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## Publications

### **A Review of DC Shipboard Microgrids Part II: Control Architectures, Stability Analysis and Protection Schemes**

Xu, L., Guerrero, J. M., Lashab, A., Wei, B., Bazmohammadi, N., Vasquez, J. & Abusorrah, A. M., 1 Apr 2022, In: IEEE Transactions on Power Electronics . 37, 4, p. 4105-4120 16 p., 9616407.

### **Impedance Modeling of Three-phase Grid-Connected Voltage Source Converters With Frequency-Locked-Loop-Based Synchronization Algorithms**

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### **Low-Frequency Oscillation Analysis of VSM-Based VSC-HVDC Systems Based on the Five-Dimensional Impedance Stability Criterion**

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**Stability Enhancement of Grid-Connected Inverters Using Weighted Average Current Control Method**

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**A Sliding Mode Control of an Active Power Filter**

Miret, J., López, O., Castilla, M., Matas, J. & Guerrero, J. M., Dec 2003, p. 1056-1060. 5 p.

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

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**A wireless load sharing controller to improve dynamic performance of parallel-connected UPS inverters**

Guerrero, J. M., García de Vicuña, L., Matas, J., Miret, J. & Castilla, M., Aug 2003, In: PESC Record - IEEE Annual Power Electronics Specialists Conference. 3, p. 1408-1413 6 p.

**Simple nonlinear controller to reduce line and load disturbances in HBCC converter**

García de Vicuña, L., Guerrero, J. M., Matas, J., Castilla, M. & Miret, J., 5 Dec 2002, In: Electronics Letters. 38, 25, p. 1751-1752 2 p.

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

Guerrero, J. M., De Vicuña, L. G., Miret, J. & Matas, J., 1 Dec 2002, p. 257-261. 5 p.

**Discrete non-linear control of a PWM inverter**

Miret, J., Garcia de Vicuña, J. L., Guerrero, J. M., Matas, J. & Castilla, M., 1 Dec 2002, p. 101-104. 4 p.

**Feedback sliding mode control linearization of a single phase active filter**

Matas, J., García de Vicuña, L., Guerrero, J. M., Miret, J. & López, O., 1 Dec 2002, p. 2933-2938. 6 p.

**A discrete sliding mode control of a buck-boost inverter**

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

Guerrero, J. M., Garcia de Vicuña, L., Matas, J. & Miret, J., Dec 2002, p. 274-277. 4 p.

**Integral control technique for single-phase UPS inverter**

Guerrero, J. M., De Vicuña, L. G., Miret, J., Matas, J. & Castilla, M., 1 Jan 2002, *ISIE 2002 - Proceedings of the 2002 IEEE International Symposium on Industrial Electronics*. IEEE, Vol. 4. p. 1043-1048 6 p. 1025931.

**Parallel operation of charge-controlled-DC-DC converters**

Guerrero, J. M., De Vicuña, L. G., Miret, J., Matas, J. & López, Ó., Jan 2002, *ISIE 2002 - Proceedings of the 2002 IEEE International Symposium on Industrial Electronics*. IEEE, Vol. 4. p. 1086-1090 5 p. 1025939

## 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

**40 nye medlemmer optaget i ATV i 2021**

Brian Vejrum Wæhrens, Josep M. Guerrero, Kirsten Gram-Hanssen, Morten Mattrup Smedskjær, Zhe Chen, Lasse Rosendahl & Katja Hose  
21/06/2021  
1 item of Media coverage

**55 danske forskere er blandt verdens mest citerede**

Frede Blaabjerg, Josep M. Guerrero, Henrik Lund, Brian Vad Mathiesen, Per Halkjær Nielsen, Xiongfei Wang & Juan C. Vasquez  
29/11/2021  
1 item of Media coverage

**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

### **A Digital Twin framework in Microgrids including Renewable Generation and Energy Storage**

Safavi, V., Guerrero, J. M., Vasquez, J. C. & Bazmohammadi, N.  
01/08/2021 → 31/07/2024

### **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

### **Analysis and Optimization of VSG Stability in Microgrids under Large-Signal Disturbances**

Jiang, B., Guerrero, J. M. & Vasquez, J. C.  
01/04/2021 → 31/03/2024

### **Artificial Intelligence based Adaptive Harmonic Suppression Method for VSG in Offshore Wind Power Plants**

Li, S., Guerrero, J. M. & Vasquez, J. C.  
01/04/2021 → 31/03/2024

### **DiCyPS: Center for Data-Intensive Cyber-Physical Systems**

Larsen, K. G., Skou, A., Pedersen, T. B., Jensen, C. S., Kjeldskov, J., Skov, M. B., Nielsen, B., Lahrmann, H., Bak-Jensen, B., Guerrero, J. M. & Raptis, D.  
Innovation Fund Denmark  
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

### **SALICRU: DC Voltage Railways Catenary - DCVOLTA**

Guerrero, J. M., Vasquez, J. C., Barrios Flores, M. A. & Guldbæk, B. K.  
SALICRU S.A.  
01/07/2021 → 31/12/2022

### **Decentralized Adaptive Protection Schemes in Micro Grid Clusters**

De La Cruz, J., Guerrero, J. M. & Vasquez, J. C.  
01/11/2021 → 31/10/2024

### **Distributed Converter And MicroGrid Advanced Control Algorithm Project**

Guerrero, J. M. & Guldbæk, B. K.  
Huawei Technologies Co., Ltd.  
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

**Energy Management System in Shipboard Microgrid**

Othman, M. B., Anvari-Moghaddam, A. & Guerrero, J. M.  
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**Flexible electric vehicle charging infrastructure (Flex-ChEV)**

Guerrero, J. M., Dragicevic, T., SUN, B., Schaltz, E., Vasquez, J. C. & Shafiee, Q.  
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**FPGA-based Protection System for Renewable Energy Sources Integrated Microgrids**

Wu, J., Guerrero, J. M. & Vasquez, J. C.  
15/02/2021 → 14/02/2024

**Future Residential LVDC Power Distribution Architectures**

Vasquez, J. C. & Guerrero, J. M.  
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**HeatReFlex: Green and Flexible District Heating/Cooling**

Anvari-Moghaddam, A., Guerrero, J. M., Nami, H. & Mohammadiivatloo, B.  
Danida Fellowship Centre  
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**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

**Large-Scale Integration of Renewable Energy Power Plants and Flexible Demand in the Egyptian Electric Grid**

Abubakr Hussein Ali, H., Guerrero, J. M. & Vasquez, J. C.  
01/04/2021 → 31/03/2024

**TECH-IN: Microgrid Technologies for Remote Indonesian Islands**

Vasquez, J. C., Guan, Y., Vasquez, J. C., Guerrero, J. M. & Guldbæk, B. K.  
Danida Fellowship Centre  
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**MeTER\_Demo: Microgrid Technology Research and Demonstration**

Guerrero, J. M., Wu, D., Guan, Y., Vasquez, J. C. & Savaghebi, M.  
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**HyMG: Microgrid technology research based on wind/PV/storage hybrid system**

Guerrero, J. M., Vasquez, J. C. & Wu, D.  
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**Modeling of Solar Cells and Environmental Conditions for Space Microgrids**

Raya-Armenta, J. M., Guerrero, J. M., Vasquez, J. C. & Saez, D.  
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**Flywheel : Off-Shore Application of the Flywheel Energy Storage**

Guerrero, J. M., Dragicevic, T. & Anvari-Moghaddam, A.  
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**OFFSHORE WIND FARMS LARGE-SCALE INTEGRATION IN TURKEY**

Chaudhary, S., Guerrero, J. M., Vasquez, J. C., Tinajero, G. D. A. & Høyer, M.  
01/06/2020 → 31/05/2023

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

Guan, Y., Vasquez, J. C., Guerrero, J. M. & Miltersen, A. H.  
European Commission  
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**RENEWABLE ENERGY BASED MINIGRID CLUSTERS IN ETHIOPIA**

Chaudhary, S., Guerrero, J. M., Vasquez, J. C., Tinajero, G. D. A., Guan, Y., Bazmohammadi, N. & Wu, Y.  
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**REMCE: Renewable Energy based Minigrid Clusters in Ethiopia**

Chaudhary, S., Golestan, S., Guan, Y., Wu, Y., Vasquez, J. C., Guerrero, J. M. & Guldbæk, B. K.  
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**REConnect: Renewable Energy Converters Connected in Parallel**

Guerrero, J. M., Vasquez, J. C., Guan, Y. & Guldbæk, B. K.  
ReConvert BV  
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**REConnect: Renewable Energy Converters Connected to Grid**

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**The Energy Internet - Integrating Internet of Things into the Smart Grid**

Vasquez, J. C., Guerrero, J. M., Gui, Y., Diaz, E. R. & Garcia, E. J. P.  
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