Electric Vehicles 423
Mavuri Arunakumari, Parvathi, Ahmed Ali, Ramakrishna S S Nuvvula

Tree-Based Ensemble Forecasting of PV Generation, Load Demand, and Battery SOC in Tropical Island Microgrids: A Multi-Horizon Cross-Season Evaluation 431
Yogesh Ramaswamy, Ramakrishna S S Nuvvula, Sangeetha G, R. Sreedhar, Vinay Kulkarni Sushma Sunkollu Nagaraj

Real-Time Hybrid Particle Swarm and Grey Wolf Optimization for PV Curtailment Reduction and Battery Longevity in Isolated PV-Battery Microgrids 438
Kathi Avinash, Raghavendra P, Ahmed Ali

A New Integral LQR based Primary Feedback Controller Design with Improved Power Quality for Multi-DGs based Microgrid Operation 443
Prakash Chandra Patra, Pratap Kumar Panigrahi, Niranjan Nayak, Snehamoy Dhar

Investigation of the Effects of Photovoltaic Panel Cooling Using Hydroelectric Power Plant Discharge Water on Energy Production and System Efficiency 449
Burak Celik, Onur Akar

Design and Simulation of Double Quantum Well AlxGa1-xAs/AlAs ASPAT Diode 453
Bashar H. Sultan, Khalid K. Mohammed

Design and Simulation of QW-ASPAT Diode with Different Barrier Dimensions 459
Bashar H.Sultan, Khalid K. Mohammed

Performance Assessment of PV–Wind Hybrid Energy System with Grid Integration 464
Thamatapu Eswara Rao, Markala Karthik, Ramakrishna S S Nuvvula, Ahmed Ali

False Data Injection Attack Detection in Smart Grid State Estimation Using State Vector Residual Analysis and Random Forest Classification 469
K Durga Syam Prasad, Sampath Kumar S, Anil Guntupalli, Ranjith Kumar Peddi, Naveen Vemulapalli Syed Riyaz Ahammed

Federated Deep Learning for Decentralized Cybersecurity in Smart Grid Communication Networks 475
Venkata Anand, Santhosha Kumar A, Naveen Vemulapalli, Raghunath Loganathan, Anil Guntupalli Syed Riyaz Ahammed

Graph Neural Network-Enhanced Reinforcement Learning for Large-Scale Electric Vehicle Charging Coordination in Urban Grids 482
K Durga Syam Prasad, S. Satheesh, B Swarna, S L Sreedevi, Chaithra S, Bachina Harish Babu

TFT-PPO: Proactive Power Quality Control for EV Fast-Charging Clusters via Transformer-Based Demand Forecasting and Reinforcement Learning 487
Kollatu Sravanthi, Sandhya N, Kevin Patel, R Rajeswari, Ramakrishna S S Nuvvula, Bachina Harish Babu

Data-Driven Framework for Real-Time Carbon Accounting and Sustainability Monitoring in Off-Grid Urban Residential Microgrids 493
Mavuri Arunakumari, Rajesh Mattaparthi, Sriraman Kothuri, V Dharma Prakash, Mahalakshmi V E. Shiva Prasad

Multi-Source Feature Integration for Short-Term Load Forecasting in Off-Grid Residential Microgrids Using Stacked LSTM Networks 501
Kathi Avinash, Venkata Akhilesh Ranga Reddy, D Manohari, Sriraman Kothuri, R Geetha, B Swarna

Seasonal Generalization of Tree-Based Machine Learning for Multi-Horizon PV, Load, and Battery Forecasting in Tropical Island Microgrids 506
Naveen Vemulapalli, M K Vijay Kumar, Anil Kumar, Roopa M, Sriraman Kothuri, E. Shiva prasad

A Machine Learning-Augmented Penalty Difference Approach for Transportation Cost Optimization 511
Ramya Nemani, Indira Singuluri, V.Sree Ramani, Anil Guntupalli, Uthej Mopathi Akhil Venkata Sai Madineni

Automated AI-Driven Reduced-Latency Fraud Detection for Secure Smart Metering and Energy Billing Systems 517
Koushal Majeti

Physics-Informed AI Techniques for Power Electronic Converter Reliability Assessment 526
Venkatesh Daggupati, Ch. Naga Sai Kalyan

IoT-Enabled Power Electronic Monitoring System for Next-Generation Energy Networks 533
Venkatesh Daggupati, Ch. Naga Sai Kalyan

Sustainability-Oriented Framework for Design, Planning and Operations of Isolated Microgrids in the Era of Uncertainties 540
Onyema Nduka, Amirhossein Adib

Grid-Interactive Fast EV Charging Station Based on a 12-Pulse Active Rectifier for Smart Grid Applications 546
Mohamad Taha, Ali M. A. Almaktook, Anges A. Aminou Moussavou, Kareem Halablab

Smart Integration of Electric Vehicle Charging Infrastructure within Hybrid Renewable Microgrids 553
Marina Nikolaevna Stepantsevich, Svetlana Vladislavovna Kukartseva, Dmitry Yuryevich Evsyukov Svetlana Vyacheslavovna Pchelintseva

Cybersecurity Challenges in Smart Grid Infrastructure: Threat Landscape, Protection Strategies, and Resilience Frameworks 557
Svetlana Vladislavovna Kukartseva, Vadim Sergeevich Tynchenko, Anastasia Valentinovna Babkina Mikhail Valentinovich Zhuravlev

Smart Grid Architecture and Functionalities and Developments 561
Moses Jeremiah Barasa Kabeyi, Oludolapo Akanni Olanrewaju

Distributed and Decentralised Energy Resources: Sources and Their Levelized Costs 574
Moses Jeremiah Barasa Kabeyi, Oludolapo Akanni Olanrewaju

Conversion Technologies for Decentralized Generation and Their Payback Ratio 580
Moses Jeremiah Barasa Kabeyi, Oludolapo Akanni Olanrewaju

Approaches in Smart Grid Integration of Renewable Energy Resources 587
Moses Jeremiah Barasa Kabeyi, Oludolapo Akanni Olanrewaju

Regulatory Frameworks for Risk Management of Generative AI Deployment in Automated Smart Grid Dispatch Systems 599
P.D. Cherniaeva, V. V. Kukartsev, A.S. Prudkiy, I.A. Vakhrusheva

Application of Machine Learning Methods for Energy Harvesting Forecasting by Biomechanical Sensor Networks in Smart Clothing Concept 605
M.V. Zhuravlev, P.D. Cherniaeva, S.O. Kurashkin, K.S. Muzalev

Supertwisting Sliding Mode based MPPT and Adaptive SPWM for PV-Fuel Cell Hybrid System with 2-level Boost Converter 610
Ruhi Zafer Caglayan, Korhan Kayisli, Fırat Hardalac, Mariacristina Roscia

Smart Grid Key Products Core Services, Main Functionalities and Key Capabilities 616
Moses Jeremiah Barasa Kabeyi, Oludolapo Akanni Olanrewaju

Spatio-Temporal Transformer Networks for Converter-Dominated Power System Intelligence 635
Siva Naga Sai Jammula, Venkatesh Daggupati, Ch. Naga Sai Kalyan

Multi-Agent Deep Learning for Distributed Converter Coordination and Frequency Stabilization 641
Siva Naga Sai Jammula, Venkatesh Daggupati, Veera Venkata Narendra Sannamuri

Deep Learning-Based Cybersecurity-Enabled Fault and Attack Detection in Cyber-Physical Energy Systems: A Systematic Review 648
Remon Das, Akash Debnath, Abu Shufian

Optimization of Battery Energy Storage System Capacity for Peak Load Shaving in Distribution Networks Based on Real Data 653
Olesya O. Oleynikova, Ilya A. Panfilov, Natalya V. Sergeyeva, Ekaterina Fedorovna Malykha

Application of time series clustering algorithms for consumer segmentation in smart grids to optimize demand response 657
Olga S. Puchkova, Olesya O. Oleynikova, Ilya A. Panfilov, Vasiliy V. Toroptsev

Wireless Power Transmitter for Rare-Earth-Free Wound-Field Synchronous Motors in Hydrogen UAVs 661
Adrian-Augustin Pop, Ferencz Havadi, Iana Potinga

State of Charge Estimation of Lithium-Ion Battery using an Extended Kalman Filter optimized by The Octopus Optimization Algorithm 667
Kezban Koç Savaş, Mehmet Demirtaş, İpek Çetinbaş

Digital Twin for Self-Healing Management of Smart Grid Segments with HVDC Links 673
V. A. Zhezherya, A. S. Prudkii, I. A. Vakhrusheva, S. O. Kurashkin

Off-Grid Hybrid Microgrid Sizing Optimization Using The Bezier Curve Optimization Algorithm 678
Aslı Kurt, Mehmet Demirtaş, İpek Çetinbaş

Deep Learning-Based Anomaly Detection in Smart Grids for Real-Time Cyber-Physical Security and Operational Stability 684
S.A. Shiryaeva, B. V. Potapov, D. Y. Evsyukov, O. S. Ermolaeva

The Effect of Renewable Energy Penetration on Supply Security Risk and Carbon Emissions: A Comparative Two-Scenario Model 689
Mehmet Rida Tur, Halil İbrahim Bülbül

The Strait of Hormuz as a Critical Energy Corridor: A Technical Review of Electricity Generation, Fuel Supply, and Energy Supply Security 694
Mehmet Rida Tur, Ramazan Bayindir

Enhancing Reliability, Efficiency, and Sustainable Energy Management in Modern Power Systems Using Particle Swarm Optimization (PSO)-Based Smart Grid Applications 701
G. Shanmugasundar, R Rajeswari, Shivakumar M., Ahmad Alkhayyat, Preeti Dubey, Parul Madan B. Swarna

HVDC-Enabled Smart Grid Architecture for Long-Distance Renewable Power Transfer and Wide-Area Grid Interconnection 708
G. Shanmugasundar, S. L. Sreedevi, Lakshmi Shree M. S., Ahmad Alkhayyat, Amit Kumar Upadhyay Parul Madan, B. Swarna

A Microgrid-Based Energy Management Framework for Resilient Electric Vehicle Charging Infrastructure in Transportation Systems 714
G. Shanmugasundar, D. Manohari, Shakila D, Ahmad Alkhayyat, Pushpendra Kumar Rajput, Anita Saroj B. Swarna

Hybrid Renewable Energy Integration Framework for Smart Grid Stability, Energy Storage Management and Sustainable Power Delivery 721
G. Shanmugasundar, Anil Kumar, Chaithra S., Ahmad Alkhayyat, Sudeep Varshney, Anita Saroj, B. Swarna

A Simulation-based Evaluation of Smart Grid Applications for Resilient and Energy-Efficient Power Distribution Networks 727
G. Shanmugasundar, Bikki Saritha, V. Dharma Prakash, Ahmad Alkhayyat, Hariprasad T. L., B. Swarna

Grid-Side Communication Requirements for Small Modular Reactors as Ancillary Service Providers in the Smart Grid 734
Ebru Ekici Güngör, Özgün Güngör, Erdal Irmak, Erdal Bekiroğlu

Inertia Contribution of the Akkuyu NPP and Small Modular Reactors to Frequency Stability in the Turkish Power System 740
Ebru Ekici Güngör, Özgün Güngör, Seyfettin Vadi

Power Quality and Harmonic Analysis of Multi-pulse SCR-Based Rectifiers for Industrial-Scale Water Electrolyzers Under Partial-Load Conditions 746
Junior Diamant Ngando Ebba, Joselyn Stephane Menye, Mamadou Baïlo Camara Mamadou Lamine Doumbia, Brayima Dakyo, Joseph Song-Manguelle

A Critical Systematic Review of Analysis Methods Used in Wind Energy Forecasting: From Statistical Approaches to Artificial Intelligence-Supported Hybrid Models 753
Mehmet Keskin, Osman Yıldırım

Integrating Consumer Behavior into EENS-Based Reliability Assessment: Demand Flexibility, Peak Concentration, and Electric Vehicle Charging Scenarios 761
Mehmet Rida Tur, Hafize Nurgul Durmus Senyapar, Ramazan Bayindir, Merve Suvak

Higher-Order Phase-Coupling Typicality for Detecting and Classifying Stealthy False Data Injection Attacks in Smart Grids 770
Mete Kağan Işıklı, Seyfettin Vadi

Electric Vehicle Charging Infrastructure in Türkiye: An Integrated Socio-Technical Framework for Network Readiness, Standards and Energy Justice 776
Hafize Nurgul Durmus Senyapar, Oguz Tasdemir, Ilhami Çolak, Ensar Kilic, Ramazan Bayindir

Concept Level Techno Operational Assessment of a Grid Connected Rooftop PV BESS Inverter System for a 60 Office Building in South England 784
Emad Al-Mahdawi, Christopher Harley