Publications

Performance improvement of the unbalanced voltage compensation in islanded microgrid based on small-signal analysis

Passivity-Based Stabilization of LCL-Type Grid-Connected Inverters via a General Admittance Model

Resilient and Cybersecure Distributed Control of Inverter-Based Islanded Microgrids

Mode-triggered droop method for the decentralized energy management of an islanded hybrid PV/hydrogen/battery DC microgrid
Han, Y., Yang, H., Li, Q., Chen, W., Zare, F. & Guerrero, J. M., 15 May 2020, In : Energy. 199, 117441.

Coupling effect analysis and control for gridconnected multi-microgrid clusters

Optimal allocation for combined heat and power system with respect to maximum allowable capacity for reduced losses and improved voltage profile and reliability of microgrids considering loading condition

IoT-enabled Microgrid for Intelligent Energy-aware Buildings: A Novel Hierarchical Self-consumption Scheme with Renewables

Cascaded Multilevel PV Inverter with Improved Harmonic Performance During Power Imbalance Between Power Cells
New hybrid-microgrid topology using a bidirectional interleaved converter as a robust power interface operating in grid-connected and islanded modes

Adaptive Reference Trajectory for Power Quality Enhancement in Three-Phase Four-Wire Standalone Power Supply Systems with Nonlinear and Unbalanced Loads

Improved topology of high voltage gain DC-DC converter with boost stages

Microgrid transactive energy: Review, architectures, distributed ledger technologies, and market analysis

Performance Analysis of 4-Leg IB APF for 3-Phase 4-Wire System with Renewable Energy Interface Fuzzy Control DC-Bus Capacitor

Power sharing control strategy of parallel inverters in AC microgrid using improved reverse droop control


Distributed consensus-based fault tolerant control of islanded microgrids

Modeling, Control and Experimental Verification of a DFIG with a Series-Grid-Side Converter with Voltage Sag, Unbalance and Distortion Compensation Capabilities

A Hybrid Compensator Configuration for VAR Control and Harmonic Suppression in All-Electric Shipboard Power Systems

An Adaptive Power Sharing Control for Management of DC Microgrids Powered by Fuel Cell and Storage System

A Simple Method for Passivity Enhancement of Current Controlled Grid-Connected Inverters
Blockchain for power systems: Current trends and future applications

Coupling effect analysis and control for grid-connected multi-microgrid clusters

DC Microgrid Protection: A Comprehensive Review

Dual-Input Quasi Z-Source PV Inverter: Dynamic Modeling, Design, and Control

Enhanced Current-Limiting Droop Controller for Grid-Connected Inverters to Guarantee Stability and Maximize Power Injection Under Grid Faults

New Inter and Inner Phase Power Control Method for Cascaded H-Bridge Based on Simplified PWM Strategy

On the Secondary Control Architectures of AC Microgrids: An Overview

Photovoltaic Power Plants in Electrical Distribution Networks: A Review on Their impact and Solutions

Resynchronization Analysis and Improvement of Grid-Connected VSCs During Grid Faults

Stochastic Risk-Constrained Scheduling of Renewable-Powered Autonomous Microgrids with Demand Response Actions: Reliability and Economic Implications

AC Microgrid Small-Signal Modeling: Hierarchical Control Structure Challenges and Solutions

A control scheme for voltage unbalance compensation in an islanded microgrid

A Hybrid Power System Laboratory: Testing Electric and Hybrid Propulsion

Hybrid Energy Storage Systems for Voltage Stabilization in Shipboard Microgrids

More in-depth analytical investigations of two Effective Harmonics Filters for More Electric Marine Vessel Applications
Non-Ideal Proportional Resonant Control for Modular Multilevel Converters under Sub-Module Fault Conditions

Single-phase FLLs Based on Linear Kalman Filter, Limit-Cycle Oscillator, and Complex Band-pass Filter: Analysis and Comparison With a Standard FLL in Grid Applications

Single-phase frequency-locked loops: A comprehensive review

State observer based capacitor-voltage-balancing method for modular multilevel converters without arm-current sensors

A hybrid islanding detection technique for inverter-based distributed generator units

Energy Management System for an Islanded Microgrid with Convex Relaxation

Integration and Decentralized Control of Standalone Solar Home Systems for off-grid Community Applications

Stability analysis and robust damping of multiresonances in distributed-generation-based islanded microgrids

A novel compact dq-reference frame model for inverter-based microgrids

A power calculation algorithm for single-phase droop-operated-inverters considering linear and nonlinear loads HIL- assessed

A Stochastic Bi-Level Decision-Making Framework for a Load-Serving Entity in Day-Ahead and Balancing Markets

Energy scheduling of community microgrid with battery cost using particle swarm optimisation

Finite-Gain Repetitive Controller for Harmonic Sharing Improvement in a VSM Microgrid
Microgrids literature review through a layers structure

Multirate Resonant Controllers for Grid-Connected Inverters with Harmonic Compensation Function

Operation Planning of Standalone Maritime Power Systems Using Particle Swarm Optimization

Overload and short-circuit protection strategy for voltage source inverter-based UPS

Parameter Stability Region Analysis of Islanded Microgrid Based on Bifurcation Theory

Performance Assessment of the RTDS/RSCAD VSC model

Investigation of Nonlinear Droop Control in DC Power Distribution Systems: Load Sharing, Voltage Regulation, Efficiency, and Stability

Modulated Model Predictive Control for Modular Multilevel AC/AC Converter

A Dual-Discrete Model Predictive Control-based MPPT for PV systems

An Evaluation Method for Voltage Dips in a Shipboard Microgrid under Quasi-balanced and Unbalanced Voltage Conditions

Coordinated Primary and Secondary Frequency Support between Microgrid and Weak Grid

Large Photovoltaic Power Plants Integration: A Review of Challenges and Solutions

Model Predictive Control of Bidirectional DC-DC Converters and AC/DC Interlinking Converters - A New Control Method for PV-Wind-Battery Microgrids
Regulatory-framework-embedded energy management system for microgrids: The case study of the Spanish self-consumption scheme

Stability Improvement of Converter-side Current Controlled Grid-Connected Inverters

Control of Hybrid Diesel/PV/Battery/Ultra-Capacitor Systems for Future Shipboard Microgrids

Stochastic Predictive Control of Multi-Microgrid Systems

A GaN-Based Active Power Decoupling Approach for Enhancing the Efficiency and Reliability of Residential PV Microinverters

An enhanced power decoupling control for grid-connected capacitive-coupling inverters

A New Adaptive Virtual Impedance based Fault Current Limiter for Converters

Bumpless optimal control over multi-objective microgrids with mode-dependent controllers

Control method for three-phase grid-connected inverter PV system employing unity power factor (UPF) strategy in microgrid

Coordinated Control of a Hybrid-Electric-Ferry Shipboard Microgrid

Design of Space Microgrid for Manned Lunar Base: Spinning-in Terrestrial Technologies

Double Deadbeat Plus Repetitive Control Scheme for Microgrid System
Dual-loop control strategy applied to the cluster of multiple nanogrids for rural electrification applications

Microgrid Optimal Energy and Reserve Scheduling Considering Frequency Constraints

Modelling and vulnerability analysis of cyber-physical power systems based on interdependent networks

Model Predictive Control of Cascaded Multilevel Battery Assisted Quasi Z-Source PV Inverter with Reduced Computational Effort

Open IoT Infrastructures for In-Home Energy Management and Control

Stability Analysis Considering Dual Physical Constraints of Parallel-connected Virtual Synchronous Generators forming Microgrids

Stochastic Consensus-based Control of μGs with Communication Delays and Noises

Synchronization and Current Sharing for Nonlinear-oscillator-based Inverters in Islanded Three-phase Microgrid

Voltage Quality Improvement in Low Voltage Distribution Networks Using Reactive Power Capability of Single-Phase PV Inverters

A reactive power-voltage control strategy of an AC microgrid based on adaptive virtual impedance

Compromised Controller Design for Current Sharing and Voltage Regulation in DC Microgrid

Direct matrix converter topologies with model predictive current control applied as power interfaces in AC, DC, and hybrid microgrids in islanded and grid-connected modes

Experiments on a real-time energy management system for islanded prosumer microgrids
Fault-tolerant Oriented Hierarchical Control and Configuration of Modular Multilevel Converter for Shipboard MVDC System

Happiness is a hybrid-electric: A diesel-burning boat finds new life with a direct-current microgrid

Optimal Operation of Energy Storage System for a Prosumer Microgrid Considering Economical and Environmental Effects

Producing Bio-electricity and Bio-heat from Urban Sewage Sludge in Turkey Using a Two-Stage Process

A Novel Dynamic Aggregation Modeling Method of Grid-Connected Inverters: Application in Small-Signal Analysis

Mode-dependent seamless transfer control strategy of a microgrid via a small-signal stability approach

Adaptive CDSC-Based open-loop synchronization technique for dynamic response enhancement of active power filters

A Hierarchical Energy Management Strategy for Interconnected Microgrids Considering Uncertainty

Distributed Average Integral Secondary Control for Modular UPS Systems based Microgrids

Distributed noise-resilient economic dispatch strategy for islanded microgrids

Distributed Noise-resilient Secondary Voltage and Frequency Control for Islanded Microgrids

Dual-loop Control Strategy applied to PV/battery based Islanded DC microgrids for Swarm Electrification of Developing Regions

Dynamic Equivalent Modeling for Multi-Microgrid Based on Structure Preservation Method
Energy Harvesting from Harbor Cranes with Flywheel Energy Storage Systems

Hybrid Machine Intelligent SVR Variants for Wind Forecasting and Ramp Events

Resilience Improvement Planning of Power-Water Distribution Systems with Multiple Microgrids Against Hurricanes Using Clean Strategies

An Efficient Decision-Making Approach for Optimal Energy Management of Microgrids

Battery Energy Storage Systems for Mitigating Fluctuations Caused by Pulse Loads and Propulsion Motors in Shipboard Microgrids

DAVIC: A New Distributed Adaptive Virtual Impedance Control for Parallel-Connected Voltage Source Inverters in Modular UPS System

Distributed Control of Low-Voltage Resistive AC Microgrids

Harmonics Mitigation in Cascaded Multilevel PV Inverters During Power Imbalance Between Cells

Modeling and Tuning of Adaptive Complex Current Controller for Three-Phase Grid-Interfaced Power Converters

Modified Secondary-Control-Based Fault Current Limiter for Inverters

Multi-Mode Operation for On-line Uninterruptible Power Supply System

Optimal Operation of an Energy Hub in the Presence of Uncertainties
Power-Heat Generation Sources Planning in Microgrids to Enhance Resilience against Islanding due to Natural Disasters

Power quality and Voltage Stability improvement of Shipboard Power Systems with Non-Linear Loads

Voltage Stabilization: A Critical Step Toward High Photovoltaic Penetration

A Low-Computational High-Performance Model Predictive Control of Single Phase Battery Assisted Quasi Z-Source PV Inverters

An Effective Solution for Regeneration Protection in Uninterruptible Power Supply

An optimized direct control method applied to multilevel inverter for microgrid power quality enhancement

Decentralized optimal frequency control in autonomous microgrids

Distributed Strategy for Optimal Dispatch of Unbalanced Three-Phase Islanded Microgrids

Dynamic Pricing for Microgrids Energy Transaction in Blockchain-based Ecosystem

Stability Analysis of Primary Plug-and-Play and Secondary Leader-based Controllers for DC Microgrid Clusters

VICINITY platform-based load scheduling method by considering smart parking and smart appliance

Virtual Positive-Damping Reshaped Impedance Stability Control Method for the Offshore MVDC System
Advanced Single-Phase DSC-Based PLLs

A Cost-Effective and Low-Complexity Predictive Control for Matrix Converters under Unbalanced Grid Voltage Conditions

Analysis and Comparison of Notch Filter and Capacitor Voltage Feedforward Active Damping Techniques for LCL Grid-Connected Converters

Distributed coordination control for suppressing circulating current in parallel inverters of islanded microgrid

Energy Management Considering Unknown Dynamics Based on Extremum Seeking Control and Particle Swarm Optimization

Fault location in microgrids: A communication-based high-frequency impedance approach

Transient Response Analysis of Inverter-based Microgrids under Unbalanced Conditions using Dynamic Phasor Model

An Optimal Market-Oriented Demand Response Model for Price-Responsive Residential Consumers

Adaptive protection combined with machine learning for microgrids

A Decentralized Robust Model for Optimal Operation of Distribution Companies with Private Microgrids

A New Tuning Method of Multi-Resonant Current Controllers for Grid-Connected Voltage Source Converters

A novel Decoupled Trigonometric Saturated droop controller for power sharing in islanded low-voltage microgrids

A Novel Model Predictive Control Strategy to Eliminate Zero-Sequence Circulating Current in Paralleled Three-Level Inverters
A robust design strategy for resonant controllers tuned beyond the LCL filter resonance frequency

Distributed Secondary Control and Management of Islanded Microgrids via Dynamic Weights

Guest Editorial Special Section on Energy Internet

Multiple second-order generalized integrators based comb filter for fast selective harmonic extraction

Performance assessment of shooting methods using parallel cloud computing

Real-Time Supervisory Control for Power Quality Improvement of Multi-Area Microgrids

Review on microgrids protection

Smart Inverters for Microgrid Applications: A Review

Stability Analysis for the Grid-Connected Single-Phase Asymmetrical Cascaded Multilevel Inverter with SRF-PI Current Control under Weak Grid Conditions

A Novel Approach to Neighborhood Fair Energy Trading in a Distribution Network of Multiple Microgrid Clusters

A Currentless Sorting and Selection based Capacitor-Voltage-Balancing Method for Modular Multilevel Converters

A Decentralized Control Architecture applied to DC Nanogrid Clusters for Rural Electrification in Developing Regions

A Nonlinear, Bounded and Lipchitz Continuous Distributed Active Power Sharing Control Method for Islanded AC Microgrids
Input-Admittance Passivity Compliance for Grid-Connected Converters With an LCL Filter

Power Flow Modeling of Islanded AC Microgrids with Hierarchical Control

Power System Real-Time Emulation: A Practical Virtual Instrumentation to Complete Electric Power System Modeling

Stochastic Risk-Constrained Decision-making Approach for a Retailer in a Competitive Environment with Flexible Demand Side Resources

Cloud-fog architecture based energy management and decision-making for next-generation distribution network with prosumers and internet of things devices

A Multi-Market-Driven Approach to Energy Scheduling of Smart Microgrids in Distribution Networks

Effect of phase-locked loop on small-signal perturbation modelling and stability analysis for three-phase LCL-type inverter connected to weak grid

A Study on Three-Phase FLLs

Direct harmonic voltage control strategy of shunt active power filters suitable for microgrid applications

Output Feedback Sliding Mode Control of PEM EL-IBC System for Hydrogen Production

Power Quality Assessment in Shipboard Microgrids under Unbalanced and Harmonic AC Bus Voltage

PQ Theory-Based Control of Single-Stage V2G Three-Phase BEV Charger for High-Voltage Battery

A communication-free economical-sharing scheme for cascaded-type microgrids
A Consensus-Based Cooperative Control of PEV Battery and PV Active Power Curtailment for Voltage Regulation in Distribution Networks

A coordinated control of hybrid ac/dc microgrids with PV-wind-battery under variable generation and load conditions

Control design, stability analysis and experimental validation of new application of an interleaved converter operating as a power interface in hybrid microgrids

Design and analysis of a transformerless STATCOM based on hybrid cascaded multilevel converter

Dynamic Characteristics Analysis and Stabilization of PV-Based Multiple Microgrid Clusters

Extended-Optimal-Power-Flow-Based Hierarchical Control for Islanded AC Microgrids

Harmonic Current Suppression Strategy for Grid-Connected PWM Converters with LCL Filters

Modeling and Stability Assessment of Single-Phase Grid Synchronization Techniques: Linear Time-Periodic versus Linear Time-Invariant Frameworks

Optimal simultaneous day-ahead scheduling and hourly reconfiguration of distribution systems considering responsive loads

Sequence-Impedance-Based Stability Comparison between VSGs and Traditional Grid-Connected Inverters

Small-Signal Stability Analysis and Optimal Parameters Design of Microgrid Clusters

Optimal Probabilistic Planning of Passive Harmonic Filters in Distribution Networks with High Penetration of Photovoltaic Generation

Steady-State Linear Kalman Filter-based PLLs for Power Applications: A Second Look
A Distributed Control Strategy for Islanded Single-Phase Microgrids with Hybrid Energy Storage Systems Based on Power Line Signaling

A Flexible Power Control Strategy for Hybrid AC/DC Zones of Shipboard Power System with Distributed Energy Storages

Cooperation of voltage controlled active power filter with grid-connected DGs in microgrid

Dynamic Assessment of COTS Converters-based DC Integrated Power Systems in Electric Ships

Elimination of zero sequence circulating currents in paralleled three-level T-type inverters with a model predictive control strategy

Energy Management of CHP-Based Microgrid with Thermal Storage for Reducing Wind Curtailment

Energy Management Strategy for Grid-tied Microgrids considering the Energy Storage Efficiency

Energy Storage Systems for Shipboard Microgrids: A Review

Modeling, Tuning, and Performance Comparison of Second-Order-Generalized-Integrator-based FLLs

Optimal Operational Scheduling of Smart Microgrids Considering Hourly Reconfiguration

Optimal Scheduling and Economic Analysis of Hybrid Electric Vehicles in a Microgrid

Power Quality Enhancement and Power Management of a Multi-Functional Interfacing Inverter for PV and Battery Energy Storage System

Robust Grid-Current-Feedback Resonance Suppression Method for LCL-Type Grid-Connected Inverter Connected to Weak Grid
Scalable Solar dc Microgrids: On the Path to Revolutionizing the Electrification Architecture of Developing Communities

Triangle Carrier-Based DPWM for Three-Level NPC Inverters

提高船舶微电网艏侧推进器运行能效的控制策略

Full Discrete Modeling, Controller Design and Sensitivity Analysis for High Performance Grid-Forming Converters in Islanded Microgrids

A Model Predictive Control for Renewable Energy Based AC Microgrids without Any PID Regulators

Autonomous Control of Current- and Voltage-Controlled DG Interface Inverters for Reactive Power Sharing and Harmonics Compensation in Islanded Microgrids

Distributed Hierarchical Control of AC Microgrid Operating in Grid-Connected, Islanded and Their Transition Modes

Passivity-based coordinated control for islanded AC microgrid

Optimal Passive Filter Planning in Distribution Networks with Nonlinear Loads and Photovoltaic Systems

A Deviation Elimination Control Based on Autonomous Current-Sharing Controller for the Parallel-Connected Inverters in AC Microgrids

A Synchronous-Reference-Frame I-V Droop Control Method for Parallel-Connected Inverters

Integrated Expansion Planning of Gas-Electricity System: A Case Study in Iran

A Decentralized Model for Coordinated Operation of Distribution Network and EV Aggregators
Microgrids Technologies in Future Seaports

Optimal Overcurrent Relay Coordination in Presence of Inverter-based Wind Farms and Electrical Energy Storage Devices

Scheduling of Power Generation in Hybrid Shipboard Microgrids with Energy Storage Systems

Stochastic Predictive Control of Multi-Microgrid Systems

A comprehensive control system for multi-parallel grid-connected inverters with LCL filter in weak grid condition

A Direct Maximum Power Point Tracking Method for Single-Phase Grid-Connected PV Inverters

A hierarchical multilayered-based protection structure for meshed microgrids

A novel compensation current control method for grid-connected PV inverter to improve power quality in micro-grid

An overview of power quality enhancement techniques applied to distributed generation in electrical distribution networks

A Reduced-Order Enhanced State Observer Control of DC-DC Buck Converter

A reduced-switching-frequency modulation method for hybrid MMCs under over-modulation conditions

A Voltage Modulated DPC Approach for Three-Phase PWM Rectifier
Energy and Frequency Hierarchical Management System Using Information Gap Decision Theory for Islanded Microgrids

Improved Direct Power Control for Grid-Connected Voltage Source Converters

Modeling and Experimental Validation of an Islanded No-Inertia Microgrid Site

Modeling of complex resonances in islanded Microgrids

Research On Variable-Length Transfer Delay and Delayed-Signal-Cancellation-Based PLLs

Smart transactive energy framework in grid-connected multiple home microgrids under independent and coalition operations

Optimal placement, sizing, and daily charge/discharge of battery energy storage in low voltage distribution network with high photovoltaic penetration

Power management optimization of hybrid power systems in electric ferries

Optimal Decision-Making Strategy of an Electric Vehicle Aggregator in Short-Term Electricity Markets

A Dynamic Consensus Algorithm to Adjust Virtual Impedance Loops for Discharge Rate Balancing of AC Microgrid Energy Storage Units

A microgrid cluster structure and its autonomous coordination control strategy

Distributed Coordination of Islanded Microgrid Clusters Using a Two-layer Intermittent Communication Network

Secondary restoration control of islanded microgrids with a decentralized event-triggered strategy
A Multi-Attribute Expansion Planning Model for Integrated Gas–Electricity System

An Alternative Realization of Droop Control and Virtual Impedance for Paralleled Converters in DC Microgrid

Analysis of Washout Filter-Based Power Sharing Strategy - An Equivalent Secondary Controller for Islanded Microgrid without LBC Lines

A New Communication-less Harmonic-based Protection Architecture for Meshed Microgrids

A Novel Grid-connected Harmonic Current Suppression Control for Autonomous Current Sharing Controller-based AC Microgrids

Cyber Physical Energy Systems Modules for Power Sharing Controllers in Inverter Based Microgrids

Dynamic-Phasor Modeling and Transient Analysis of Inverter-Based Microgrid under Unbalanced and Harmonic Condition

Hybrid Mixed-Integer Non-Linear Programming Approach for Directional Over-Current Relay Coordination

Inverter-Current-Feedback Resonance-Suppression Method for LCL-Type DG System to Reduce Resonance-Frequency Offset and Grid-Inductance Effect

Modeling and controls of flywheel energy storage systems for energy harvesting from harbor electrical cranes

Modeling and stability analysis of CCIs- and VCIs-based hybrid microgrids operating in grid-connected modes

Model predictive-Based direct battery control in PV fed Quasi Z-source inverters
Multilevel DC-link converter-based photovoltaic system with integrated energy storage

Novel model predictive control method to eliminate common-mode voltage for three-level T-type inverters considering dead-time effects

Robust AC Voltage Controller with Harmonic Elimination for Stand-Alone and Weak-Grid-Connected Operation

Scheduling of power generations for energy saving in hybrid AC/DC shipboard microgrids

Security-Constrained Unit Commitment in AC Microgrids Considering Stochastic Price-Based Demand Response and Renewable Generation

Stable current sharing and voltage balancing in DC microgrids: A consensus-based secondary control layer

A cost-effective decentralized control for AC-stacked photovoltaic inverters

Adaptive Control Design for Autonomous Operation of Multiple Energy Storage Systems in Power Smoothing Applications

A New Harmonic-based Protection structure for Meshed Microgrids

A Unified Voltage Harmonic Control Strategy for Coordinated Compensation with VCM and CCM Converters

Discrete Model-Predictive-Control-Based Maximum Power Point Tracking for PV Systems: Overview and Evaluation

Improved P-/fQ-V and P-V/Q-f droop controllers for parallel distributed generation inverters in AC microgrid

MAS-based Distributed Coordinated Control and Optimization in Microgrid and Microgrid Clusters: A Comprehensive Overview
Multiple-Complex Coefficient-Filter-Based PLL for Improving the Performance of Shunt Active Power Filter under Adverse Grid Conditions

Optimal Operation Management of a Regional Network of Microgrids Based On Chance-Constrained Model Predictive Control

Active Power Quality Improvement Strategy for Grid-connected Microgrid Based on Hierarchical Control

A model predictive control strategy of PV-Battery microgrid under variable power generations and load conditions

A Multi-Functional Fully Distributed Control Framework for AC Microgrids

An Open-Loop Grid Synchronization Approach for Single-Phase Applications

A Novel Distributed Secondary Coordination Control Approach for Islanded Microgrids

A Stochastic Model Predictive Control Approach for Joint Operational Scheduling and Hourly Reconfiguration of Distribution Systems

Cooperative Control of Multi-Master-Slave Islanded Microgrid with Power Quality Enhancement Based on Conservative Power Theory

Distributed Control of Battery Energy Storage Systems for Voltage Regulation in Distribution Networks with High PV Penetration

Distributed Nonlinear Control with Event-Triggered Communication to Achieve Current-Sharing and Voltage Regulation in DC Microgrids

Microgrids: A review of technologies, key drivers, and outstanding issues

Model predictive control methods of leakage current elimination for a three-level T-type transformerless PV inverter
Performance improvement of shunt active power filter based on non-linear least-square approach

Stability Analysis of Digital-Controlled Single-Phase Inverter with Synchronous Reference Frame Voltage Control

Primary Control Design Based on Capacity Curves for Inverter-Based Microgrids

AC Ship Microgrids: Control and power management optimization

Adaptive Distributed EMS for Small Clusters of Resilient LVDC Microgrids

A Leader-Follower Approach to Gas-Electricity Expansion Planning Problem

A Novel Coordinated Control of Renewable Energy Sources and Energy Storage System in Islanded Microgrid

A simple approach to enhance the performance of complex-coefficient filter-based PLL in grid-connected applications

Dealing with Uncertainty in PV-Powered Microgrids: An Optimal Corrective Approach

Designing high-order power-source synchronous current converters for islanded and grid-connected microgrids


Optimal siting and sizing of DG units for a MV network going through voltage transition

Plug-and-Play Voltage/Current Stabilization DC Microgrid Clusters with Grid-Forming/Feeding Converters
Real-Time optimal scheduling for prosumers resilient to regulatory changes

Stochastic Frequency-Security Constrained Scheduling of a Microgrid Considering Price-driven Demand Response

A communication-free decentralized control for grid-connected cascaded pv inverters

A Decentralized Current-Sharing Controller Endows Fast Transient Response to Parallel DC-DC Converters

An Approach for the Emulation of DC Grid Admittances: Implementation on a Buck Converter

A Voltage Feedback Based Harmonic Compensation Strategy for Current-Controlled Converters

Controller design and stability analysis of grid connected DC microgrid

DC-Link Protection and Control in Modular Uninterruptible Power Supply

Design and Implementation of Single-Phase Asymmetric Multilevel STATCOM

Finite-gain-current repetitive controller for synchronverters with harmonic-sharing capabilities

Internet of Things for Modern Energy Systems: State-of-the-Art, Challenges, and Open Issues

Island operation capability in the Colombian electrical market: a promising ancillary service of distributed energy resources

Phase Compensated Reduced Order Generalized Integrators for Grid-Tied VSCs with Harmonics Compensation Capability
Power coordinated control method with frequency support capability for hybrid single/three-phase microgrid

Power distribution system improvement planning under hurricanes based on a new resilience index

Transient Monitoring Function–Based Fault Detection for Inverter-Interfaced Microgrids

Virtual-Impedance-Based Fault Current Limiters for Inverter Dominated AC Microgrids

Evaluation of Reliability in Risk-Constrained Scheduling of Autonomous Microgrids with Demand Response and Renewable Resources

An Economic Customer-Oriented Demand Response Model in Electricity Markets

Matrix pencil method-based reference current generation for shunt active power filters

A novel quasi-master-slave control frame for PV-storage independent microgrid

Boundary detection and enhancement strategy for power system bus bar stabilization: investigation under fault conditions for islanding operation

Distributed secondary and tertiary controls for I-V droop-controlled-paralleled DC-DC converters

Low-voltage ride-through of a droop-based three-phase four-wire grid-connected microgrid

Optimal Scheduling of Distributed Energy Resources and Responsive Loads in Islanded Microgrids Considering Voltage and Frequency Security Constraints

Power Quality Assessment in Real Shipboard Microgrid Systems under Unbalanced and Harmonic AC Bus Voltage
Ripple Mitigation with Improved Line-Load Transients Response in a Two-Stage DC-DC-AC Converter: Adaptive SMC Approach

Stability analysis of DC microgrids with constant power load under distributed control methods

基于分层控制的微电网并网谐波电流主动抑制控制策略

A Communication-less Distributed Control Architecture for Islanded Microgrids with Renewable Generation and Storage

Adaptive synchronization of grid-connected three-phase inverters by using virtual oscillator control

An Adaptive Resonant Regulator for Single-phase Grid-Tied VSCs

An MPC Based ESS Control Method for PV Power Smoothing Applications


Harmonic Issues Assessment on PWM VSC-Based Controlled Microgrids using Newton Methods

Morphological PLL for potential applications on renewable energy

Multi-mode operations for on-line uninterruptible power supply

Online Energy Management Systems for Microgrids: Experimental Validation and Assessment Framework

Two-degree-of-freedom admittance-type droop control for plug-and-play DC microgrid
An Enhanced State Observer for DC-Link Voltage Control of Three-Phase AC/DC Converters

An improved power control strategy for hybrid AC-DC microgrids

A PLL-Based Controller for Three-Phase Grid-Connected Power Converters

Coordinated Control of Multifunctional Inverters for Voltage Support and Harmonic Compensation in a Grid-Connected Microgrid

Hierarchical Control Design for Shipboard Power System with DC Distribution and Energy Storage aboard Future More-Electric Ships

Optimal Sizing and Performance Evaluation of a Renewable Energy Based Microgrid in Future Seaports

A Nonadaptive Window-Based PLL for Single-Phase Applications

Flat tie-line power scheduling control of grid-connected hybrid microgrids

Modeling and design of a multivariable control system for multi-paralleled grid-connected inverters with LCL filter

New strategy for eliminating zero-sequence circulating current between parallel operating three-level NPC voltage source inverters

Stabilizing plug-and-play regulators and secondary coordinated control for AC islanded microgrids with bus-connected topology

Distributed Averaging Control for Voltage Regulation and Current Sharing in DC Microgrids: Modelling and Experimental Validation
Optimal Decision Making Framework of an Electric Vehicle Aggregator in Future and Pool markets

Multi-time-scales energy management for grid-on multi-layer microgrids cluster

Energy Production: A Comparison of Forecasting Methods using the Polynomial Curve Fitting and Linear Regression

Guest Editorial: Flexible Operation and Control for Medium Voltage Direct-Current (MVDC) Grid

Plug-and-Play Design of Current Controllers for Grid-feeding Converters in DC Microgrids

Single-Phase PLLs: A Review of Recent Advances

Stochastic Security and Risk-Constrained Scheduling for an Autonomous Microgrid with Demand Response and Renewable Energy Resources

PCC Voltage Power Quality Restoring Strategy Based on the Droop Controlled Grid-connecting Microgrid

Admittance-type RC-mode Droop Control to Introduce Virtual Inertia in DC Microgrids

A proportional harmonic power sharing scheme for hierarchical controlled microgrids considering unequal feeder impedances and nonlinear loads

A Distributed Control Framework for Integrated Photovoltaic-Battery-Based Islanded Microgrids

An Enhanced Instantaneous Circulating Current Control for Reactive power and Harmonic Load Sharing in Islanded Microgrids
Centralized Disturbance Detection in Smart Microgrids With Noisy and Intermittent Synchrophasor Data

Containment and Consensus-Based Distributed Coordination Control to Achieve Bounded Voltage and Precise Reactive Power Sharing in Islanded AC Microgrids

Dynamic Pricing: An Efficient Solution for True Demand Response Enabling

Economic demand response model in liberalised electricity markets with respect to flexibility of consumers

Grid-forming VSC control in four-wire systems with unbalanced nonlinear loads

Grid-tied photovoltaic and battery storage systems with Malaysian electricity tariff: A review on maximum demand shaving

New Metrics for Evaluating Technical Benefits and Risks of DGs Increasing Penetration

Online optimization of a multi-conversion-level DC home microgrid for system efficiency enhancement

Optimization for Customized Power Quality Service in Multibus Microgrids

Power Flow Analysis for Low-Voltage AC and DC Microgrids Considering Droop Control and Virtual Impedance

A Multi-Agent Based Energy Management Solution for Integrated Buildings and Microgrid System

A Multi-Objective Demand Side Management Considering ENS Cost in Smart Grids

An Enhanced Control Scheme for Uninterruptible Power Supply

A novel harmonic current sharing control strategy for parallel-connected inverters
A Power Sharing Method Based on Modified Droop Control for Modular UPS

A Root-Locus Design Methodology Derived from the Impedance/Admittance Stability Formulation and Its Application for LCL Grid-Connected Converters in Wind Turbines

A Secondary-Control Based Fault Current Limiter for Four-Wire Three Phase Inverter-Interfaced DGs

A Stochastic Bi-Level Scheduling Approach for the Participation of EV Aggregators in Competitive Electricity Markets

A unified triangle carrier based PWM strategy for three-phase N-level diode clamped inverters

Constant Power Load Instability Mitigation in DC Shipboard Power Systems Using Negative Series Virtual Inductor Method

Direct harmonic voltage control strategy for shunt active power filter

Discrete-Time Domain Modelling of Voltage Source Inverters in Standalone Applications: Enhancement of Regulators Performance by Means of Smith Predictor

Dynamic Modeling of Networks, Microgrids, and Renewable Sources in the dq0 Reference Frame: A Survey

Flexible Compensation of Voltage and Current Unbalance and Harmonics in Microgrids

Frequency participation by using virtual inertia in wind turbines including energy storage

Generation and Demand Scheduling for a Grid-Connected Hybrid Microgrid Considering Price-based Incentives

Grid Voltage Modulated Control of Grid-Connected Voltage Source Inverters under Unbalanced Grid Conditions
Guest Editorial Special Section on Systems of Power Converters: Design, Modeling, Control, and Implementation

Hierarchical control of a photovoltaic/battery based DC microgrid including electric vehicle wireless charging station

Hybrid Droop Control Strategy Applied to Grid-Supporting Converters in DC Microgrids: Modeling, Design and Analysis

Hybrid Shipboard Microgrids: System Architectures and Energy Management Aspects

Impact of the Voltage Dips in Shipboard Microgrid Power Systems

Hybrid Shipboard Microgrids: System Architectures and Energy Management Aspects

Impact of the Voltage Dips in Shipboard Microgrid Power Systems

Impedance Stability Assessment of Active Damping Strategies for LCL Grid-Connected Converters

Modeling and control of LCL-filtered grid-tied inverters with wide inductance variation

Multiple time-scale optimization scheduling for islanded microgrids including PV, wind turbine, diesel generator and batteries

Optimal Planning and Operation of Hybrid Energy System Supplemented by Storage Devices

Robust Energy Hub Management Using Information Gap Decision Theory

SCADA system for islanded DC microgrids

Second Order Washout filter based Power Sharing Strategy for Uninterruptible Power Supply

Specialized Hierarchical Control Strategy for DC Distribution based Shipboard Microgrids: A combination of emerging DC shipboard power systems and microgrid technologies
The influence of internal current loop on transient response performance of I-V droop controlled paralleled DC-DC converters

Virtual resistance-based control strategy for DC link regeneration protection and current sharing in uninterruptible power supply


A Critical Examination of Frequency-Fixed Second-Order Generalized Integrator-Based Phase-Locked Loops

A Current Limiting Strategy to Improve Fault Ride-Through of Inverter Interfaced Autonomous Microgrids

Analysis and Design of Improved Weighted Average Current Control Strategy for LCL-Type Grid-Connected Inverters

An optimal energy management system for islanded Microgrids based on multi-period artificial bee colony combined with Markov Chain

Customized power quality service provided by converter interfaced microgrids — Voltage harmonics as a study case

Demand Response Load Following of Source and Load Systems

Feedforward control strategy for the state-decoupling Stand-alone UPS with LC output filter

Flexible operation of parallel grid-connecting converters under unbalanced grid voltage

Guest Editorial Special Issue on Structured DC Microgrids

Multigent System-Based Distributed Coordinated Control for Radial DC Microgrid Considering Transmission Time Delays
Performance Evaluation of Type-3 PLLs Under Wide Variation in Input Voltage and Frequency

Review on Control of DC Microgrids and Multiple Microgrid Clusters

Second Ripple Current Suppression by Two Bandpass Filters and Current Sharing Method for Energy Storage Converters in DC Microgrid

An intelligent droop control for improve voltage regulation and equal power sharing in islanded DC microgrids

An optimal power management system for automatic connection of DC and AC resources of hybrid-microgrid systems

A DC Microgrid Coordinated Control Strategy Based on Integrator Current-Sharing

Analysis and Comparison of Modular Railway Power Conditioner for High-Speed Railway Traction System

Angle Stability Analysis for Voltage-Controlled Converters

Decentralized Method for Load Sharing and Power Management in a Hybrid Single/Three-Phase-Islanded Microgrid Consisting of Hybrid Source PV/Battery Units

Efficient Energy Management for a Grid-Tied Residential Microgrid

A Circulating-Current Suppression Method for Parallel-Connected Voltage-Source Inverters With Common DC and AC Buses

A GPS-Based Control Framework for Accurate Current Sharing and Power Quality Improvement in Microgrids
An Islanding Detection Method by Using Frequency Positive Feedback Based on FLL for Single-Phase Microgrid

A Virtual Inertia Control Strategy for DC Microgrids Analogized with Virtual Synchronous Machines

Grid-Connected Inverter for Distributed Generation in Microgrid: Design of Current Control Strategy of Grid-Connected Inverter for Distributed Generation Sources under Nonlinear Load

Improving Frequency Stability Based on Distributed Control of Multiple Load Aggregators

New Perspectives on Droop Control in AC Microgrid

Optimal Scheduling of a Battery-Based Energy Storage System for a Microgrid with High Penetration of Renewable Sources

Optimum power quality service in multi-bus microgrid systems

Plug-and-play control and consensus algorithms for current sharing in DC microgrids

A novel decentralized economic operation in islanded AC microgrids

Active load sharing technique for on-line efficiency optimization in DC microgrids

Adaptive control of energy storage systems for power smoothing applications

An enhanced hierarchical control strategy for the Internet of Things-based home scale microgrid

An Open Virtual Neighbourhood Network to Connect IoT Infrastructures and Smart Objects – VICINITY: IoT enables interoperability as a service
Combined Solar Charging Stations and Energy Storage Units Allocation for Electric Vehicles by Considering Uncertainties

Comparative Admittance-based Analysis for Different Droop Control Approaches in DC Microgrids

Coordinated Active Power Dispatch for a Microgrid via Distributed Lambda Iteration

Economic Power Schedule and Transactive Energy through Intelligent Centralized Energy Management System for DC Residential Distribution System

Effect of placement of droop based generators in distribution network on small signal stability margin and network loss

Guest Editorial Energy Conversion in Next-generation Electric Ships

Hierarchical Delay-Dependent Distributed Coordinated Control for DC Ring-Bus Microgrids

Multirate Fractional-Order Repetitive Control of Shunt Active Power Filter Suitable for Microgrid Applications

Optimal Scheduling of a Multi-Carrier Energy Hub Supplemented By Battery Energy Storage Systems

Optimal Sizing of a Lithium Battery Energy Storage System for Grid-Connected Photovoltaic Systems

Optimization scheduling in intelligent Energy Management System for the DC residential distribution system

Optimizing droop coefficients for minimum cost operation of islanded micro-grids
Potential energy savings by using direct current for residential applications: A Danish household study case

Principle and Control Design of Active Ground-Fault Arc Suppression Device for Full Compensation of Ground Current

Reactive Power Strategy of Cascaded Delta-connected STATCOM Under Asymmetrical Voltage Conditions

Real-Time Energy Management System for a Hybrid AC/DC Residential Microgrid

Single-Phase Phase-Locked Loop Based on Derivative Elements

Using Smart Meters Data for Energy Management Operations and Power Quality Monitoring in a Microgrid

Selective Sharing of Load Current Components Among Parallel Power Electronic Interfaces in Three-phase Four-wire Stand-alone Microgrid

Control Strategies for Islanded Microgrid using Enhanced Hierarchical Control Structure with Multiple Current-Loop Damping Schemes

Decentralized Method for Load Sharing and Power Management in a PV/Battery Hybrid Source Islanded Microgrid

Energy trading and pricing in microgrids with uncertain energy supply: A three-stage hierarchical game approach

High-Order Frequency-Locked Loops: A Critical Analysis

Multiagent-Based Distributed State of Charge Balancing Control for Distributed Energy Storage Units in AC Microgrids

New Integrated Multilevel Converter for Switched Reluctance Motor Drives in Plug-in Hybrid Electric Vehicles with Flexible Energy Conversion

Stochastic analysis of residential micro combined heat and power system

An Adaptive Quadrature Signal Generation Based Single-Phase Phase-Locked Loop for Grid-Connected Applications

A Robot-Soccer-Coordination Inspired Control Architecture Applied to Islanded Microgrids

A Robust and Fast Synchronization Technique for Adverse Grid Conditions

Distributed Secondary Voltage and Frequency Control for Islanded Microgrids with Uncertain Communication Links

Double-Carrier Phase-Disposition Pulse Width Modulation Method for Modular Multi-level Converters

Low-Voltage Ride-Through Operation of Power Converters in Grid-Interactive Microgrids by Using Negative-Sequence Droop Control

Mixed-Integer-Linear-Programming-Based Energy Management System for Hybrid PV-Wind-Battery Microgrids: Modeling, Design, and Experimental Verification

Mixed-Integer-Linear-Programming-Based Energy Management System for Hybrid PV-Wind-Battery Microgrids: Modeling, Design, and Experimental Verification

Multi-Agent System based Event-Triggered Hybrid Controls for High-Security Hybrid Energy Generation Systems

Study of the Effect of Time-Based Rate Demand Response Programs on Stochastic Day-Ahead Energy and Reserve Scheduling in Islanded Residential Microgrids

A generalized discontinuous PWM based neutral point voltage balancing method for three-level NPC voltage source inverter with switching losses reduction
Containment and Consensus-based Distributed Coordination Control for Voltage Bound and Reactive Power Sharing in AC Microgrid

Data-Driven Control for Interlinked AC/DC Microgrids via Model-Free Adaptive Control and Dual-Droop Control

Discharge rate balancing control strategy based on dynamic consensus algorithm for energy storage units in AC microgrids

Distributed cooperative synchronization strategy for multi-bus microgrids

Droop-Free Distributed Control with Event-Triggered Communication in DC Micro-Grid

Economic Dispatch for Operating Cost Minimization under Real Time Pricing in Droop Controlled DC Microgrid

Enhanced fractional-order repetitive control for three-phase active power filter

Frequency-Division Power Sharing and Hierarchical Control Design for DC Shipboard Microgrids with Hybrid Energy Storage Systems

Mitigation of Harmonics in Grid-Connected and Islanded Microgrids via Virtual Admittances and Impedances

Reduced order generalized integrators with phase compensation for three-phase active power filter

Review of Active and Reactive Power Sharing Strategies in Hierarchical Controlled Microgrids
Three-Phase PLLs: A Review of Recent Advances

A GPS-Based Decentralized Control Method for Islanded Microgrids

An improved synchronous reference frame current control strategy for a photovoltaic grid-connected inverter under unbalanced and nonlinear load conditions

Energy modelling towards low carbon development of Beijing in 2030

Principle and Design of a Single-phase Inverter-Based Grounding System for Neutral-to-ground Voltage Compensation in Distribution Networks

Review of Ship Microgrids: System Architectures, Storage Technologies and Power Quality Aspects

An Adaptive Least-Error Squares Filter-Based Phase-Locked Loop for Synchronization and Signal Decomposition Purposes

Cost-Based Droop Schemes for Economic Dispatch in Islanded Microgrids

Grid impedance estimation based hybrid islanding detection method for AC microgrids

Guest Editorial Special Issue on Power Quality in Smart Grids

Hybrid Adaptive/Nonadaptive Delayed Signal Cancellation-Based Phase-Locked Loop

Multi-Level Energy Management and Optimal Control of a Residential DC Microgrid

Networked and Distributed Control Method with Optimal Power Dispatch for Islanded Microgrids

Real-Time Reactive Power Distribution in Microgrids by Dynamic Programing
Thermal Impact Analysis of Circulating Current in High Power Modular Online Uninterruptible Power Supplies Application

Centralized Control Architecture for Coordination of Distributed Renewable Generation and Energy Storage in Islanded AC Microgrids

Containment-based Distributed Coordination Control to Achieve Both Bounded Voltage and Precise Current Sharing in Reverse-Droop-based DC Microgrid

Coordination of EVs Participation for Load Frequency Control in Isolated Microgrids

DC Distribution Systems and Microgrids

Distributed power quality improvement in residential microgrids

Economic power schedule and transactive energy through an intelligent centralized energy management system for a DC residential distribution system

Multi-agent system-based event-triggered hybrid control scheme for energy internet

On the Impact of Wireless Jamming on the Distributed Secondary Microgrid Control

Optimal Design and Operation Management of Battery-Based Energy Storage Systems (BESS) in Microgrids

含不对称负荷的微电网黑启动控制策略研究

A decentralized scalable approach to voltage control of DC islanded microgrids

An advanced current control compensation scheme to improve the microgrid power quality without using dedicated compensation devices
Conventional P-ω/Q-V Droop Control in Highly Resistive Line of Low-Voltage Converter-Based AC Microgrid

Coordinated Secondary Control for Balanced Discharge Rate of Energy Storage System in Islanded AC Microgrids

Robust Droop Control of Grid-Connected Inverters

Robust Two Degrees-of-freedom Single-current Control Strategy for LCL-type Grid-Connected DG System under Grid-Frequency Fluctuation and Grid-impedance Variation

Smart Shipboard Power System Operation and Management

A comprehensive study and analysis of second order harmonic ripple in DC microgrid feeding single phase PWM inverter loads

Adaptive Overcurrent Protection for Microgrids in Extensive Distribution Systems

A Dynamic Consensus Algorithm based Low-Voltage Ride-Through Operation of Power Converters in Grid-Interactive Microgrids

A Modified Droop Control Method for Parallel-Connected Current Source Inverters

An Efficient Multi-objective Approach for Designing of Communication Interfaces in Smart Grids

Cooperative Energy Management for a Cluster of Households Prosumers

Coupling/Tradeoff Analysis and Novel Containment Control for Reactive Power, Output Voltage in Islanded Micro-Grid

Decentralized control for renewable DC Microgrid with composite energy storage system and UC voltage restoration connected to the grid
Design of Energy Storage Control Strategy to Improve the PV System Power Quality

Droop Control with an Adjustable Complex Virtual Impedance Loop based on Cloud Model Theory

Elimination of zero sequence circulating current between parallel operating three-level inverters

Energy Management System Based on Fuzzy fractional order PID Controller for Transient Stability Improvement in Microgrids with Energy Storage

Enhanced current and voltage regulators for stand-alone applications

Four-quadrant bidirectional operation of charging station upgraded with flywheel energy storage system

Harmonic Damping in DG-Penetrated Distribution Network

Linear Active Disturbance Rejection Control for LCL Type Grid-connected Converter

Optimal Adaptive Droop Control for Effective Load Sharing in AC Microgrids

Optimal Planning and Operation Management of a Ship Electrical Power System with Energy Storage System

Small-Signal Analysis of the Microgrid Secondary Control Considering a Communication Time Delay

State Feedback Decoupling with In-Loop Lead Compensator in Stand-Alone VSIs

Variable flow controls of closed system pumps for energy savings in maritime power systems
A Circulating Current Suppression Method for Parallel Connected Voltage-Source-Inverters (VSI) with Common DC and AC Buses

A Control Algorithm for Electric Vehicle Fast Charging Stations Equipped with Flywheel Energy Storage Systems

A Control Architecture to Coordinate Distributed Generators and Active Power Filters Coexisting in a Microgrid

A Hybrid Algorithm for Fault Locating in Looped Microgrids

Analysis and Damping of Harmonic Propagation in DG-Penetrated Distribution Networks

Analysis and distributed control of power flow in DC microgrids to improve system efficiency

Analysis and Improvement of the Energy Management of an Isolated Microgrid in Lencois Island based on a Linear Optimization Approach

Analysis, Design and Implementation of a Quasi-Proportional-Resonant Controller for a Multifunctional Capacitive-Coupling Grid-Connected Inverter

An Embedded Voltage Harmonic Compensation Strategy for Current Controlled DG Interfacing Converters

An Enhanced Power Sharing Scheme for Voltage unbalance and harmonics compensation in an islanded AC microgrid

A Repetitive Control Scheme Aimed at Compensating the 6k + 1 Harmonics for a Three-Phase Hybrid Active Filter

A Riding-through Technique for Seamless Transition between Islanded and Grid-Connected Modes of Droop-Controlled Inverters

A Root-Locus Design Methodology Derived from the Impedance Stability Criterion and Its Application for LCL Grid-Connected Converters
Control Design of VSIs to Enhance Transient Performance in Microgrids

Control Method of Single-phase Inverter Based Grounding System in Distribution Networks

Distributed Coordination of Electric Vehicle Charging in a Community Microgrid Considering Real-Time Price

Effect of state feedback coupling on the transient performance of voltage source inverters with LC filter

Enhanced Power Quality and Minimized Peak Current Control In An Inverter based Microgrid under Unbalanced Grid Faults

Enhancement of Current and Voltage Controllers Performance by Means of Lead Compensation and Anti-Windup for Islanded Microgrids

Harmonic currents Compensator Grid-Connected Inverter at the Microgrid

Implementation issues on the design of current loops based on resonant regulators for isolated microgrids

Macro Protections for Micro Grids: Toward a New Protection Paradigm Subsequent to Distributed Energy Resource Integration

Marginal Generation Technology in the Chinese Power Market towards 2030 Based on Consequential Life Cycle Assessment

Open-Switch Fault Diagnosis and Fault Tolerant for Matrix Converter with Finite Control Set-Model Predictive Control

Operation Cost Minimization of Droop-Controlled AC Microgrids Using Multiagent-Based Distributed Control

Performance Evaluations of Four MAF-Based PLL Algorithms for Grid-Synchronization of Three-Phase Grid-Connected PWM Inverters and DGs

Power Oscillations Damping in DC Microgrids

Small-Signal Modeling of the PVR-Based AD Scheme and Controller Design for Three-Phase Standalone DG System

Voltage and Current Regulators Design of Power Converters in Islanded Microgrids based on State Feedback Decoupling

A Coordinated Control for Photovoltaic Generators and Energy Storages in Low-Voltage AC/DC Hybrid Microgrids under Islanded Mode

Comparative studies on control systems for a two-blade variable-speed wind turbine with a speed exclusion zone

Effect of State Feedback Coupling and System Delays on the Transient Performance of Stand-Alone VSI with LC Output Filter

Fast Reactive Power Sharing, Circulating Current and Resonance Suppression for Parallel Inverters Using Resistive-Capacitive Output Impedance

Model-independent approach for short-term electric load forecasting with guaranteed error convergence

Multiobjective Optimization in Combinatorial Wind Farms System Integration and Resistive SFCL Using Analytical Hierarchy Process

Multiple-Time-Scales Hierarchical Frequency Stability Control Strategy of Medium-Voltage Isolated Microgrid

Microgrid supervisory controllers and energy management systems: A literature review
A control architecture to coordinate distributed generators and active power filters coexisting in a microgrid

A Feed-Forward Control Realizing Fast Response for Three-Branch Interleaved DC-DC Converter in DC Microgrid
Wang, H., Han, M., Yan, W., Zhao, G. & Guerrero, J. M., Jul 2016, In : Energies. 9, 7, 12 p., 529.

A knowledge discovery in databases approach for industrial microgrid planning

Control Architecture for Parallel-Connected Inverters in Uninterruptible Power Systems

Coordinated Demand Response and Distributed Generation Management in Residential Smart Microgrids

Distributed adaptive droop control for DC distribution systems

Evaluation of the hierarchical control of distributed Energy Storage Systems in islanded Microgrids based on Std IEC/ISO 62264

Multiagent-Based Reactive Power Sharing and Control Model for Islanded Microgrids

Tertiary control of voltage unbalance compensation for optimal power quality in islanded microgrids

Virtual Admittance Loop for Voltage Harmonic Compensation in Microgrids

Virtual Admittance Loop for Voltage Harmonic Compensation in Microgrids

A New Way of Controlling Parallel-Connected Inverters by Using Synchronous-Reference-Frame Virtual Impedance Loop: —Part I: Control Principle

A True Open-Loop Synchronization Technique
Distributed Smart Decision-Making for a Multimicrogrid System Based on a Hierarchical Interactive Architecture

Improved grid operation through power smoothing control strategies utilizing dedicated energy storage at an electric vehicle charging station

Modular Online Uninterruptible Power System Plug'n'Play Control and Stability Analysis

Next-Generation Shipboard DC Power System: Introduction Smart Grid and dc Microgrid Technologies into Maritime Electrical Networks

Optimal Real-time Dispatch for Integrated Energy Systems: An Ontology-Based Multi-Agent Approach

Performance Comparison for Virtual Impedance Techniques Used in Droop Controlled Islanded Microgrids

PLL with MAF-Based Prefiltering Stage: Small-Signal Modeling and Performance Enhancement

Shipboard Microgrids: Maritime Islanded Power Systems Technologies

Voltage-Level Selection of Future Two-Level LVdc Distribution Grids: A Compromise Between Grid Compatibility, Safety, and Efficiency

A GPS-Based Control Method for Load Sharing and Power Quality Improvement in Microgrids

Comparative Performance Evaluation of Orthogonal-Signal-Generators-Based Single-Phase PLL Algorithms: A Survey

Comparison of a Synchronous Reference Frame Virtual Impedance-Based Autonomous Current Sharing Control with Conventional Droop Control for Parallel-Connected Inverters
Control architecture for paralleled current-source-inverter (CSI) based uninterruptible power systems (UPS)  

Control strategy of interlinking converters as the key segment of hybrid AC–DC microgrids  

Coordinated Control for Flywheel Energy Storage Matrix Systems for Wind Farm Based on Charging/Discharging Ratio Consensus Algorithms  

DC Microgrids—Part II: A Review of Power Architectures, Applications, and Standardization Issues  

Inducverters: PLL-Less Converters with Auto-Synchronization and Emulated Inertia Capability  

Innovative planning synergies between manufacturing processes and microgrids  

Maritime DC Microgrids - A Combination of Microgrid Technologies and Maritime Onboard Power System for Future Ships  

Modeling and Sensitivity Study of Consensus Algorithm-Based Distributed Hierarchical Control for DC Microgrids  

Modular Plug’n’Play Control Architectures for Three-Phase Inverters in UPS Applications  

Optimal Power Scheduling for an Islanded Hybrid Microgrid  

Resonance Damping and Parameter Design Method for LCL-LC Filter Interfaced Grid-Connected Photovoltaic Inverters  

Review on the integration of photovoltaic renewable energy in developing countries: Special attention to the Lebanese case  

Secondary Control Strategies for Frequency Restoration in Islanded Microgrids with Consideration of Communication Delays  
Small-Signal Modeling, Stability Analysis and Design Optimization of Single-Phase Delay-Based PLLs

The Frequency Fluctuation Impact Analysis for Droop Controlled Grid-connecting Inverter in Microgrid

Uninterruptible power supplies

Convergence Analysis of Distributed Control for Operation Cost Minimization of Droop Controlled DC Microgrid Based on Multiagent

Effects and Analysis of Minimum Pulse Width Limitation on Adaptive DC Voltage Control of Grid Converters

Flexible System Integration and Advanced Hierarchical Control Architectures in the Microgrid Research Laboratory of Aalborg University

Inrush Transient Current Analysis and Suppression of Photovoltaic Grid-Connected Inverters During Voltage Sag

Intelligent DC Homes in Future Sustainable Energy Systems: When efficiency and Intelligence Work Together

Leakage Current Elimination of Four-Leg Inverter for Transformerless Three-Phase PV Systems

Optimal Power Scheduling for a Grid-Connected Hybrid PV-Wind-Battery Microgrid System

Single phase cascaded H5 inverter with leakage current elimination for transformerless photovoltaic system

An Efficient Implementation of Generalized Delayed Signal Cancellation PLL

Droop-free Distributed Control for AC Microgrids
Method for Load Sharing and Power Management in a Hybrid PV/Battery Source Islanded Microgrid

Voltage Unbalance and Harmonic Compensation in Microgrids by Cooperation of Distributed Generators and Active Power Filters

三相LCL 型并联逆变器控制策略与稳定性分析
Shen, P., Han, Y. & Guerrero, J. M., Feb 2016, In : Dianli Dianzi Jishu. 50, 2, p. 66-68

Optimization design of DC micro-grid stability controller based on the autonomous decentralized system

Assessing the Potential of Plug-in Electric Vehicles in Active Distribution Networks

Cooperative Management for a Cluster of Residential Prosumers

Development and Integration of a HEMS with an Advanced Smart Metering Infrastructure

Distributed Voltage Unbalance Compensation in Islanded Microgrids by Using Dynamic-Consensus-Algorithm

Five Approaches to Deal With Problem of DC Offset in Phase-Locked Loop Algorithms: Design Considerations and Performance Evaluations

Generalized coupling resonance modeling, analysis, and active damping of multi-parallel Inverters in microgrid operating in grid-connected mode

General Unified Integral Controller with Zero Steady-State Error for Single-Phase Grid-Connected Inverters

Modular Energy Management System Applicable to Residential Microgrids

Review of Power Sharing Control Strategies for Islanding Operation of AC Microgrids
Stationary Frame Current Control Evaluations for Three-Phase Grid-Connected Inverters with PVR-based Active Damped LCL Filters

Abc-frame complex-coefficient filter and controller based current harmonic elimination strategy for three-phase grid connected inverter

A Circulating Current Suppression Method for Parallel Connected Voltage-Source-Inverters (VSI) with Common DC and AC Buses


Agent-Based Decentralized Control Method for Islanded Microgrids

A Hybrid Estimator for Active/Reactive Power Control of Single-Phase Distributed Generation Systems with Energy Storage

DC Microgrids – Part I: A Review of Control Strategies and Stabilization Techniques

Decentralized method for load sharing and power management in a hybrid single/three-phase islanded microgrid consisting of hybrid source PV/battery units

Distributed voltage control and load sharing for inverter-interfaced microgrid with resistive lines

Fault Ride Though Control of Photovoltaic Grid-connected Inverter with Current-limited Capability under Offshore Unbalanced Voltage Conditions

Optimal power flow for technically feasible Energy Management systems in Islanded Microgrids

基于SMC的交直流混合微电网接口换流器控制策略

基于自律分散系统的直流微电网稳定控制器优化设计
An Analysis of Modified Demodulation-Based Grid Voltage Parameter Estimator

Voltage control of DC islanded microgrids: A decentralized scalable approach

Zonal protection of DC swarm microgrids using a novel multi-terminal grid interface with decentralized control

A fuzzy-based hybrid PLL scheme for abnormal grid conditions

A Multiagent-based Consensus Algorithm for Distributed Coordinated Control of Distributed Generators in the Energy Internet

A robust and fast generic voltage sag detection technique

Coordinated Control Based on Bus-Signaling and Virtual Inertia for Islanded DC Microgrids

Current control loop design and analysis based on resonant regulators for microgrid applications

Distributed Active Synchronization Strategy for Microgrid Seamless Reconnection to the Grid under Unbalance and Harmonic Distortion

Distributed Low Voltage Ride-Through Operation of Power Converters in Grid-Connected Microgrids under Voltage Sags

Dynamic Stability Analysis of Autonomous Medium-Voltage Mixed-Source Microgrid

Equalization Algorithm for Distributed Energy Storage Systems in Islanded AC Microgrids

Frequency Stability of Hierarchically Controlled Hybrid Photovoltaic-Battery-Hydropower Microgrids
Inner Current Loop Analysis and Design Based on Resonant Regulators for Isolated Microgrids

Load Shifting Control and Management of Domestic Microgeneration Systems for Improved Energy Efficiency and Comfort

Protection of AC and DC Microgrids: Challenges, Solutions and Future Trends

Secondary Frequency and Voltage Control of Islanded Microgrids via Distributed Averaging

Single-Phase Microgrid with Seamless Transition Capabilities between Modes of Operation

Smart Metering System for Microgrids

Stability Enhancement Based on Virtual Impedance for DC Microgrids with Constant Power Loads

Tertiary and secondary control levels for efficiency optimization and system damping in droop controlled dc-dc converters

考慮电池储能系统荷电状态的有功功率协调控制

Harmonic Analysis and Active Filtering in Offshore Wind Power Plants: R. Teodorescu, C. L. Bak, (Aalborg University, Denmark), Ł. Kocowiak (DONG Energy, Denmark) C. F. Jensen (Energinet.dk, Denmark)

Hybrid Three-Phase/Single-Phase Microgrid Architecture with Power Management Capabilities

Methodologies for Wind Turbine and STATCOM Integration in Wind Power Plant Models for Harmonic Resonances Assessment
Space Vector Modulation for DC-Link Current Ripple Reduction in Back-To-Back Current Source Converters for Microgrid Applications

Active Damping Techniques for LCL-Filtered Inverters-Based Microgrids

Active Power Regulation based on Droop for AC Microgrid

Advanced Smart Metering Infrastructure for Future Smart Homes

A Harmonic Current Suppression Control Strategy for Droop-Controlled Inverter Connected to the Distorted Grid

A Hierarchical Control Scheme for Reactive Power and Harmonic Current Sharing in Islanded Microgrids

Analysis, design and implementation of a quasi-proportional-resonant controller for multifunctional capacitive-coupling grid-connected inverter

An Overview of Low Voltage DC Distribution Systems for Residential Applications

Control and Modeling of Push-Pull Forward Three-Level Converter for Microgrid

Control of a Multi-Functional Inverter for Grid Integration of PV and Battery Energy Storage System

Cross-Circulating Current Suppression Method for Parallel Three-Phase Two-Level Inverters

Distributed Cooperative Control of Multi Flywheel Energy Storage System for Electrical Vehicle Fast Charging Stations
Dynamic Consensus Algorithm based Distributed Voltage Harmonic Compensation in Islanded Microgrids

Managing high penetration of renewable energy in MV grid by electric vehicle storage

Multiagent based Distributed Control for Operation Cost Minimization of Droop Controlled AC Microgrid Using Incremental Cost Consensus

Negative Sequence Droop Method based Hierarchical Control for Low Voltage Ride-Through in Grid-Interactive Microgrids

Online Energy Management System for Distributed Generators in a Grid-Connected Microgrid

Stability Analysis for Isolated AC Microgrids Based on PV-Active Generators

Virtual admittance loop for voltage harmonic compensation in microgrids

Computational optimization techniques applied to microgrids planning: a review

Tuning of Synchronous-Frame PI Current Controllers in Grid-Connected Converters Operating at a Low Sampling Rate by MIMO Root Locus

A flexible five-level cascaded H-bridge inverter for photovoltaic grid-connected systems

A Cell-to-Cell Battery Equalizer With Zero-Current Switching and Zero-Voltage Gap Based on Quasi-Resonant LC Converter and Boost Converter

Adaptive Virtual Impedance Scheme for Selective Compensation of Voltage Unbalance and Harmonics in Microgrids

Control and design of full-bridge three-level converter for renewable energy sources
Cooperative Frequency Control for Autonomous AC Microgrids

Enhancing the Capacity of the AC Distribution System Using DC Interlinks - A Step Towards Future DC Grid

Harmonic Resonances in Wind Power Plants: Modeling, Analysis and Active Mitigation Methods

Model Order Reductions for Stability Analysis of Islanded Microgrids With Droop Control


Provision of Flexible Load Control by Multi-Flywheel-Energy-Storage System in Electrical Vehicle Charging Stations

Reactive Power Management in Islanded Microgrid – Proportional Power Sharing in Hierarchical Droop Control

Reactive Power Support of Electrical Vehicle Charging Station Upgraded with Flywheel Energy Storage System

Stored Energy Balance for Distributed PV-Based Active Generators in an AC Microgrid

Voltage Harmonics Monitoring in a Microgrid Based on Advanced Metering Infrastructure (AMI)

An Improved Droop Control Strategy for Reactive Power Sharing In Islanded Microgrid

A Systematic Approach to Design High-Order Phase-Locked Loops

Dynamic Evaluation of LCL-type Grid-Connected Inverters with Different Current Feedback Control Schemes

Dynamics Assessment of Grid-Synchronization Algorithms for Single-Phase Grid-Connected Converters
Energy Management Systems and tertiary regulation in hierarchical control architectures for islanded micro-grids

Generation-Side Power Scheduling in a Grid-Connected DC Microgrid

Phase-lock loop of Grid-connected Voltage Source Converter under non-ideal grid condition

Stability analysis and design of the improved droop controller on a voltage source inverter

A Control Architecture to Coordinate Renewable Energy Sources and Energy Storage Systems in Islanded Microgrids

Voltage and frequency control of wind-powered islanded microgrids based on induction generator and STATCOM

A Survey on Control of Electric Power Distributed Generation Systems for Microgrid Applications

Flexible Control Strategy for Grid-Connected Inverter under Unbalanced Grid Faults without PLL

Multi-Functional Distributed Generation Unit for Power Quality Enhancement

A Crossed Pack-to-Cell Equalizer Based on Quasi-Resonant LC Converter with Adaptive Fuzzy Logic Equalization Control for Series-connected Lithium-ion Battery Strings

A Direct Voltage Unbalance Compensation Strategy for Islanded Microgrids

Conventional Synchronous Reference Frame Phase-Locked Loop Is An Adaptive Complex Filter

dq-Frame Cascaded Delayed Signal Cancellation-Based PLL: Analysis, Design, and Comparison With Moving Average Filter-Based PLL
Droop-free Team-oriented Control for AC Distribution Systems

High-Performance Control of Paralleled Three-Phase Inverters for Residential Microgrid Architectures Based on Online Uninterruptable Power Systems

Improved Droop Control Strategy for Grid-Connected Inverters

Microgrid Central Controller Development and Hierarchical Control Implementation in the Intelligent MicroGrid Lab of Aalborg University

Microgrid Stability Controller Based on Adaptive Robust Total SMC

Modeling and sensitivity analysis of consensus algorithm based distributed hierarchical control for dc microgrids

Multi-Agent-Based Distributed State of Charge Balancing Control for Distributed Energy Storage Units in AC Microgrids

Small-Signal Modeling, Analysis and Testing of Parallel Three-Phase-Inverters with A Novel Autonomous Current Sharing Controller

Distributed Bus Signaling Control for a DC Charging Station with Multi Paralleled Flywheel Energy Storage System

Hybrid Active Filter with Variable Conductance for Harmonic Resonance Suppression in Industrial Power Systems

Double-Quadrant State-of-Charge-Based Droop Control Method for Distributed Energy Storage Systems in Autonomous DC Microgrids

A Control Scheme to Improve the Power Quality with the Absence of Dedicated Compensation Devices in Microgrid
Adaptive Distance Protection for Microgrids

Analysis, Control and Experimental Verification of a Single-Phase Capacitive-Coupling Grid-Connected Inverter

A Simplified Control Architecture for Three-Phase Inverters in Modular UPS Application with Shunt Active Power Filter Embedded

Coordinated Secondary Control for Balanced Discharge Rate of Energy Storage System in Islanded Microgrids

Distance Protection for Microgrids in Distribution System

Dynamic Consensus Algorithm based Distributed Unbalance Compensation in Islanded Microgrids

Economic Power Dispatch of Distributed Generators in a Grid-Connected Microgrid

Energy Management Systems and Tertiary Regulation in Hierarchical Control Architectures for Islanded Microgrids

Energy Management System with Equalization Algorithm for Distributed Energy Storage Systems in PV-Active Generator Based Low Voltage DC Microgrids

Fuzzy droop control loops adjustment for stored energy balance in distributed energy storage system

Hierarchical Control for Voltage Harmonics Compensation in Multi-Area Microgrids

Hierarchical Controlled Grid-Connected Microgrid based on a Novel Autonomous Current Sharing Controller

Hierarchical Control with Virtual Resistance Optimization for Efficiency Enhancement and State-of-Charge Balancing in DC Microgrids
Hybrid Synchronous/Stationary Reference Frame Filtering based PLL

Improved control strategy for the three-phase grid-connected inverter

Intelligent DC Microgrid Living Laboratories - A Chinese-Danish Cooperation Project

Leakage Current Suppression with A Novel Six-Switch Photovoltaic Grid-Connected Inverter

MAF-PLL With Phase-Lead Compensator

Modular Plug’n’Play Control Architectures for Three-phase Inverters in UPS Applications

Multiagent-based Distributed Control for Operation Cost Minimization of Droop Controlled DC Microgrid Using Incremental Cost Consensus

Operation Cost Minimization of Droop-Controlled DC Microgrids Based on Real-Time Pricing and Optimal Power Flow

Optimal Power Flow in Isolated Microgrids Using a Simple Distributed Algorithm

Optimal Power Flow in three-phase islanded microgrids with inverter interfaced units

Optimal Utilization of Microgrids Supplemented with Battery Energy Storage Systems in Grid Support Applications

Smart Inverters for Utility and Industry Applications

Thermal Impact Analysis of Circulating Current in High Power Modular Online Uninterruptible Power Supplies Application
Two-Level Control for Fast Electrical Vehicle Charging Stations with Multi Flywheel Energy Storage System

A Quasi-Type-1 Phase-Locked Loop Structure

Autonomous Active Power Control for Islanded AC Microgrids with Photovoltaic Generation and Energy Storage System

Hierarchical Control for Multiple DC Microgrids Clusters

Microgrids: experiences, barriers and success factors

Dynamic Phasors-Based Modeling and Stability Analysis of Droop-Controlled Inverters for Microgrid Applications

Flywheel-Based Distributed Bus Signalling Strategy for the Public Fast Charging Station

Multiagent Based Distributed Control for State-of-Charge Balance of Distributed Energy Storage in DC microgrids

Capacity Optimization of Renewable Energy Sources and Battery Storage in an Autonomous Telecommunication Facility
Faroe Islands Wind-Powered Space Heating Microgrid Using Self-Excited 220 kW Induction Generator

Modeling and Nonlinear Control of Electric Power Stage in Hybrid Electric Vehicle

Model Predictive Control of Smart Microgrids

Robust Networked Control Scheme for Distributed Secondary Control of Islanded Microgrids

Study of large-signal stability of an inverter-based generator using a Lyapunov function

Three-Phase Grid-Connected of Photovoltaic Generator Using Nonlinear Control

A Systematic Method to Synthesize New Transformerless Full-bridge Grid-tied Inverters

Frequency Stability of Hierarchically Controlled Hybrid Photovoltaic-Battery-Hydropower Microgrids

Generic inertia emulation controller for multi-terminal voltage-source-converter high voltage direct current systems

Guest Editorial: Special Section on Smart DC Distribution Systems

Intelligent Distributed Generation and Storage Units for DC Microgrids - A New Concept on Cooperative Control without Communications Beyond Droop Control

Modeling and Nonlinear Control of Fuel Cell / Supercapacitor Hybrid Energy Storage System for Electric Vehicles

Optimal power flow based on glow worm-swarm optimization for three-phase islanded microgrids
Power flow analysis for DC voltage droop controlled DC microgrids

Secondary Coordinated Control of Islanded Microgrids Based on Consensus Algorithms

Virtual Flux Droop Method – A New Control Strategy of Inverters in Microgrids

Virtual Impedance Based Stability Improvement for DC Microgrids with Constant Power Loads

Dynamic Performance of Grid Converters using Adaptive DC Voltage Control

Microgrids in Active Network Management-Part II: System Operation, Power Quality and Protection

A Distributed Control Strategy for Coordination of an Autonomous LVDC Microgrid Based on Power-Line Signalling

Performance Improvement of a Prefiltered Synchronous-Reference-Frame PLL By Using a PID-Type Loop Filter

Power flow analysis for droop controlled LV hybrid AC-DC microgrids with virtual impedance

Event-triggered hybrid control based on multi-Agent systems for Microgrids

Agent-based Distributed Unbalance Compensation for Optimal Power Quality in Islanded Microgrids

Control Strategy for Microgrid Inverter under Unbalanced Grid Voltage Conditions

Droop-Control-Based State-of-Charge Balancing Method for Charging and Discharging Process in Autonomous DC Microgrids
State-of-Charge Balance Using Adaptive Droop Control for Distributed Energy Storage Systems in DC MicroGrid Applications

Agent-based distributed hierarchical control of dc microgrid systems

Analysis of Droop Controlled Parallel Inverters in Islanded Microgrids

A Simple Autonomous Current-Sharing Control Strategy for Fast Dynamic Response of Parallel Inverters in Islanded Microgrids

A Single Phase Seven-level Grid-connected inverter Based On Three Reference SPWM Strategy

Autonomous Control of Distributed Generation and Storage to Coordinate P/Q Sharing in Islanded Microgrids: An Approach beyond Droop Control

Dynamic Consensus Algorithm Based Distributed Global Efficiency Optimization of a Droop Controlled DC Microgrid

Fundamental impedance identification method for grid-connected voltage source inverters

Mas Roig Mini-Grid: A Renewable-Energy-Based Rural Islanded Microgrid

Modeling, Stability Analysis and Active Stabilization of Multiple DC-Microgrids Clusters

Reactive Power Sharing and Voltage Harmonic Distortion Compensation of Droop Controlled Single Phase Islanded Microgrids

Resonance Damping Techniques for Grid-Connected Voltage Source Converters with LCL filters – A Review
Review of Aircraft Electric Power Systems and Architectures

Voltage Scheduling Droop Control for State-of-Charge Balance of Distributed Energy Storage in DC Microgrids

An Improved Droop Control Method for DC Microgrids Based on Low Bandwidth Communication with DC Bus Voltage Restoration and Enhanced Current Sharing Accuracy

Advanced LVDC Electrical Power Architectures and Microgrids: A Step toward a New Generation of Power Distribution Networks

Asymmetrical Grid Fault Ride-Through Strategy of Three-phase Grid-connected Inverter Considering Network Impedance Impact in Low Voltage Grid

Autonomous Active and Reactive Power Distribution Strategy in Islanded Microgrids

Fuzzy-Logic-Based Gain-Scheduling Control for State-of-Charge Balance of Distributed Energy Storage Systems for DC Microgrids

Hierarchical Control of Parallel AC-DC Converter Interfaces for Hybrid Microgrids

Line-Interactive UPS for Microgrids

Modular Power Architectures for Microgrid Clusters

Power Flow Analysis Algorithm for Islanded LV Microgrids Including Distributed Generator Units with Droop Control and Virtual Impedance Loop
Control and Analysis of Droop and Reverse Droop Controllers for Distributed Generations

Control of single-phase islanded PV/battery minigrids based on power-line signalling

Distributed Secondary Control for Islanded MicroGrids - A Novel Approach

Dynamic-Phasor-Based Nonlinear Modelling of AC Islanded Microgrids Under Droop Control

Hierarchical Control for Multiple DC-Microgrids Clusters

Modeling and Control of Flexible HEV Charging Station upgraded with Flywheel Energy Storage

Secondary Voltage Unbalance Compensation for Three-Phase Four-Wire Islanded Microgrids

Supervisory Control of an Adaptive-Droop Regulated DC Microgrid with Battery Management Capability

Tertiary Control for Optimal Unbalance Compensation in Islanded Microgrids

Analysis, Design, and Experimental Verification of A Synchronous Reference Frame Voltage Control for Single-Phase Inverters

An Analysis of the PLLs With Secondary Control Path

Application of a microgrid with renewables for a water treatment plant

A Rolling Horizon Rescheduling Strategy for Flexible Energy in a Microgrid

Co-design of the LCL Filter and Control for Grid-Connected Inverters
Distributed Consensus-Based Control of Multiple DC-Microgrids Clusters

Hierarchical Coordinated Control of Distributed Generators and Active Power Filters to Enhance Power Quality of Microgrids

Hybrid islanding detection method by using grid impedance estimation in parallel-inverters-based microgrid

Hierarchical Control of Distributed Generators and Active Power Filters to Enhance Power Quality of Microgrids

Team-oriented Adaptive Droop Control for Autonomous AC Microgrids

Moving Average Filter-Based Phase-Locked Loops: Performance Analysis and Design Guidelines

A generic Inertia Emulation Controller for Multi-Terminal VSC-HVDC systems

A parametric study on unbalanced three phase islanded microgrids with inverter interfaced units

Microgrids: Hierarchical Control and an Overview of the Control and Reserve Management Strategies

What are microgrids?
Advantages and Challenges of a Type-3 PLL

An Islanding Microgrid Power Sharing Approach Using Enhanced Virtual Impedance Control Scheme

Single-Carrier Modulation for Neutral-Point-Clamped Inverters in Three-Phase Transformerless Photovoltaic Systems

Stability, Power Sharing, & Distributed Secondary Control in Droop-Controlled Microgrids

Small-signal modeling of digitally controlled grid-connected inverters with LCL filters

Erratum to Highly efficient distributed generation and high-capacity energy storage
Hemmes, K., Guerrero, J. M. & Zhelev, T., 1 Aug 2013, In : Chemical Engineering and Processing. 70, p. 18-31

Supervisory Control for Real Time Reactive Power Flow Optimization in Islanded Microgrids

适用于交直流混合微电网的直流分层控制系统

Advanced Control Architectures for Intelligent Microgrids—Part II: Power Quality, Energy Storage, and AC/DC Microgrids

Distributed Control to Ensure Proportional Load Sharing and Improve Voltage Regulation in Low-Voltage DC Microgrids

Introduction to the special section on distributed generation and microgrids


孤岛运行交流微电网中分布式储能系统改进下垂控制方法
Lu, X., Sun, K., Huang, L., Xiao, X. & Guerrero, J. M., Jan 2013, In : Dianli Xitong Zidonghua. 37, 1

Adaptive sliding mode control of interleaved parallel boost converter for fuel cell energy generation system
Advanced Control Architectures for Intelligent MicroGrids, Part I: Decentralized and Hierarchical Control

A generic inertia emulation controller for multi-terminal VSC-HVDC systems

Analysis, design, and experimental evaluation of power calculation in digital droop-controlled parallel microgrid inverters

Analysis, Modelling, and Simulation of Droop Control with Virtual Impedance Loop Applied to Parallel UPS Systems

A New Synchronous Reference Frame-Based Method for Single-Phase Shunt Active Power Filters

A new virtual-flux-vector based droop control strategy for parallel connected inverters in microgrids

A Novel Grid Impedance Estimation Technique based on Adaptive Virtual Resistance Control Loop Applied to Distributed Generation Inverters

A Novel Robust Communication Algorithm for Distributed Secondary Control of Islanded MicroGrids

A parametric study on unbalanced three phase islanded microgrids with inverter interfaced units

Autonomous Voltage Unbalance Compensation in an Islanded Droop-Controlled Microgrid

Battery State-of-Charge and Parameter Estimation Algorithm Based on Kalman Filter

Control of single-phase islanded PV/battery streetlight cluster based on power-line signaling

Control of single-phase islanded PV/battery streetlight cluster based on power-line signaling
Quintana, P. J., Garcia, J., Guerrero, J. M., Dragicevic, T. & Vasquez, J. C., 2013, Control of single-phase islanded PV/battery streetlight cluster based on power-line signaling.
Coordinated Power Control Strategy based on Primary-Frequency-Signaling for Islanded Microgrids

Coordinated Primary and Secondary Control with Frequency-Bus-Signaling for Distributed Generation and Storage in Islanded Microgrids

Distributed Cooperative Control of Nonlinear and Non-identical Multi-agent Systems

Distributed Cooperative Secondary Control of Microgrids Using Feedback Linearization

Distributed Secondary Control for DC Microgrid Applications with Enhanced Current Sharing Accuracy

Dynamics Assessment of Advanced Single-Phase PLL Structures

Grid simulator for power quality assessment of micro-grids

Industrial applications of the Kalman filter: a review

MAS Based Event-Triggered Hybrid Control for Smart Microgrids

Microgrid Reactive and Harmonic Power Sharing Using Enhanced Virtual Impedance

Modeling, analysis, and design of stationary reference frame droop controlled parallel three-phase voltage source inverters

Modeling, analysis, and design of stationary-reference-frame droop-controlled parallel three-phase voltage source inverters
Modelling, Analysis, and Design of a Frequency-Droop-Based Virtual Synchronous Generator for Microgrid Applications

Optimal Power Flow in Microgrids with Energy Storage

Optimization with System Damping Restoration for Droop Controlled DC-DC Converters

Selective compensation of voltage harmonics in grid-connected microgrids

Selective virtual capacitive impedance loop for harmonics voltage compensation in islanded microgrids

Stability Constrained Efficiency Optimization for Droop Controlled DC-DC Conversion System

Voltage-Based Control of a Smart Transformer in a Microgrid

直流微电网储能系统中带有母线电压跌落补偿功能的负荷功率动态分配方法

Introduction to the special section on industrial applications and implementation issues of the Kalman filter

Automatic Power-Sharing Modification of P/V Droop Controllers in Low-Voltage Resistive Microgrids

Comments on "Economic analysis of different supporting policies for the production of electrical energy by solar photovoltaics in western European Union countries" by Luigi Dusonchet and Enrico Telauretti

Lyapunov based control of hybrid energy storage system in electric vehicles

An islanding microgrid reactive power sharing scheme enhanced by programmed virtual impedances

A Review of Power Electronics Based Microgrids
Cooperative Control with Virtual Selective Harmonic Capacitance for Harmonic Voltage Compensation in Islanded MicroGrids

Design and Tuning of a Modified Power-Based PLL for Single-Phase Grid-Connected Power Conditioning Systems

Distributed Secondary Control for Islanded MicroGrids – A Networked Control Systems Approach

Grid-connected of photovoltaic module using nonlinear control

Grid Integration of Renewables

Highly efficient distributed generation and high-capacity energy storage

Improving the voltage quality of an inverter via by-passing the harmonic current components

Mitigation of Voltage and Current Harmonics in Grid-Connected Microgrids

Multilayer Control for Inverters in Parallel Operation without Intercommunications

Multiple Distributed Smart Microgrids with a Self-Autonomous, Energy Harvesting Wireless Sensor Network

Online Detection and Estimation of Grid Impedance Variation for Distributed Power Generation

Precise Modeling Based on Dynamic Phasors for Droop-Controlled Parallel-Connected Inverters

Secondary Control for Compensation of Voltage Harmonics and Unbalance in Microgrids
Secondary control for reactive power sharing and voltage amplitude restoration in droop-controlled islanded microgrids

Secondary Control for Reactive Power Sharing in Droop-Controlled Islanded MicroGrids

Secondary Control for Voltage Quality Enhancement in Microgrids

Secondary Control Scheme for Voltage Unbalance Compensation in an Islanded Droop-Controlled Microgrid

Selective Harmonic Virtual Impedance for Voltage Source Inverters with LCL filter in Microgrids

SoC-Based Droop Method for Distributed Energy Storage in DC Microgrid Applications

SoC-Based Dynamic Power Sharing Method with AC-Bus Voltage Restoration for Microgrid Applications

Voltage Quality Improvement in Islanded Microgrids Supplying Nonlinear Loads

Advanced control of interleaved boost converter for fuel cell energy generation system

Editorial: Special issue on power electronics for microgrids - Part II

Nonlinear control of single-phase shunt active power filter theoretical analysis of closed-loop performances

Intelligent connection agent for three-phase grid-connected microgrids

Adaptive control of interleaved boost converter for fuel cell energy
Fuzzy variable structure control for PWM inverters

Detailed Operation Scheduling and Control for Renewable Energy Powered Microgrids

A novel improved variable step-size incremental-resistance MPPT method for PV systems

Selective compensation of voltage harmonics in an islanded microgrid

Design and analysis of the droop control method for parallel inverters considering the impact of the complex impedance on the power sharing

Hierarchical control of droop-controlled AC and DC microgrids - A general approach toward standardization

A centralized control architecture for harmonic voltage suppression in islanded microgrids

A Distributed Control Strategy Based on DC Bus Signaling for Modular Photovoltaic Generation Systems With Battery Energy Storage

Connecting Renewable Energy Sources into the Smartgrid

Control of parallel-connected bidirectional AC-DC converters in stationary frame for microgrid application

Droop-Controlled Inverters with Seamless Transition between Islanding and Grid-Connected Operations

Experimental evaluation of voltage unbalance compensation in an islanded microgrid

Hierarchical Control Scheme for Voltage Harmonics Compensation in an Islanded Droop-Controlled Microgrid
Hierarchical Control Scheme for Voltage Unbalance Compensation in Islanded Microgrids

Modeling, analysis, and design of stationary reference frame droop controlled parallel three-phase voltage source inverters

Multilayer control for inverters in parallel operation without signal interconnection

Secondary control for voltage unbalance compensation in an islanded microgrid

Selective Compensation of Voltage Harmonics in a Grid-Connected Microgrid

Smart grid and renewable energy systems

Voltage Harmonic Compensation of a Microgrid Operating in Islanded and Grid-Connected Modes

An integrated multifunction DC/DC converter for PV generation systems

Intelligent control agent for transient to an island grid

Microgrids: integration of distributed energy resources into the smart-grid

Guest editorial: Editorial special issue on power electronics for microgrids - Part I

Hierarchical control of intelligent microgrids

Hierarchical control of power plants with microgrid operation
Resonant current regulation for transformerless hybrid active filter to suppress harmonic resonances in industrial power systems

A simple control algorithm to avoid flux density bias in isolated full-bridge topologies

Design of an analog quasi-steady-state nonlinear current-mode controller for single-phase active power filter

Control design guidelines for single-phase grid-connected photovoltaic inverters with damped resonant harmonic compensators

Voltage support provided by a droop-controlled multifunctional inverter

Sliding-mode control for a single-phase AC/AC quantum resonant converter

Selective harmonic-compensation control for single-phase active power filter with high harmonic rejection

Sharing of active power supply and reactive power compensation for Parallel Inverters

Control strategy for flexible microgrid based on parallel line-interactive UPS systems

Flux DC bias and digital suppression scheme for isolated power factor correction converter

Droop control of a multifunctional PV inverter

Ride-through improvement of wind-turbines via feedback linearization

Adaptive nonlinear control of multiphase synchronous buck power converters

Analysis of flux density bias and digital suppression strategy for single-stage power factor corrector converter
Control of distributed uninterruptible power supply systems

Guest editorial

Linear current control scheme with series resonant harmonic compensator for single-phase grid-connected photovoltaic inverters

Feedback linearization of direct-drive synchronous wind turbines via a sliding mode approach

Comparative study of hysteretic controllers for single-phase voltage regulators

Feedback linearization of a single-phase active power filter via sliding mode control

Reactive power compensation for parallel inverters without control interconnections in microgrid

Control of line-interactive UPS connected in parallel forming a microgrid

Droop control method with virtual output impedance for parallel operation of uninterruptible power supply systems in a microgrid

Parallel operation of uninterruptible power supply systems in MicroGrids

Author's reply [2]

Simple low-cost hysteretic controller for single-phase synchronous buck converters

Designing VRM hysteretic controllers For optimal transient response

Decentralized control for parallel operation of distributed generation inverters using resistive output impedance
Uninterruptible power supply systems provide protection

Analysis, design and practical evaluation of an input-output linearization controller for the CLL-T dc-dc resonant converter

Decentralized control for parallel operation of distributed generation inverters in microgrids using resistive output impedance

Droop control method for the parallel operation of online uninterruptible power systems using resistive output impedance

Wireless-control strategy for parallel operation of distributed-generation inverters

Decentralized control for parallel operation of distributed generation inverters using resistive output impedance

Decentralized control for parallel operation of distributed generation inverters using resistive output impedance

Feedback linearization control with average current sharing for multiphase synchronous buck converter

One-cycle control for the parallel operation of synchronous buck converters

Simple feedback linearizing controller to reduce audiosusceptibility and load disturbance in the full-bridge current doubler synchronous rectifier

Steady-state invariant frequency and amplitude droop control using adaptive output impedance for parallel-connected UPS inverters

Wireless-control strategy for parallel operation of distributed generation inverters

Design of voltage-mode hysteretic controllers for synchronous buck converters supplying microprocessor loads
Output impedance design of parallel-connected UPS inverters with wireless load-sharing control

Half-bridge CLL resonant rectifier with quantum mode control

Sliding-mode control of quantum series-parallel resonant converters via input-output linearization

Averaged large-signal model of single magnetic push-pull forward converter with built-in input filter

Output impedance design of parallel-connected UPS inverters

Parallel operation of Half-Bridge Converters with Current-Doubler Rectifier uUsing feedback linearization control

Simplified feedback linearization of a single-phase active power filter using sliding mode control

A simple sliding mode control of an active power filter

Output impedance performance for parallel operation of UPS inverters using wireless and average current-sharing controllers

A wireless controller to enhance dynamic performance of parallel inverters in distributed generation systems

A high-performance DSP-controller for parallel operation of online UPS systems

A Sliding Mode Control of an Active Power Filter

A Wireless Controller for Parallel Inverters in Distributed Online UPS Systems

Non-Linear Control of a Parallelled Half-Bridge Complementary-Control Converter System with a Single-Wire Current Sharing

A wireless load sharing controller to improve dynamic performance of parallel-connected UPS inverters
Simple nonlinear controller to reduce line and load disturbances in HBCC converter

A discrete sliding mode control of a buck-boost inverter

A nonlinear feed-forward control technique for single-phase UPS inverters

Discrete non-linear control of a PWM inverter

Feedback sliding mode control linearization of a single phase active filter

Steady-state invariant-frequency control of parallel redundant uninterruptible power supplies

Integral control technique for single-phase UPS inverter

Parallel operation of charge-controlled-DC-DC converters

Activities

Workshop: IoT-driven eNErgy sysTems (INET) - Advances and Applications
Amjad Anvari-Moghaddam (Lecturer), Yajuan Guan (Lecturer), Juan Carlos Vasquez Quintero (Lecturer), Josep M. Guerrero (Lecturer)
30 Jul 2018

Special Issue "IoT and Energy Internet" (Event)
Josep M. Guerrero (Editor), Juan C. Vasquez (Editor), Yajuan Guan (Editor)
26 Jul 2018 → 9 Sep 2019

Tutorial: Advances in Microgrids Control and Management
Amjad Anvari-Moghaddam (Lecturer), Qobad Shafiee (Lecturer), Hassan Bevrani (Lecturer), Josep M. Guerrero (Lecturer)
20 Feb 2018 → 21 Feb 2018

Tutorial: The Internet of Energy - The Building Block for the Future Smart Grids
Mehdi Savaghebi (Lecturer), Juan Carlos Vasquez Quintero (Lecturer), Yajuan Guan (Lecturer), Josep M. Guerrero (Lecturer)
29 Oct 2017

Special Section on "Energy Internet" (Event)
Josep M. Guerrero (Editor), Yajuan Guan (Editor), Juan C. Vasquez (Editor), Kai Sun (Editor)
28 Aug 2017 → 31 Dec 2018
Keynote: Advanced Control Architectures of DC Microgrids
Josep M. Guerrero (Lecturer)
10 Jun 2015

Keynote Plenary session: Future challenges on microgrids and DC homes
Josep M. Guerrero (Lecturer)
21 May 2014

Keynote: Microgrid Technologies for Future Electric Vehicle Charging Stations
Josep M. Guerrero (Lecturer)
16 May 2014

Keynote: New technologies and future challenges on MicroGrid Research
Josep M. Guerrero (Speaker)
26 Mar 2014

Invited presentation: Advanced Control Architectures for Intelligent Microgrids
Josep M. Guerrero (Lecturer)
25 Aug 2011

Press clippings

Computer-professorat med Obelsk Støtte
Gert Frølund Pedersen, Josep M. Guerrero, Svend Birkelund & Mark Grimshaw
30/04/2012
16 items of Media coverage

Fornem hæder til AAU-professor
Josep M. Guerrero
06/12/2014
12 items of Media coverage

Forskning i fremtidens el-systemer
Josep M. Guerrero
03/01/2014
5 items of Media coverage

Mikroanlæg skal sikre bæredygtig energiforsyning
Josep M. Guerrero
28/05/2019
1 item of Media coverage

NAVNE I NOTER
Josep M. Guerrero
25/12/2013
1 item of Media coverage

NAVNE I NOTER
Josep M. Guerrero
25/12/2013
1 item of Media coverage

Navne i noter
Josep M. Guerrero
14/12/2014
1 item of Media coverage
Svinghjul kan give billigere strøm til søs
Josep M. Guerrero
12/01/2015
10 items of Media coverage

Syv forskere fra Aalborg Universitet på Clarivates "Highly Cited Researchers List 2017"
Frede Blaabjerg, Josep M. Guerrero, Henrik Lund, Brian Vad Mathiesen, Remus Teodorescu, Christian Torp-Pedersen & Juan Carlos Vasquez Quintero
21/11/2017
1 item of Media coverage

Villum Fonden udvælger 11 nye investigators
Josep M. Guerrero
02/05/2019
1 item of Media coverage

Aalborgprofessor skal udvikle bæredygtig energiforsyning
Josep M. Guerrero
02/04/2019
12 items of Media coverage

Projects

Active filter functionalities for power converters in wind power plants
Guerrero, J. M., Chaudhary, S., Teodorescu, R., Bak, C. L., Freijedo Fernandez, F. D., Hoseinzadeh, B. & Lascu, C. V.
01/04/2014 → 31/03/2016

ASSET: A holistic and Scalable Solution for Research, Innovation and Education in Energy Transition
Guerrero, J. M., Vasquez, J. C., Akhavan, A., Nasir, M. & Guldbæk, B. K.
EU - Horizon 2020
01/05/2019 → 30/04/2021

DiCyPS: Center for Data-Intensive Cyber-Physical Systems
01/01/2015 → 31/12/2020

CROM: Center for Research on Microgrids
Guerrero, J. M., Vasquez, J. C., Tinajero, G. D. A., Akhavan, A. & Guldbæk, B. K.
Villum Fonden
01/08/2019 → 31/07/2025

MMGrid: Control and Management of Multi-Microgrid Clusters in Taiwan
Guerrero, J. M., Dragicevic, T., Vasquez, J. C. & Wu, D.
01/01/2013 → 31/12/2013

Distributed Converter And MicroGrid Advanced Control Algorithm Project
Guerrero, J. M. & Guldbæk, B. K.
Huawei Technologies Duesseldorf GmBH
25/09/2018 → 31/05/2020

Efficiensea
Guerrero, J. M., Dragicevic, T., Meng, L., Vasquez, J. C. & Miltersen, A. H.
Innovation Fund Denmark
16/03/2015 → 15/03/2018
Flexible electric vehicle charging infrastructure (Flex-ChEV)
01/03/2014 → 29/02/2016

Future Residential LVDC Power Distribution Architectures
Vasquez, J. C. & Guerrero, J. M.
01/01/2014 → 31/12/2014

HeatReFlex: Green and Flexible District Heating/Cooling
Anvari-Moghaddam, A., Guerrero, J. M., Nami, H. & Mohammadivatloo, B.
Danida Fellowship Centre
01/05/2019 → 31/10/2021

iDClab: Intelligent DC Microgrid Living Lab
Guerrero, J. M., Vasquez, J. C., Diaz, E. R. & Golestan, S.
Det Strategiske Forskningsråd
01/01/2014 → 31/12/2017

DiCyPS: IT-Infrastructures for Control, Optimization and Management in Energy Systems
Guerrero, J. M., Anvari-Moghaddam, A., Vasquez, J. C., Bak-Jensen, B. & Guldbæk, B. K.
Innovation Fund Denmark
01/01/2015 → 31/12/2020

MeTER_Demo: Microgrid Technology Research and Demonstration
Guerrero, J. M., Wu, D., Guan, Y., Vasquez, J. C. & Savaghebi, M.
01/04/2014 → 31/03/2017

HyMG: Microgrid technology research based on wind/PV/storage hybrid system
Guerrero, J. M., Vasquez, J. C. & Wu, D.
01/01/2013 → 31/12/2013

Flywheel: Off-Shore Application of the Flywheel Energy Storage
Guerrero, J. M., Dragicevic, T & Anvari-Moghaddam, A.
Den Danske Maritime Fond
13/11/2014 → 28/02/2016

VICINITY: Open virtual neighbourhood network to connect IoT infrastructures and smart objects
Guan, Y., Vasquez, J. C., Guerrero, J. M. & Miltersen, A. H.
European Commision
01/01/2016 → 31/12/2019

The Energy Internet - Integrating Internet of Things into the Smart Grid
Aalborg University
01/01/2017 → 31/12/2019

TROY: UPS SLC-TROY Project
Guerrero, J. M., Vasquez, J. C., Zhang, C., Wei, B. & Gui, Y.
Others
01/04/2015 → 01/06/2017