

# Jon Andoni Barrena

## List of Publications by Year in descending order

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Version: 2024-02-01

51  
papers

4,024  
citations

516710

16  
h-index

552781

26  
g-index

51  
all docs

51  
docs citations

51  
times ranked

5327  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Review on supercapacitors: Technologies and materials. Renewable and Sustainable Energy Reviews, 2016, 58, 1189-1206.  | 16.4 | 2,197     |
| 2  | Individual Voltage Balancing Strategy for PWM Cascaded H-Bridge Converter-Based STATCOM. IEEE Transactions on Industrial Electronics, 2008, 55, 21-29.   | 7.9  | 290       |
| 3  | Hybrid ac/dc microgridsâ€™Part I: Review and classification of topologies. Renewable and Sustainable Energy Reviews, 2015, 52, 1251-1259.  | 16.4 | 264       |
| 4  | Modular Multilevel Converter With Different Submodule Conceptsâ€™Part I: Capacitor Voltage Balancing Method. IEEE Transactions on Industrial Electronics, 2013, 60, 4525-4535.                           | 7.9  | 246       |
| 5  | Hybrid ac/dc microgridsâ€™Part II: Review and classification of control strategies. Renewable and Sustainable Energy Reviews, 2015, 52, 1123-1134.   | 16.4 | 178       |
| 6  | Modular Multilevel Converter With Different Submodule Conceptsâ€™Part II: Experimental Validation and Comparison for HVDC Application. IEEE Transactions on Industrial Electronics, 2013, 60, 4536-4545. | 7.9  | 176       |
| 7  | An Experimentally Verified Active Gate Control Method for the Series Connection of IGBT/Diodes. IEEE Transactions on Power Electronics, 2012, 27, 1025-1038.   | 7.9  | 110       |
| 8  | Modulation of Modular Multilevel Converter for HVDC application. , 2010, , .   |      | 61        |
| 9  | Interlinking converters and their contribution to primary regulation: a review. International Journal of Electrical Power and Energy Systems, 2019, 111, 44-57.  | 5.5  | 40        |
| 10 | Modelling, simulation and control of Modular Multilevel Converter. , 2010, , .   |      | 39        |
| 11 | DC Voltage Balancing for PWM Cascaded H-Bridge Converter Based STATCOM. Industrial Electronics Society (IECON ), Annual Conference of IEEE, 2006, , .  | 0.0  | 29        |
| 12 | Novel Zero-Sequence Blocking Transformer (ZSBT) Using Three Single-Phase Transformers. IEEE Transactions on Energy Conversion, 2013, 28, 234-242.  | 5.2  | 28        |
| 13 | Equivalence of Primary Control Strategies for AC and DC Microgrids. Energies, 2017, 10, 91.  | 3.1  | 25        |
| 14 | Power Balancing in Cascaded H-Bridge and Modular Multilevel Converters Under Unbalanced Operation: A Review. IEEE Access, 2021, 9, 110525-110543.  | 4.2  | 25        |
| 15 | A Novel PWM Modulation Strategy for DC Voltage Balancing in Cascaded H-Bridge Multilevel Converters. , 2007, , .   |      | 24        |
| 16 | Design and small-signal stability analysis of a virtual-capacitor control for DC microgrids. , 2017, , .   |      | 23        |
| 17 | Design, analysis and comparison of multilevel topologies for DSTATCOM applications. , 2005, , .  |      | 21        |
| 18 | New Hexagonal Three-Phase Voltage-Source Converter Topology for High-Power Applications. IEEE Transactions on Industrial Electronics, 2015, 62, 30-39.   | 7.9  | 21        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 19 | Isolated Double-Twin VSC Topology Using Three-Phase IPTs for High-Power Applications. IEEE Transactions on Power Electronics, 2014, 29, 5761-5769.  | 7.9 | 20        |
| 20 | Analysis and Improved Operation of a PEBB-Based Voltage-Source Converter for FACTS Applications. IEEE Transactions on Power Delivery, 2013, 28, 1330-1338.                                  | 4.3 | 17        |
| 21 | Unified Virtual Inertia for ac and dc Microgrids: And the Role of Interlinking Converters. IEEE Electrification Magazine, 2019, 7, 56-68.   | 1.8 | 17        |
| 22 | Impedance-Based Stability Evaluation of Virtual Synchronous Machine Implementations in Converter Controllers. , 2018, , .   |     | 16        |
| 23 | Spectral analysis of a transmission system based on AC submarine cables for an offshore wind farm. , 2009, , .  |     | 14        |
| 24 | Optimized LCL filter design methodology applied to MV grid-connected multimegawatt VSC. , 2012, , .   |     | 13        |
| 25 | Dual Inertia-Emulation Control for Interlinking Converters in Grid-Tying Applications. IEEE Transactions on Smart Grid, 2021, 12, 3868-3876.  | 9.0 | 13        |
| 26 | Active substation design to maximize DG integration. , 2009, , .  |     | 11        |
| 27 | Component minimized AC/DC/AC converter with DC-link capacitors voltages balancing. , 2009, , .  |     | 9         |
| 28 | Medium-Voltage AC Static Switch Solution to Feed Neutral Section in a High-Speed Railway System. Energies, 2018, 11, 2740.  | 3.1 | 9         |
| 29 | Primary control operation modes in islanded hybrid ac/dc microgrids. , 2015, , .  |     | 8         |
| 30 | Analysis of massive integration of renewable power plants under new regulatory frameworks. , 2014, , .  |     | 7         |
| 31 | Voltage Source Converter Topology for High-Power Applications Serializing Three-Phase Converters and H-Bridges. IEEE Transactions on Industrial Electronics, 2014, 61, 5184-5191.           | 7.9 | 7         |
| 32 | Comparative Eigenvalue Analysis of Synchronous Machine Emulations and Synchronous Machines. , 2019, , .   |     | 7         |
| 33 | An IGBT behavioural model based on curve fitting methods. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .   | 0.0 | 6         |
| 34 | Frequency restoration in insular grids using Ultracaps ESS. , 2010, , .   |     | 6         |
| 35 | Analytical Modeling Approach to Study Harmonic Mitigation in AC Grids with Active Impedance at Selective Frequencies. Energies, 2018, 11, 1337.   | 3.1 | 6         |
| 36 | Comparison of DC-bus voltage balancing strategies for three-phase DSTATCOM based on cascaded H-bridge multilevel converter. Power Electronics Specialist Conference (PESC), IEEE, 2008, , . | 0.0 | 5         |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 37 | VSC topology comparison for STATCOM application under unbalanced conditions. , 2013, , .   |     | 5         |
| 38 | IP-ZSBT Magnetic Configuration for Parallelizationâ€“Serialization of Three-Phase High Power Converters. IEEE Transactions on Energy Conversion, 2014, 29, 366-374.  | 5.2 | 5         |
| 39 | Methodology to Evaluate Converter Structures based on 3L NPC PEBBs. , 2020, , .  |     | 4         |
| 40 | Electronic on Load Tap Changer Transformer for DC Electrical Railway Power Supply Systems. , 2019, , .   |     | 3         |
| 41 | Power electronics applied to voltage control in rural distribution networks with penetration of distributed generation. Renewable Energy and Power Quality Journal, 0, , 879-884.                                  | 0.2 | 3         |
| 42 | Passive balancing of the DC bus midpoint for Neutral Point Clamped (NPC) based Voltage Source Converters. , 2013, , .  |     | 2         |
| 43 | Equivalence of primary control strategies for AC and DC microgrids. , 2016, , .  |     | 2         |
| 44 | Benefits of distributed energy storage working in parallel to distributed energy resources. Renewable Energy and Power Quality Journal, 2009, 1, 739-743.  | 0.2 | 2         |
| 45 | Grid manager design using Battery Energy Storage Systems in weak power systems with high penetration of wind energy. Renewable Energy and Power Quality Journal, 2010, 1, 1208-1212.                               | 0.2 | 2         |
| 46 | Reactive Power Limits of Single-Phase and Three-Phase DC-Link VSC STATCOMs under Negative-Sequence Voltage and Current. , 2021, , .  |     | 2         |
| 47 | Reactive power limits of Cascaded H-Bridge STATCOMs in star and delta configuration under negative-sequence current withstanding. International Journal of Electrical Power and Energy Systems, 2022, 142, 108267. | 5.5 | 2         |
| 48 | Distribution network simulation method based on a combination of dynamic power-flow simulation and electro-magnetic simulation. , 2013, , .  |     | 1         |
| 49 | Optimization of the consumption for industrial customers using battery energy storage systems. , 2015, , .   |     | 1         |
| 50 | Experimental test bench for testing DC microgrid control strategies. , 2017, , .   |     | 1         |
| 51 | Hybrid AC/DC Microgrid Mode-Adaptive Controls. , 2017, , .   |     | 1         |