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Projekter

ActRes: Agency for resilience – Making people and energy systems fit for climate change and crises

Hellwig, R. T. (PI (principal investigator)), dos Santos, L. F. (Projektdeltager), Berger, C. (Projektdeltager), Horvath, A.-S. (Projektdeltager), Horsbøl, A. (Projektdeltager), Vasquez, J. C. (Projektdeltager), Raftopoulos, M. (Projektdeltager), Yuan, M. (Projektdeltager), Rüdiger, M. (Projektdeltager), Sahoo, S. (Projektdeltager) & Guan, Y. (Projektdeltager)
01/09/2023 → 31/12/2025

Dynamic Performance and Power Quality of Large-Scale Grid-Connected Wind Power Plants

Ullah, M. (PI (principal investigator)), Guerrero, J. M. (Supervisor), Vasquez, J. C. (Supervisor) & Guan, Y. (Supervisor)
01/03/2023 → 28/02/2026

Harmonic Modelling and Stability Analysis of Multi-Vendor Grid-forming Wind Power Plants

Song, J.-X. (PI (principal investigator)), Guan, Y. (Supervisor), Chaudhary, S. (Supervisor) & Yu, Y. (Supervisor)
15/06/2024 → 14/06/2027

LastWind: Large-Scale Integration of Wind Power Generation in Ethiopia - LastWind

Guan, Y. (PI (principal investigator)), Guerrero, J. M. (Projektdeltager), Vasquez, J. C. (Projektdeltager), Javidsharifi, M. (Projektdeltager), Yu, Y. (CoPI), Kang, W. (Projektdeltager) & Pugliese, A. A. (Projektkoordinator)
Danida Fellowship Centre
01/08/2023 → 31/07/2026

TECH-IN: Microgrid Technologies for Remote Indonesian Islands

Vasquez, J. C. (PI (principal investigator)), Guan, Y. (Projektdeltager), Vasquez, J. C. (Supervisor), Guerrero, J. M. (Projektdeltager) & Pugliese, A. A. (Projektkoordinator)
Danida Fellowship Centre
01/05/2021 → 30/11/2024

MeTER_Demo: Microgrid Technology Research and Demonstration

Guerrero, J. M. (Projektleder), Wu, D. (Projektdeltager), Guan, Y. (Projektdeltager), Vasquez, J. C. (Projektdeltager) & Savaghebi, M. (Projektdeltager)
01/04/2014 → 31/03/2017

VICINITY: Open virtual neighbourhood network to connect IoT infrastructures and smart objects

Guan, Y. (Projektdeltager), Vasquez, J. C. (Projektdeltager), Guerrero, J. M. (Projektkoordinator) & Miltersen, A. (Projektkoordinator)
European Commission
01/01/2016 → 31/12/2019

Planning and Operational Management Systems for Resilient Microgrids in Remote and Isolated Communities Under Natural Disasters (TECH-IN: Microgrid Technologies for Remote and Island Communities under Natural Disasters)

Ali, M. (PI (principal investigator)), Guerrero, J. M. (Supervisor), Vasquez, J. C. (Supervisor) & Guan, Y. (Supervisor)
01/01/2022 → 01/02/2025

REMCE: Renewable Energy based Minigrid Clusters in Ethiopia

Chaudhary, S. (PI (principal investigator)), Golestan, S. (Projektdeltager), Guan, Y. (Projektdeltager), Wu, Y. (Projektdeltager), Vasquez, J. C. (Supervisor), Guerrero, J. M. (Supervisor) & Pugliese, A. A. (Projektkoordinator)
Danida Fellowship Centre
01/05/2021 → 31/12/2024

REConnect: Renewable Energy Converters Connected in Parallel

Guerrero, J. M. (PI (principal investigator)), Vasquez, J. C. (Col (co-investigator)), Guan, Y. (Projektansøger) & Guldbæk, B. K. (Projektkoordinator)
ReConvert BV
01/08/2020 → 15/12/2020

REConnect: Renewable Energy Converters Connected to Grid

Guan, Y. (PI (principal investigator)), Guerrero, J. M. (Projektkoordinator), Vasquez, J. C. (Projektleder), Zwam, A. V. (Projektkoordinator), Meersman, B. (Projektdeltager) & Oostveen, B. (Projektdeltager)
01/08/2020 → 31/12/2020

To Enhance the Fault Ride Through Capability of Doubly Fed Induction Generator using Direct Matrix Converter for Wind Turbines

Asim, A. (PI (principal investigator)), Vasquez, J. C. (Supervisor), Guan, Y. (Supervisor) & Guerrero, J. M. (Supervisor)
01/10/2023 → 30/09/2026

Aktiviteter**Mission Innovation - Green Energy Community Webinar**

Guan, Y. (Foredragsholder)
12 jan. 2021

Chair of a Special Session: Advanced Power Converter Topologies of IEEE ECCE ASIA 2020

Guan, Y. (Andet) & Feng, W. (Andet)
1 dec. 2020

Sweden Electric Power and Power Electronics Conference - Microgrids and Internet of Things

Guan, Y. (Foredragsholder)
3 okt. 2019

Workshop: IoT-driven eEnergy sysTems (INET) - Advances and Applications

Anvari-Moghaddam, A. (Foredragsholder), Guan, Y. (Foredragsholder), Quintero, J. C. V. (Foredragsholder) & Guerrero, J. M. (Foredragsholder)
30 jul. 2018

Special Issue "IoT and Energy Internet" (Begivenhed)

Guerrero, J. M. (Redaktør), Vasquez, J. C. (Redaktør) & Guan, Y. (Redaktør)
26 jul. 2018 → 9 sep. 2019

Tutorial: The Internet of Energy - The Building Block for the Future Smart Grids

Savaghebi, M. (Foredragsholder), Quintero, J. C. V. (Foredragsholder), Guan, Y. (Foredragsholder) & Guerrero, J. M. (Foredragsholder)
29 okt. 2017

Special Section on "Energy Internet" (Begivenhed)

Guerrero, J. M. (Redaktør), Guan, Y. (Redaktør), Vasquez, J. C. (Redaktør) & Sun, K. (Redaktør)
28 aug. 2017 → 31 dec. 2018

Bevillinger

LastWind: Large-Scale Integration of Wind Power Generation in Ethiopia - LastWind

Guan, Y. (PI (principal investigator)), Guerrero, J. M. (Projektdeltager), Vasquez, J. C. (Projektdeltager), Javidsharifi, M. (Projektdeltager), Yu, Y. (CoPI), Kang, W. (Projektdeltager) & Pugliese, A. A. (Projektkoordinator)

Danida Fellowship Centre: 5.370.376,00 kr.

01/08/2023 → 31/07/2026

Publikationer

Three-Stage Planning of Networked Microgrids for Electrification of Indonesia Islands Considering Earthquake Scenarios

Kang, W., Guan, Y., Yu, Y., Vasquez, J. C., Wijaya, F. D. & Guerrero, J. M., 2025, *Energy Informatics - 4th Energy Informatics Academy Conference, EI.A 2024, Proceedings*. Jørgensen, B. N., Ma, Z. G., Wijaya, F. D., Irnawan, R. & Sarjiya, S. (red.). Springer Science+Business Media, s. 355-371 17 s. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), Bind 15272 LNCS).

Distributed control of virtual energy storage systems for voltage regulation in low voltage distribution networks subjects to varying time delays

Kang, W., Guan, Y., Wang, H., Vasquez, J. C., Agundis-Tinajero, G. D. & Guerrero, J. M., 15 dec. 2024, I: *Applied Energy*. 376, 124295.

A Generic Inertial-Response Preserved Active-Damping Control for Grid-Forming Inverters Emulating Synchronous Machines

Yu, Y., Guan, Y., Kang, W., Vasquez, J. C. & Guerrero, J. M., 1 nov. 2024, I: *IEEE Transactions on Industrial Electronics*.

A Decentralized Self-synchronizing Method for Cascaded Converter System Based on Analysis of the Existence of Equilibrium Points

Shi, G., Ou, J., Wu, Z., Zhang, J., Xu, X., Guan, Y. & Guerrero, J. M., 14 okt. 2024, I: *IEEE Transactions on Power Electronics*.

Renewable Microgrids for Resilience Enhancement of Different Loads with Diverse Usage Patterns under Natural Disaster

Ali, M., Vasquez, J. C., Guerrero, J. M., Bazmohammadi, N., Guan, Y. & Ali, M., 23 jul. 2024, s. 175. 1 s.

Hierarchical Operation Management System for Mobile Ad-hoc Microgrids in Emergency Events

Guan, Y., Kang, W., Vasquez, J. C., Wijaya, F. D., Arumdati, N., Perdana, A. P., Ma, Z. G. & Guerrero, J. M., 2 jul. 2024, *2024 IEEE 10th International Power Electronics and Motion Control Conference (IPEMC2024-ECCE Asia)*. s. 2752-2755 4 s.

A Probabilistic Data Recovery Framework against Load Redistribution Attacks Based on Bayesian Network and Bias Correction Method

Khaleghi, A., Ghazizadeh, M. S., Aghamohammadi, M. R., Guerrero, J. M., Vasquez, J. C. & Guan, Y., 1 jul. 2024, I: *IEEE Transactions on Power Systems*. 39, 4, s. 5806-5817 12 s.

Distributed Event-Triggered Secondary Frequency Regulation by Sharing HESS Power in Microgrids

Kang, W., Guan, Y., YunYu, Arbab-Zavar, B., Juan, C. V. Q. & Guerrero, J. M., 1 jul. 2024, I: *IEEE Transactions on Smart Grid*. 15, 4, s. 3375-3389 15 s.

Joint planning of residential electric vehicle charging station integrated with photovoltaic and energy storage considering demand response and uncertainties

Zhang, M., Yan, Q., Guan, Y., Ni, D. & Agundis Tinajero, G. D., 1 jul. 2024, I: *Energy*. 298, 131370.

Analysis of Power Quality Improvement Techniques Applied to Grid-connected Wind Power Plants

Ullah, M., Guan, Y., Vasquez, J. C. & Guerrero, J. M., 26 jun. 2024. 6 s.

An Improved ω - ϕ Droop Control for Cascaded PV-ES System in Islanded Mode

Ou, J., Han, H., Shi, G., Guan, Y., Lashab, A. & Guerrero, J. M., 20 jun. 2024, (Accepteret/In press) I: *IEEE Transactions on Sustainable Energy*. s. 1-16 16 s.

Microgrid an Energy Solution for Remote Islanded Communities in Indonesia

Ali, M., Vasquez, J. C., Guerrero, J. M., Guan, Y. & Bazmohammadi, N., 17 maj 2024, *2024 IEEE 10th International Power Electronics and Motion Control Conference (IPEMC2024-ECCE Asia)*. China : IEEE (Institute of Electrical and Electronics Engineers), s. 3799-3804 6 s.

Resilience Oriented Distributed Secondary Control for Networked Microgrids: A Case Study From Indonesia

Basati, A., Bazmohammadi, N., Guan, Y., Vasquez, J. C. & Guerrero, J. M., 28 apr. 2024, *2024 6th Global Power, Energy and Communication Conference (GPECOM 2024)*. IEEE (Institute of Electrical and Electronics Engineers), s. 512-517 6 s.

Microgrid For Remote Islanded Communities in Indonesia

Ali, M., Vasquez, J. C., Guerrero, J. M., Bazmohammadi, N., Guan, Y. & De La Cruz, J., 23 apr. 2024, s. 1. 1 s.

Dynamic Equivalent Modeling for Black-Box Microgrids under Multi-Operating-Point by Using LSTM

Li, Y., Guerrero, J. M., Yang, J., Guan, Y., Ma, G. & Feng, J., 1 mar. 2024, I: *CSEE Journal of Power and Energy Systems*. 10, 2, s. 639-648 10 s.

Dual-Stackelberg game-based trading in community integrated energy system considering uncertain demand response and carbon trading

Zhang, M., Yang, J., Yu, P., Tinajero, G. D. A., Guan, Y., Yan, Q., Zhang, X. & Guo, H., feb. 2024, I: *Sustainable Cities and Society*. 101, 105088.

A Generic Inertial-Response Preserved Active-Damping Control for Grid-Forming Inverters Emulating Synchronous Machines

Yu, Y., Guan, Y., Kang, W., Vasquez, J. C. & Guerrero, J. M., 2024, I: *IEEE Transactions on Industrial Electronics*.

A Resilient Control Framework for Enhancing Cyber-Security in Microgrids

Tan, S., Xie, P., Guan, Y., Vasquez, J. C., Guerrero, J. M. & Zhang, X., 2024, *Energy Informatics - 4th Energy Informatics Academy Conference, EIA 2024, Proceedings*. Jørgensen, B. N., Ma, Z. G., Wijaya, F. D., Irnawan, R. & Sarjiya, S. (red.). Springer Nature Switzerland AG, s. 372-378 7 s.

Inertial-Response Preserved Active Damping of Grid-Forming Voltage-Source Converters Using Fractional-Order Regulators

Yu, Y., Wu, J., Kang, W., Vasquez, J. C., Guerrero, J. M. & Guan, Y., 2024, *2024 IEEE 10th International Power Electronics and Motion Control Conference, IPEMC 2024 ECCE Asia*. IEEE Signal Processing Society, (2024 IEEE 10th International Power Electronics and Motion Control Conference, IPEMC 2024 ECCE Asia).

Multi-Objective Energy Management for Residential Microgrid with Hybrid Electricity-Hydrogen Storage System using Particle Swarm Optimization

Wu, J., Li, S., Chaudhary, S. K., Vasquez, J. C., Guerrero, J. M. & Guan, Y., 2024, *2024 International Power Electronics and Motion Control Conference (ECCE Asia 2024)*.

Multi-Objective Energy Management for Residential Microgrid with Hybrid Electricity-Hydrogen Storage System using Particle Swarm Optimization

Wu, J., Li, S., Chaudhary, S., Vasquez, J. C., Guerrero, J. M. & Guan, Y., 2024, *2024 IEEE 10th International Power Electronics and Motion Control Conference, IPEMC 2024 ECCE Asia*. IEEE Signal Processing Society, s. 2716-2721 6 s. (2024 IEEE 10th International Power Electronics and Motion Control Conference, IPEMC 2024 ECCE Asia).

Stochastic Optimal Planning of Networked Microgrids for Indonesia Electrification Considering Various Faults

Kang, W., Guan, Y., Yu, Y., Wei, B., Barrios Flores, M. A., Danang Wijaya, F., Vasquez, J. C. & Guerrero, J. M., 2024, *2024 IEEE 10th International Power Electronics and Motion Control Conference, IPEMC 2024 ECCE Asia*. IEEE Signal Processing Society, s. 2287-2292 6 s. (2024 IEEE 10th International Power Electronics and Motion Control Conference, IPEMC 2024 ECCE Asia).

Parallel Prediction Method of Knowledge Proficiency Based on Bloom's Cognitive Theory

Zhang, T., Mao, H., Liu, H., Liu, Y., Yu, M., Wu, W., Yu, G., Wei, B. & Guan, Y., dec. 2023, I: Mathematics. 11, 24, 23 s., 5002.

Long-Term Renewable Energy Planning in the Indonesian Context: A Lombok Island Study Case

Rajabnia, M., Ali, M., Vasquez, J. C., Guan, Y., Guerrero, J. M., Khan, B., Wijaya, F. D. & Perdana, A. P., 30 nov. 2023, I: Applied Sciences. 18 s.

Planning of Community Microgrid for Improving the Resilience of System by Using HOMER Grid

Ali, M., Rajabnia, M., Vasquez, J. C., Guerrero, J. M., Guan, Y. & Abusorrah, A. M., 2 okt. 2023, *2023 25th European Conference on Power Electronics and Applications, EPE 2023 ECCE Europe*. Aalborg, Denmark: IEEE (Institute of Electrical and Electronics Engineers), s. 1-6 6 s. 10264450

Distributed Fixed-Time Energy Management for Port Microgrid Considering Transmissive Efficiency

Ban, Z., Teng, F., Zhang, H., Li, S., Xiao, G. & Guan, Y., sep. 2023, I: Mathematics. 11, 17, 3674.

A Decentralized Secondary Frequency Restoration Control with Local Current for Island Cascaded-type Microgrids

Shi, G., Han, H., Sun, Y., Ou, J., Guan, Y. & Guerrero, J. M., 1 jul. 2023, I: IEEE Transactions on Power Systems. 38, 4, s. 3136-3146 11 s., 9889201.

Quasi-SoC Balancing Control for Networked Ad-hoc Microgrids Against Natural Disasters

Guan, Y., Kang, W., Vasquez, J. C., Wijaya, F. D., Arumdati, N., Priyo Perdana, A. & Guerrero, J. M., 11 jun. 2023, *PEDG 2023 - 2023 IEEE 14th International Symposium on Power Electronics for Distributed Generation Systems*. IEEE (Institute of Electrical and Electronics Engineers), s. 1015-1020 6 s. 10215137. (IEEE International Symposium on Power Electronics for Distributed Generation Systems (PEDG)).

Fractional Order Virtual Synchronous Generator

Yu, Y., Guan, Y., Kang, W., Chaudhary, S. K., Vasquez, J. C. & Guerrero, J. M., 1 jun. 2023, I: IEEE Transactions on Power Electronics . 38, 6, s. 6874-6879 6 s.

Energy Management for a Port Integrated Energy System Based on Distributed Dual Decomposition Mixed Integer Linear Programming

Teng, F., Zhang, Q., Xiao, G., Ban, Z., Liang, Y. & Guan, Y., jun. 2023, I: Journal of Marine Science and Engineering. 11, 6, 1137.

Model-Based Reinforcement Learning Method for Microgrid Optimization Scheduling

Yao, J., Xu, J., Zhang, N. & Guan, Y., jun. 2023, I: Sustainability (Switzerland). 15, 12, 9235.

Ad-Hoc Microgrids Planning for Rural Communities under Natural Disasters

Ali, M., Vasquez, J. C., Guerrero, J. M., Guan, Y., Cruz, J. D. L. & Aslam, M. J., 9 mar. 2023, *2023 International Conference on Energy, Power, Environment, Control, and Computing (ICEPECC)*. IEEE (Institute of Electrical and Electronics Engineers), s. 1-5 5 s. 10209509

A Comparison of Grid-Connected Local Hospital Loads with Typical Backup Systems and Renewable Energy System Based Ad Hoc Microgrids for Enhancing the Resilience of the System

Ali, M., Vasquez, J. C., Guerrero, J. M., Guan, Y., Golestan, S., Cruz, J. D. L., Koondhar, M. A. & Khan, B., 15 feb. 2023, I: Energies. 16, 4, 1918.

Dynamic Frequency Performance Analysis and Improvement for Parallel VSG Systems Considering Virtual Inertia and Damping Coefficient

Chen, S., Sun, Y., Han, H., Shi, G., Guan, Y. & Guerrero, J. M., feb. 2023, I: IEEE Journal of Emerging and Selected Topics in Power Electronics. 11, 1, s. 478-489 12 s.

Ad-Hoc Microgrids Planning for Rural Communities Under Natural Disasters

Ali, M., Vasquez, J. C., Guerrero, J. M., Guan, Y., De La Cruz, J. & Yalman, Y., 9 jan. 2023. 1 s.

Conference Fireside Chat: "A Comparison of Typical Backup Systems and Ad Hoc Microgrids Powered by Renewable Energy for Improving the Resilience of Local Hospital Loads"

Ali, M., Vasquez, J. C., Guerrero, J. M., Guan, Y., De La Cruz, J. & Yalman, Y., 9 jan. 2023, 6 s.

A Defensive Mechanism Against Load Redistribution Attacks with Sequential Outage Potential Using Encrypted PMUs

Khaleghi, A., Ghazizadeh, M. S., Aghamohammadi, M. R., Guerrero, J. M., Vasquez, J. C. & Guan, Y., 2023, *IECON 2023 - 49th Annual Conference of the IEEE Industrial Electronics Society*. IEEE (Institute of Electrical and Electronics Engineers), 6 s. 10312307. (Proceedings of the Annual Conference of the IEEE Industrial Electronics Society).

Community microgrid planning in Lombok Island: an Indonesian case study

Kang, W., Guan, Y., Danang Wijaya, F., Kondorura Bawan, E., Priyo Perdana, A., Vasquez, J. C. & M. Guerrero, J., 2023, I: *Frontiers in Energy Research*. 11, 1209875.

Digital twin-based energy management for home microgrid: A quantification of redundant supply capacity

Shao, J., Wei, B., Guan, Y., Bazmohammadi, N., Vasquez, J. C. & Guerrero, J. M., 2023, *2023 IEEE Energy Conversion Congress and Exposition, ECCE 2023*. IEEE (Institute of Electrical and Electronics Engineers), s. 6176-6181 6 s. 10362682. (IEEE Energy Conversion Congress and Exposition (ECCE)).

Distributed Event-Triggered Power Optimization of Multiple Smart Homes in Microgrids

Kang, W., Guan, Y., Wei, B., Wu, Y., Vasquez, J. C. & Guerrero, J. M., 2023, *IECON 2023 - 49th Annual Conference of the IEEE Industrial Electronics Society*. IEEE (Institute of Electrical and Electronics Engineers), 6 s. 10312245. (Proceedings of the Annual Conference of the IEEE Industrial Electronics Society).

Distributed Event-Triggered Optimal Control Method for Heterogeneous Energy Storage Systems in Smart Grid

Kang, W., Chen, M., Guan, Y., Tang, L., Vasquez, J. C. & Guerrero, J. M., 1 okt. 2022, I: *IEEE Transactions on Sustainable Energy*. 13, 4, s. 1944-1956 13 s.

An Integrated Synchronization and Control Strategy for Parallel-Operated Inverters Based on V-I Droop Characteristics

Cao, W., Han, M., Zhang, X., Guan, Y., Guerrero, J. M. & Vasquez, J., maj 2022, I: *IEEE Transactions on Power Electronics*. 37, 5, s. 5373-5384 12 s.

Event-triggered distributed voltage regulation by heterogeneous BESS in low-voltage distribution networks

Kang, W., Chen, M., Guan, Y., Wei, B., Vasquez Q., J. C. & Guerrero, J. M., 15 apr. 2022, I: *Applied Energy*. 312, 118597.

Adaptive Power Management of Hierarchical Controlled Hybrid Shipboard Microgrids

Mutarraf, M. U., Guan, Y., Terriche, Y., Lien Su, C., Nasir, M., Vasquez, J. C. & Guerrero, J. M., 21 feb. 2022, I: *IEEE Access*. 10, s. 21397-21411 15 s.

An Overview of the Operation Architectures and Energy Management System for Multiple Microgrid Clusters

Guan, Y., Wei, B., Guerrero, J. M., Vasquez, J. C. & Gui, Y., 2022, I: *iEnergy*. 1, 3, s. 306 - 314

Electric cars, ships, and their charging infrastructure – A comprehensive review

Mutarraf, M. U., Guan, Y., Xu, L., Lien Su, C., Vasquez, J. C. & Guerrero, J. M., 2022, I: *Sustainable Energy Technologies and Assessments*. 52, Part B, 102177.

Multi-time scale-based hierarchical optimal control strategy for energy management of a 100% clean energy town

He, J., Shi, C., Wei, T., Peng, X. & Guan, Y., 2022, (Afsendt) I: *Journal of Energy Storage*.

A Communication-Less Multimode Control Approach for Adaptive Power Sharing in Ship-Based Seaport Microgrid

Mutarraf, M. U., Terriche, Y., Nasir, M., Guan, Y., Lien Su, C., Vasquez, J. C. & Guerrero, J. M., 1 dec. 2021, I: *IEEE Transactions on Transportation Electrification*. 7, 4, s. 3070-3082 13 s.

Inverter Parallelization for an Islanded Microgrid Using the Hopf Oscillator Controller Approach with Self-synchronization Capabilities

Li, M., Gui, Y., Guan, Y., Matas, J., Guerrero, J. M. & Vasquez, J. C., nov. 2021, I: IEEE Transactions on Industrial Electronics. 68, 11, s. 10879-10889

Hierarchical optimal energy management strategy of hybrid energy storage considering uncertainty for a 100% clean energy town

He, J., Shi, C., Wei, T., Peng, X. & Guan, Y., sep. 2021, I: Journal of Energy Storage. 41, 102917.

An IoT Platform-based Multi-objective Energy Management System for Residential Microgrids

Guan, Y., Feng, W., Wu, Y., Vasquez, J. C. & Guerrero, J. M., 29 nov. 2020, *2020 IEEE 9th International Power Electronics and Motion Control Conference, IPEMC 2020 ECCE Asia*. IEEE (Institute of Electrical and Electronics Engineers), s. 3107-3112 6 s. 9368001

A Decentralized Control Scheme for Adaptive Power-Sharing in Ships based Seaport Microgrid.

Mutarraf, M. U., Terriche, Y., Nasir, M., Guan, Y., Su, C.-L., Vasquez, J. C. & Guerrero, J. M., nov. 2020, *Proceedings - IECON 2020: 46th Annual Conference of the IEEE Industrial Electronics Society*. IEEE (Institute of Electrical and Electronics Engineers), s. 3126-3131 6 s. 9255344. (Proceedings of the Annual Conference of the IEEE Industrial Electronics Society).

Hil-assessed fast and accurate single-phase power calculation algorithm for voltage source inverters supplying to high total demand distortion nonlinear loads

Mariachet, J. E., Guan, Y., Matas, J., Martín, H., Li, M. & Guerrero, J. M., okt. 2020, I: Electronics (Switzerland). 9, 10, s. 1-24 24 s., 1643.

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

Wu, Y., Wu, Y., Guerrero, J. M., Vasquez, J. C., Garcia, E. J. P. & Guan, Y., mar. 2020, I: Electronics. 9, 4, s. 1-18 18 s., 550.

An Introduction to the Internet of Things

Kölsch, J., Zivkovic, C., Guan, Y. & Grimm, C., 1 jan. 2020, *IoT Platforms, Use Cases, Privacy, and Business Models: With Hands-on Examples Based on the VICINITY Platform*. Springer Publishing Company, s. 1-19 19 s.

IoT Platforms

Uwiringiyimana, M. M., Nandagopal, G., Guan, Y., Vinkovič, S., Kölsch, J. & Heinz, C., 1 jan. 2020, *IoT Platforms, Use Cases, Privacy, and Business Models: With Hands-on Examples Based on the VICINITY Platform*. Springer Publishing Company, s. 21-49 29 s.

Methods and Tools for Validation and Testing

Kölsch, J., Guan, Y. & Grimm, C., 1 jan. 2020, *IoT Platforms, Use Cases, Privacy, and Business Models: With Hands-on Examples Based on the VICINITY Platform*. Springer Publishing Company, s. 81-98 18 s.

Preface

Zivkovic, C., Guan, Y. & Grimm, C., 1 jan. 2020, *IoT Platforms, Use Cases, Privacy, and Business Models: With Hands-on Examples Based on the VICINITY Platform*. Springer Publishing Company, s. vii

IoT Platforms, Use Cases, Privacy, and Business Models: With Hands-on Examples Based on the VICINITY Platform

Zivkovic, C. (Redaktør), Guan, Y. (Redaktør) & Grimm, C. (Redaktør), 2020, Springer. 227 s.

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

Mariachet, J. E., Matas, J., Martín, H., Li, M., Guan, Y. & Guerrero, J. M., nov. 2019, I: Electronics (Switzerland). 8, 11, 19 s., 1366.

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

Xie, P., Yuan, C., Guan, Y., Tan, S., Li, M., Vasquez, J. C. & Guerrero, J. M., sep. 2019, *Proceedings of 2019 IEEE Energy Conversion Congress and Exposition (ECCE)*. IEEE (Institute of Electrical and Electronics Engineers), s. 2092-2098 7 s. 8912574. (IEEE Energy Conversion Congress and Exposition).

An Effective Solution for Regeneration Protection in Uninterruptible Power Supply

Lu, J., Guerrero, J. M., Savaghebi, M., Ghias, A. M. Y. M., Guan, Y., Hou, X. & Vasquez, J. C., maj 2019, I: IEEE Transactions on Industry Applications. 55, 3, s. 3055-3065 11 s., 8645693.

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

Guan, Y., Feng, W., Palacios-Garcia, E. J., Vasquez, J. C. & Guerrero, J. M., maj 2019, *Proceedings of 2019 15th International Conference on Distributed Computing in Sensor Systems (DCOSS)*. IEEE Press, s. 248-254 7 s. 8804844. (International Conference on Distributed Computing in Sensor Systems (DCOSS)).

Guest Editorial Special Section on Energy Internet

Guerrero, J. M., Guan, Y., Vasquez, J. C. & Sun, K., mar. 2019, I: IEEE Transactions on Industrial Informatics. 15, 3, s. 1753-1755 3 s., 8606128.

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

Guan, Y., Feng, W., Wei, B., Liu, W., Li, M., Quintero, J. C. V. & Guerrero, J. M., 22 okt. 2018, *Proceedings of the 2018 International Power Electronics Conference (IPEC-Niigata 2018 -ECCE Asia)*. IEEE (Institute of Electrical and Electronics Engineers), s. 3678-3683 6 s. 8507423

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

Li, M., Gui, Y., Jin, Z., Guan, Y. & Guerrero, J. M., 22 okt. 2018, *2018 International Power Electronics Conference, IPEC-Niigata - ECCE Asia 2018*. IEEE (Institute of Electrical and Electronics Engineers), s. 2668-2672 5 s. 8507446

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

Lu, J., Savaghebi, M., Guan, Y., Quintero, J. C. V., Ghias, A. M. Y. M. & Guerrero, J. M., okt. 2018, I: IEEE Access. 6, s. 56184-56191 8 s., 8472209.

Improved Direct Power Control for Grid-Connected Voltage Source Converters

Gui, Y., Kim, C., Chung, C. C., Guerrero, J. M., Guan, Y. & Quintero, J. C. V., okt. 2018, I: IEEE Transactions on Industrial Electronics. 65, 10, s. 8041-8051 11 s.

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

Guan, Y., Meng, L., Li, C., Quintero, J. C. V. & Guerrero, J. M., 1 sep. 2018, I: IEEE Transactions on Smart Grid. 9, 5, s. 4847-4860 14 s., 7862235.

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

Guan, Y., Feng, W., Lu, J., Guerrero, J. M. & Vasquez, J. C., sep. 2018, *Proceedings of the 2018 IEEE Energy Conversion Congress and Exposition (ECCE)*. IEEE Press, s. 5899-5904 6 s. 8557795. (IEEE Energy Conversion Congress and Exposition).

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

Wei, F., Sun, K., Guan, Y., Guerrero, J. M. & Xiao, X., jul. 2018, I: IEEE Transactions on Smart Grid. 9, 4, s. 3486-3495 10 s.

DC-Link Protection and Control in Modular Uninterruptible Power Supply

Lu, J., Savaghebi, M., Guan, Y., Golestan, S., Quintero, J. C. V., Guerrero, J. M. & Marzabal, A., maj 2018, I: IEEE Transactions on Industrial Electronics. 65, 5, s. 3942 - 3953 12 s., 8060574.

基于分层控制的微电网并网谐波电流主动抑制控制策略

Feng, W., Sun, K., Guan, Y., Guerrero, J. M. & Xiao, X., 25 mar. 2018, I: *Diangong Jishu Xuebao/Transactions of China Electrotechnical Society*. 33, 6, s. 1400-1409 10 s.

Multi-mode operations for on-line uninterruptible power supply

Lu, J., Savaghebi, M., Guan, Y., Li, M. & Guerrero, J., mar. 2018, *Proceedings of the 33rd Annual IEEE Applied Power Electronics Conference and Exposition - APEC 2018*. IEEE Press, s. 180-187 8 s. (IEEE Applied Power Electronics Conference and Exposition (APEC)).

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

Wei, F., Sun, K., Guan, Y., Guerrero, J. M. & Xiao, X., 29 nov. 2017, I: *The Journal of Engineering*. 2017, 13, s. 1399-1403 4 s.

A novel harmonic current sharing control strategy for parallel-connected inverters

Guan, Y., Guerrero, J. M., Savaghebi, M., Quintero, J. C. V. & Wei, F., okt. 2017, *Proceedings of 2017 IEEE Energy Conversion Congress and Exposition (ECCE)*. IEEE Press, s. 1602-1607 6 s.

Grid Architecture for Future Distribution System—A Cyber-Physical System Perspective

Li, C., Dragicevic, T., Aldana, N. L. D., Hernández, A. C. L., Guan, Y., Rasmussen, T. B. & Beheshtaein, S., okt. 2017, *Proceedings of 43rd Annual Conference of the IEEE Industrial Electronics Society, IECON 2017*. IEEE Press, s. 5235-5239 5 s.

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

Lu, J., Guan, Y., Savaghebi, M. & Guerrero, J. M., okt. 2017, *Proceedings of 2017 IEEE Energy Conversion Congress and Exposition (ECCE)*. IEEE Press, 7 s. (IEEE Energy Conversion Congress and Exposition, Bind 2017).

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

Guan, Y., Quintero, J. C. V. & Guerrero, J. M., jun. 2017, *Proceedings of 2017 IEEE 26th International Symposium on Industrial Electronics (ISIE)*. IEEE Press, s. 51-56 6 s.

An Open Virtual Neighbourhood Network to Connect IoT Infrastructures and Smart Objects – VICINITY: IoT enables interoperability as a service

Guan, Y., Quintero, J. C. V., Guerrero, J. M., Samovich, N., Vanya, S., Oravec, V., Garcia-Castro, R., Serena, F., Poveda-Villalon, M., Rodijicic, C., Heinz, C., Grimm, C., Tryferidis, A., Tzovaras, D., Dickerson, K., Paralic, M., Skokan, M. & Sabol, T., jun. 2017, *Proceedings of 2017 Global Internet of Things Summit (GloTS)*. IEEE Press, 6 s.

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

Guan, Y., Meng, L., Li, C., Vasquez, J. C. & Guerrero, J. M., mar. 2017, *Proceedings of the 2017 IEEE Applied Power Electronics Conference and Exposition (APEC)*. IEEE Press, s. 2788-2794 7 s. 7931093. (IEEE Applied Power Electronics Conference and Exposition (APEC)).

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

Guan, Y., Quintero, J. C. V. & Guerrero, J. M., nov. 2016, I: *IEEE Transactions on Industry Applications*. 52, 6, s. 5019 - 5028 10 s.

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

Liu, W., Guo, X., Sulligoi, G., Guan, Y., Zhao, X., Wei, B., Savaghebi, M. & Guerrero, J. M., sep. 2016, *Proceedings of 8th Annual IEEE Energy Conversion Congress & Exposition (ECCE), 2016*. IEEE Press, 6 s.

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

Guan, Y., Guerrero, J. M., Zhao, X., Quintero, J. C. V. & Guo, X., jun. 2016, I: *IEEE Transactions on Power Electronics*. 31, 6, s. 4576 - 4593 18 s.

Comparison of a Synchronous Reference Frame Virtual Impedance-Based Autonomous Current Sharing Control with Conventional Droop Control for Parallel-Connected Inverters

Guan, Y., Guerrero, J. M., Zhao, X. & Quintero, J. C. V., maj 2016, *2016 8th International Power Electronics and Motion Control Conference - ECCE Asia (IPEMC 2016-ECCE Asia)*. IEEE Press, s. 3419 - 3426 8 s. 7512844

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

Wei, F., Sun, K., Guan, Y., Guerrero, J. M. & Xiao, X., maj 2016, *2016 8th International Power Electronics and Motion Control Conference - ECCE Asia (IPEMC 2016-ECCE Asia)*. IEEE Press, s. 3715 - 3722 8 s.

Synchronization control strategy for microgrid and grid based on hierarchical control

Feng, W., Guan, Y., Ju, C., Yang, Z. & Xu, H., 28 feb. 2016, I: *Taiyangneng Xuebao/Acta Energiae Solaris Sinica*. 37, 2, s. 393-399 7 s.

A harmonic current suppression strategy for voltage source grid-connected inverters based on output voltage hybrid control in islanded microgrids

Feng, W., Sun, K., Guan, Y. & Wang, Y., 2016, I: *Diangong Jishu Xuebao*. 31, 7, s. 72-80 9 s.

Novel Control Strategies for Parallel-Connected Inverters in AC Microgrids

Guan, Y., 2016, Aalborg Universitetsforlag.

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

Guan, Y., Quintero, J. C. V., Guerrero, J. M., Wang, Y. & Feng, W., nov. 2015, I: *IEEE Transactions on Industry Applications*. 51, 6, s. 4729-4742 13 s.

Smart Metering System for Microgrids

Palacios-Garcia, E. J., Guan, Y., Savaghebi, M., Quintero, J. C. V., Guerrero, J. M., Moreno-Munoz, A. & Ipsen, B. S., nov. 2015, *IECON 2015, Yokohama, november 2015*. IEEE Press, s. 003289 - 003294 6 s.

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

Wei, F., Sun, K., Guan, Y., Guerrero, J. M. & Xiao, X., sep. 2015, *Proceedings of the 2015 IEEE Energy Conversion Congress and Exposition (ECCE)*. IEEE Press, s. 525 - 532 8 s.

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

Firoozabadi, M. S., Guan, Y., Quintero, J. C. V., Guerrero, J. M. & Nielsen, C., jul. 2015, *Proceedings of the Seminario Anual de Automática, Electrónica Industrial e Instrumentación 2015 (SAAEI'15)*. 5 s.

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

Guan, Y., Quintero, J. C. V., Guerrero, J. M. & Coelho, E. A. A., mar. 2015, *Proceedings of the 30th Annual IEEE Applied Power Electronics Conference and Exposition, APEC 2015*. IEEE Press, s. 571 - 578 8 s. (IEEE Applied Power Electronics Conference and Exposition. Conference Proceedings).

Study on harmonic restriction of grid-connected current for low power operation of pv power generation system

Huang, X., Guan, Y., Wang, H., Wang, Y. & Xu, H., 28 feb. 2015, I: *Taiyangneng Xuebao/Acta Energiae Solaris Sinica*. 36, 2, s. 414-421 8 s.

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

Guan, Y., Guerrero, J. M. & Quintero, J. C. V., 2015, *Proceedings of the 2015 9th International Conference on Power Electronics and ECCE Asia (ICPE-ECCE Asia)*. IEEE Press, s. 475 - 481 7 s.

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

Guan, Y., Quintero, J. C. V. & Guerrero, J. M., 2015, *Proceedings of the 2015 IEEE Energy Conversion Congress and Exposition (ECCE)*. IEEE Press, s. 2333 - 2340 8 s.

A Novel Frequency Restoring Strategy of Hydro-PV Hybrid Microgrid

Wei, F., Kai, S., Guan, Y. & Wang, Y., nov. 2014, *Proceedings of the IEEE International Power Electronics and Application Conference and Exposition (IEEE PEAC'14)*. IEEE Press, s. 348 - 353 6 s.

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

Guan, Y., Vasquez, J. C., Guerrero, J. M., Wu, D., Feng, W. & Wang, Y., sep. 2014, *Proceedings of the 2014 IEEE Energy Conversion Congress and Exposition (ECCE)*. IEEE Press, s. 1573-1580 8 s.

Secondary Coordinated Control of Islanded Microgrids Based on Consensus Algorithms

Wu, D., Dragicevic, T., Vasquez, J. C., Guerrero, J. M. & Guan, Y., sep. 2014, *Proceedings of the 2014 IEEE Energy Conversion Congress and Exposition (ECCE)*. IEEE Press, s. 4290-4297 8 s.

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

Guan, Y., Vasquez, J. C. & Guerrero, J. M., maj 2014, *Proceedings of the 2014 IEEE International Energy Conference (ENERGYCON)*. IEEE Press, s. 182-188 7 s. (I E E E International Energy Conference. ENERGYCON proceedings).

Analysis and experimental verification of new power flow control for grid-connected inverter with LCL filter in microgrid
Gu, H., Guan, Y., Wang, H., Wei, B. & Guo, X., 2014, I: *The Scientific World Journal*. 2014, 263590.

Stability analysis of hydraulic-PV hybrid micro-grid based on small-signal dynamic model

Feng, W., Guan, Y., Yibo, W. & Xu, H., 2013, *2013 International Conference on Electrical Machines and Systems, ICEMS 2013*. IEEE Computer Society Press, s. 285-290 6 s. 6754454. (2013 International Conference on Electrical Machines and Systems, ICEMS 2013).

Control strategy for three-phase inverters dominated microgrid in autonomous operation

Guan, Y., Wu, W. & Guo, X., 25 nov. 2011, I: *Zhongguo Dianji Gongcheng Xuebao/Proceedings of the Chinese Society of Electrical Engineering*. 31, 33, s. 52-60 9 s.

Intentional islanding voltage control for three-phase grid-connected inverters

Wang, B., Guo, X., Mei, Q., Guan, Y., Wang, L. & Sun, X., jul. 2011, I: *Dianwang Jishu/Power System Technology*. 35, 7, s. 91-95 5 s.

Control strategy for autonomous operation of three-phase inverters dominated microgrid under different line impedance

Guan, Y., Wang, Y., Yang, Z., Cao, R. & Xu, H., 2011, *2011 International Conference on Electrical Machines and Systems, ICEMS 2011*. 6073435. (2011 International Conference on Electrical Machines and Systems, ICEMS 2011).