Nicu Bizon

List of Publications by Citations

152 papers	1,967 citations	29 h-index	40 g-index
195 ext. papers	2,578 ext. citations	4.6 avg, IF	6.55 L-index

#	Paper	IF	Citations
152	Efficient energy control strategies for a Standalone Renewable/Fuel Cell Hybrid Power Source. *Energy Conversion and Management*, **2015**, 90, 93-110	10.6	110
151	Load-following mode control of a standalone renewable/fuel cell hybrid power source. *Energy Conversion and Management*, **2014**, 77, 763-772	10.6	82
150	Control of High-Energy High-Power Densities Storage Devices by Li-ion Battery and Supercapacitor for Fuel Cell/Photovoltaic Hybrid Power Plant for Autonomous System Applications. *IEEE Transactions on Industry Applications*, **2016**, 52, 4395-4407	4.3	66
149	Global Extremum Seeking Control of the power generated by a Photovoltaic Array under Partially Shaded Conditions. *Energy Conversion and Management*, **2016**, 109, 71-85	10.6	64
148	On tracking robustness in adaptive extremum seeking control of the fuel cell power plants. *Applied Energy*, **2010**, 87, 3115-3130	10.7	63
147	Global Maximum Power Point Tracking (GMPPT) of Photovoltaic array using the Extremum Seeking Control (ESC): A review and a new GMPPT ESC scheme. *Renewable and Sustainable Energy Reviews*, **2016**, 57, 524-539	16.2	59
146	Energy optimization of fuel cell system by using global extremum seeking algorithm. *Applied Energy*, **2017**, 206, 458-474	10.7	56
145	Real-time optimization strategy for fuel cell hybrid power sources with load-following control of the fuel or air flow. *Energy Conversion and Management*, **2018**, 157, 13-27	10.6	56
144	Fuel Cell Electric Vehicles: A Brief Review of Current Topologies and Energy Management Strategies. *Energies*, **2021**, 14, 252	3.1	49
143	Optimization of the proton exchange membrane fuel cell hybrid power system for residential buildings. *Energy Conversion and Management*, **2018**, 163, 22-37	10.6	47
142	Fuel economy using the global optimization of the Fuel Cell Hybrid Power Systems. *Energy Conversion and Management*, **2018**, 173, 665-678	10.6	47
141	Improving the PEMFC energy efficiency by optimizing the fueling rates based on extremum seeking algorithm. *International Journal of Hydrogen Energy*, **2014**, 39, 10641-10654	6.7	46
140	Real-time strategies to optimize the fueling of the fuel cell hybrid power source: A review of issues, challenges and a new approach. *Renewable and Sustainable Energy Reviews*, **2018**, 91, 1089-1102	16.2	43
139	Energy efficiency for the multiport power converters architectures of series and parallel hybrid power source type used in plug-in/V2G fuel cell vehicles. *Applied Energy*, **2013**, 102, 726-734	10.7	43
138	Energy efficiency of multiport power converters used in plug-in/V2G fuel cell vehicles. *Applied Energy*, **2012**, 96, 431-443	10.7	41
137	Real-time optimization strategies of Fuel Cell Hybrid Power Systems based on Load-following control: A new strategy, and a comparative study of topologies and fuel economy obtained. *Applied Energy*, **2019**, 241, 444-460	10.7	40
136	Energy control strategies for the Fuel Cell Hybrid Power Source under unknown load profile. *Energy* , **2015**, 86, 31-41	7.9	40

135	Effective mitigation of the load pulses by controlling the battery/SMES hybrid energy storage system. *Applied Energy*, **2018**, 229, 459-473	10.7	39
134	Designing and modelling of the asymptotic perturbed extremum seeking control scheme for tracking the global extreme. *International Journal of Hydrogen Energy*, **2017**, 42, 17632-17644	6.7	38
133	Nonlinear control of fuel cell hybrid power sources: Part II □Current control. *Applied Energy*, **2011**, 88, 2574-2591	10.7	38
132	Performance analysis of the tracking of the global extreme on multimodal patterns using the Asymptotic Perturbed Extremum Seeking Control scheme. *International Journal of Hydrogen Energy* , **2017**, 42, 17645-17654	6.7	35
131	Optimal operation of fuel cell/wind turbine hybrid power system under turbulent wind and variable load. *Applied Energy*, **2018**, 212, 196-209	10.7	35
130	Energy harvesting from the FC stack that operates using the MPP tracking based on modified extremum seeking control. *Applied Energy*, **2013**, 104, 326-336	10.7	35
129	Nonlinear control of fuel cell hybrid power sources: Part I □Voltage control. *Applied Energy*, **2011**, 88, 2559-2573	10.7	34
128	A new topology of fuel cell hybrid power source for efficient operation and high reliability. *Journal of Power Sources*, **2011**, 196, 3260-3270	8.9	33
127	Hydrogen economy of the fuel cell hybrid power system optimized by air flow control to mitigate the effect of the uncertainty about available renewable power and load dynamics. *Energy Conversion and Management*, **2019**, 179, 152-165	10.6	33
126	Tracking the maximum efficiency point for the FC system based on extremum seeking scheme to control the air flow. *Applied Energy*, **2014**, 129, 147-157	10.7	32
125	Searching of the extreme points on photovoltaic patterns using a new Asymptotic Perturbed Extremum Seeking Control scheme. *Energy Conversion and Management*, **2017**, 144, 286-302	10.6	31
124	Global maximum power point tracking based on new extremum seeking control scheme. *Progress in Photovoltaics: Research and Applications*, **2016**, 24, 600-622	6.8	29
123	FC energy harvesting using the MPP tracking based on advanced extremum seeking control. *International Journal of Hydrogen Energy*, **2013**, 38, 1952-1966	6.7	26
122	Energy harvesting from the PV Hybrid Power Source. *Energy*, **2013**, 52, 297-307	7.9	24
121	Nonlinear Differential Flatness-Based Speed/Torque Control With State-Observers of Permanent Magnet Synchronous Motor Drives. *IEEE Transactions on Industry Applications*, **2018**, 54, 2874-2884	4.3	22
120	Efficient fuel economy strategies for the Fuel Cell Hybrid Power Systems under variable renewable/load power profile. *Applied Energy*, **2019**, 251, 113400	10.7	21
119	Hydrogen saving through optimized control of both fueling flows of the Fuel Cell Hybrid Power System under a variable load demand and an unknown renewable power profile. *Energy Conversion and Management*, **2019**, 184, 1-14	10.6	18
118	Hybrid power sources (HPSs) for space applications: Analysis of PEMFC/Battery/SMES HPS under unknown load containing pulses. *Renewable and Sustainable Energy Reviews*, **2019**, 105, 14-37	16.2	18

117	Energy Efficiency and Fuel Economy of a Fuel Cell/Renewable Energy Sources Hybrid Power System with the Load-Following Control of the Fueling Regulators. *Mathematics*, **2020**, 8, 151	2.3	18
116	. *IEEE Transactions on Transportation Electrification*, **2020**, 6, 519-529	7.6	16
115	Design of hybrid power systems using HOMER simulator for different renewable energy sources **2017**,		16
114	Fuel saving strategy using real-time switching of the fueling regulators in the proton exchange membrane fuel cell system. *Applied Energy*, **2019**, 252, 113449	10.7	15
113	Optimization of the Fuel Cell Renewable Hybrid Power System Using the Control Mode of the Required Load Power on the DC Bus. *Energies*, **2019**, 12, 1889	3.1	14
112	Implementing Blockchain Technology in Irrigation Systems That Integrate Photovoltaic Energy Generation Systems. *Sustainability*, **2020**, 12, 1540	3.6	14
111	An Optimization Model for the Temporary Locations of Mobile Charging Stations. *Mathematics*, **2020**, 8, 453	2.3	14
110	Air Flow Real-time Optimization Strategy for Fuel Cell Hybrid Power Sources with Fuel Flow Based on Load-following. *Fuel Cells*, **2018**, 18, 809-823	2.9	14
109	Sensitivity analysis of the fuel economy strategy based on load-following control of the fuel cell hybrid power system. *Energy Conversion and Management*, **2019**, 199, 111946	10.6	12
108	Load Frequency Control Using Hybrid Intelligent Optimization Technique for Multi-Source Power Systems. *Energies*, **2021**, 14, 1581	3.1	12
107	Real-time strategy to optimize the fuel flow rate of fuel cell hybrid power source under variable load cycle **2017**,		11
106	A Synergetic Sliding Mode Controller Applied to Direct Field-Oriented Control of Induction Generator-Based Variable Speed Dual-Rotor Wind Turbines. *Energies*, **2021**, 14, 4437	3.1	11
105	Analysis, Control and Optimal Operations in Hybrid Power Systems. *Green Energy and Technology*, **2013**,	0.6	10
104	Terminal Synergetic Control for Direct Active and Reactive Powers in Asynchronous Generator-Based Dual-Rotor Wind Power Systems. *Electronics (Switzerland)*, **2021**, 10, 1880	2.6	10
103	Improved Rotor Flux and Torque Control Based on the Third-Order Sliding Mode Scheme Applied to the Asynchronous Generator for the Single-Rotor Wind Turbine. *Mathematics*, **2021**, 9, 2297	2.3	10
102	Differential Flatness-Based Cascade Energy/Current Control of Battery/Supercapacitor Hybrid Source for Modern e□ehicle Applications. *Mathematics*, **2020**, 8, 704	2.3	9
101	Real-time strategy to optimize the airflow rate of fuel cell hybrid power source under variable load cycle **2017**,		9
100	Permanent Magnet Synchronous Motor Dynamic Modeling with State Observer-based Parameter Estimation for AC Servomotor Drive Application **2019**, 12,		9

99	Design and control of permanent magnet assisted synchronous reluctance motor with copper loss minimization using MTPA. *Journal of Electrical Engineering*, **2020**, 71, 11-19	0.6	9
98	Design and control of multiphase interleaved boost converters-based on differential flatness theory for PEM fuel cell multi-stack applications. *International Journal of Electrical Power and Energy Systems*, **2021**, 124, 106346	5.1	9
97	Hybrid Gravitational-Firefly Algorithm-Based Load Frequency Control for Hydrothermal Two-Area System. *Mathematics*, **2021**, 9, 712	2.3	9
96	Experimental Comparison of Three Real-Time Optimization Strategies Applied to Renewable/ FC-Based Hybrid Power Systems Based on Load-Following Control. *Energies*, **2018**, 11, 3537	3.1	9
95	Optimal energy management strategies for the electric vehicles compiling bibliometric maps. *International Journal of Energy Research*, **2021**, 45, 10129-10172	4.5	8
94	An optimized NQR spectrometer for detection of prohibited substances. *Measurement: Journal of the International Measurement Confederation*, **2020**, 151, 107158	4.6	7
93	Third-Order Sliding Mode Applied to the Direct Field-Oriented Control of the Asynchronous Generator for Variable-Speed Contra-Rotating Wind Turbine Generation Systems. *Energies*, **2021**, 14, 5877	3.1	7
92	Advanced Direct Vector Control Method for Optimizing the Operation of a Double-Powered Induction Generator-Based Dual-Rotor Wind Turbine System. *Mathematics*, **2021**, 9, 2403	2.3	7
91	Better Fuel Economy by Optimizing Airflow of the Fuel Cell Hybrid Power Systems Using Fuel Flow-Based Load-Following Control. *Energies*, **2019**, 12, 2792	3.1	6
90	Differential Flatness-Based Control of Current/Voltage Stabilization for a Single-Phase PFC with Multiphase Interleaved Boost Converters **2017**,		6
89	Model based control of modified four-phase interleaved boost converter for fuel cell power source for mobile based station **2015**,		6
88	Adaptive Control of Fuel Cell Converter Based on a New Hamiltonian Energy Function for Stabilizing the DC Bus in DC Microgrid Applications. *Mathematics*, **2020**, 8, 2035	2.3	6
87	Blockchain Technology Applied in Health The Study of Blockchain Application in the Health System (II) **2018**,		6
86	Robust Flatness-based Control with State Observer-Based Parameter Estimation for PMSM Drive **2018**,		6
85	SCADA Applications for Electric Power System. *Power Systems*, **2017**, 561-609	0.4	5
84	Optimization of the Fuel Cell Renewable Hybrid Power Systems. *Green Energy and Technology*, **2020** ,	0.6	5
83	Reducing the Cost of Electricity by Optimizing Real-Time Consumer Planning Using a New Genetic Algorithm-Based Strategy. *Mathematics*, **2020**, 8, 1144	2.3	5
82	The Use of Nuclear Quadrupole Resonance Spectroscopy for Detection of Prohibited Substances: Techniques and Equipment **2019**,		5

81	State-of-the-Art Review on IoT Threats and Attacks: Taxonomy, Challenges and Solutions. *Sustainability*, **2021**, 13, 9463	3.6	5
80	Differential Flatness Based-Control Strategy of a Two-Port Bidirectional Supercapacitor Converter for Hydrogen Mobility Applications. *Energies*, **2020**, 13, 2794	3.1	4
79	Robust Flatness Control with Extended Luenberger Observer for PMSM Drive **2018**,		4
78	Preventing reactant starvation of a 5 kW PEM fuel cell stack during sudden load change **2014**,		4
77	. *IEEE Transactions on Sustainable Energy*, **2021**, 12, 1500-1511	8.2	4
76	Model-Free Control of Multiphase Interleaved Boost Converter for Fuel Cell/Reformer Power Generation **2019**,		4
75	Energy Efficiency of PEM Fuel Cell Hybrid Power Source. *Lecture Notes in Energy*, **2017**, 371-391	0.4	3
74	Efficient and Secure Strategy for Energy Systems of Interconnected Farmers? Associations to Meet Variable Energy Demand. *Mathematics*, **2020**, 8, 2182	2.3	3
73	Analytical and experimental studies on a new linear energy harvester. *Canadian Journal of Physics*, **2018**, 96, 727-733	1.1	3
72	Malicious and Deliberate Attacks and Power System Resiliency. *Power Systems*, **2019**, 223-246	0.4	3
71	A Theoretical Terahertz Metamaterial Absorber Structure with a High Quality Factor Using Two Circular Ring Resonators for Biomedical Sensing. *Inventions*, **2021**, 6, 78	2.9	3
70	Renewable/Fuel Cell Hybrid Power System Operation Using Two Search Controllers of the Optimal Power Needed on the DC Bus. *Energies*, **2020**, 13, 6111	3.1	3
69	A Comprehensive Review of the Evolution of Networked Control System Technology and Its Future Potentials. *Sustainability*, **2021**, 13, 2962	3.6	3
68	Intelligent charging station in 5G environments: Challenges and perspectives. *International Journal of Energy Research*, **2021**, 45, 16418-16435	4.5	3
67	An Improved Particle Swarm Optimization Technique and its Application in Load Frequency Control **2021**,		3
66	Study of Hamiltonian Energy Control of Multiphase Interleaved Fuel Cell Boost Converter **2019**,		3
65	Overview of Microgrid. *Power Systems*, **2020**, 3-19	0.4	3
64	Control and Protection of the Smart Microgrids Using Internet of Things: Technologies, Architecture and Applications. *Power Systems*, **2020**, 749-770	0.4	3

63	Design, Modeling, and Differential Flatness Based Control of Permanent Magnet-Assisted Synchronous Reluctance Motor for e-Vehicle Applications. *Sustainability*, **2021**, 13, 9502	3.6	3
62	Software and hardware solutions for Using the keyboards by blind people **2019**,		2
61	**2016**,		2
60	On the search speed for the Extremum Seeking Control 2D-schemes. Part II - performances estimation **2013**,		2
59	Fuzzy interpolation of the average signal steps **2009**,		2
58	Fuel cell current ripple minimization using a bi-buck power interface **2008**,		2
57	Design and fabrication of a new micro-power scaled electromagnetic harvester. *Journal of Energy Systems*,51-66	0.8	2
56	Optimization Algorithms and Energy Management Strategies. *Green Energy and Technology*, **2020**, 57-105	5.6	2
55	Applications in Control of the Hybrid Power Systems. *Green Energy and Technology*, **2013**, 227-290	0.6	2
54	Improving the Fuel Economy and Battery Lifespan in Fuel Cell/Renewable Hybrid Power Systems Using the Power-Following Control of the Fueling Regulators. *Applied Sciences (Switzerland)*, **2020**, 10, 8310	2.6	2
53	Energy management strategies for hybrid electric vehicles - vosviwer bibliometric analysis **2020**,		2
52	An Optimized Triggering Algorithm for Event-Triggered Control of Networked Control Systems. *Mathematics*, **2021**, 9, 1262	2.3	2
51	A Comprehensive Risk Assessment Framework for Synchrophasor Communication Networks in a Smart Grid Cyber Physical System with a Case Study. *Energies*, **2021**, 14, 3428	3.1	2
50	Power Quality Issues and Mitigation Techniques in Microgrid. *Power Systems*, **2020**, 719-748	0.4	2
49	Design and Experimental Investigations of an Energy Storage System in Microgrids. *Power Systems*, **2020**, 207-232	0.4	2
48	A Simple and Safe Strategy for Improving the Fuel Economy of a Fuel Cell Vehicle. *Mathematics*, **2021**, 9, 604	2.3	2
47	ICT based Smart Management Solution to Realize Water and Energy Savings through Energy Efficiency Measures in Water Distribution Systems **2018**,		2
46	Communications for Electric Power System. *Power Systems*, **2017**, 547-559	0.4	1

45	The design of the graphical interface for the SCADA system on an industrial platform **2020**,		1
44	Performance of the load-following control switched to the air and hydrogen regulators of the fuel cell system **2020**,		1
43	On the search speed for the Extremum Seeking Control 2D-schemes. Part I - signal processing using orthogonal dither signals **2013**,		1
42	Fuzzy bang-bang control of a switching voltage regulator **2008**,		1
41	Energy generation system behaviour using a clocked fuzzy peak current control **2007**,		1
40	Hybrid Power Systems. *Green Energy and Technology*, **2020**, 17-55	0.6	1
39	PV Microgrids Efficiency: From Nanomaterials and Semiconductor Polymer Technologies for PV Cells to Global MPPT Control for PV Arrays. *Power Systems*, **2020**, 289-325	0.4	1
38	Energy Harvesting from the Fuel Cell Hybrid Power Source Based on Extremum Seeking Control Schemes. *Lecture Notes in Energy*, **2017**, 329-370	0.4	1
37	Comparative study regarding the integration of photovoltaic sources in agriculture **2020**,		1
36	Efficient Operation of the Hybrid Power System Using an Optimal Fueling Strategy and Control of the Fuel Cell Power Based on the Required Power Tracking Algorithm. *Sustainability*, **2020**, 12, 9690	3.6	1
35	A New Active Control Driver Circuit for Satellite Torquer System Using Second Generation Current Conveyor. *Electronics (Switzerland)*, **2021**, 10, 911	2.6	1
34	A Terahertz Metamaterial Absorber Based Refractive Index Sensor with High Quality Factor **2021**,		1
33	Design and Implementation of a Maximum Power Point Tracking System for a Piezoelectric Wind Energy Harvester Generating High Harmonicity. *Sustainability*, **2021**, 13, 7709	3.6	1
32	Model Based Control of Battery/Supercapacitor Hybrid Source for Modern e-Vehicle **2019**,		1
31	Model Free-Based Torque Control of Permanent Magnet Synchronous Motor Drives **2019**,		1
30	Cyber Security Objectives and Requirements for Smart Grid. *Engergy Systems in Electrical Engineering*, **2019**, 607-634	0.3	1
29	Renewable (REW) / Fuel Cell (FC) Hybrid Power System with mitigation of the REW variability by the FC fuel flow control **2018**,		1
28	Modeling an ANN-based control for optimal operation of PEMFC systems **2018**,		1

27	Fuel Cell (FC) Hybrid Power System with mitigation of the load power variability by the FC fuel flow control **2018**,		1
26	A brief review of sensorless motors position control **2021**,		1
25	LI-Care: A LabVIEW and IoT Based eHealth Monitoring System. *Electronics (Switzerland)*, **2021**, 10, 3137	2.6	1
24	Application of Fractional-Order PI Controllers and Neuro-Fuzzy PWM Technique to Multi-Rotor Wind Turbine Systems. *Electronics (Switzerland)*, **2022**, 11, 1340	2.6	1
23	Developing a Generalized Multi-Level Inverter with Reduced Number of Power Electronics Components. *Sustainability*, **2022**, 14, 5545	3.6	1
22	Energy Harvesting from the Photovoltaic Hybrid Power Source Based on Extremum Seeking Control Schemes. *Lecture Notes in Energy*, **2017**, 143-176	0.4	0
21	Electronically Tunable Full Wave Precision Rectifier Using DVCCTAs. *Electronics (Switzerland)*, **2021**, 10, 1262	2.6	0
20	A Three-Phase Resonant Boost Inverter Fed Brushless DC Motor Drive for Electric Vehicles. *Electronics (Switzerland)*, **2021**, 10, 1799	2.6	0
19	Simplified Super Twisting Sliding Mode Approaches of the Double-Powered Induction Generator-Based Multi-Rotor Wind Turbine System. *Sustainability*, **2022**, 14, 5014	3.6	0
18	Direct Power Control Based on Modified Sliding Mode Controller for a Variable-Speed Multi-Rotor Wind Turbine System Using PWM Strategy. *Energies*, **2022**, 15, 3689	3.1	0
17	Issues in Securing Critical Infrastructure Networks for Smart Grid Based on SCADA, Other Industrial Control and Communication Systems. *Power Systems*, **2019**, 289-324	0.4	
16	Fuzzy 3D Interpolation - Zero Level. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **1997**, 30, 339-344		
15	Fuzzy Gain Control for the Control Action of a Time Delay Processes. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **1998**, 31, 643-648		
14	Global Extremum Seeking Algorithms. *Green Energy and Technology*, **2020**, 107-184	0.6	
13	Fuel Economy Maximization Strategies. *Green Energy and Technology*, **2020**, 243-284	0.6	
12	Implementation of a Signal Pre-processing, Processing and Analysis System for Nuclear Quadrupole Resonance. *Signals and Communication Technology*, **2022**, 153-175	0.5	
11	Analysis of Nuclear Quadrupole Resonance Response Signals. *Signals and Communication Technology*, **2022**, 95-107	0.5	
10	Energy Management of the Grid-Connected PV Array. *Power Systems*, **2020**, 255-288	0.4	

9	Mitigation of Energy Variability in Renewable/Fuel Cell Hybrid Power Systems. *Green Energy and Technology*, **2020**, 303-332	0.6
8	Fuel Cell Net Power Maximization Strategies. *Green Energy and Technology*, **2020**, 185-241	0.6
7	Energy Harvesting from the Partially Shaded Photovoltaic Systems. *Green Energy and Technology*, **2020**, 285-301	0.6
6	Intelligent Control of the Energy Generation Systems **2010**, 40-96	
5	Overview of Hybrid Power System. *Green Energy and Technology*, **2013**, 1-39	0.6
4	Improved Adaptive Hamiltonian Control Law for Constant Power Load Stability Issue in DC Microgrid: Case Study for Multiphase Interleaved Fuel Cell Boost Converter. *Sustainability*, **2021**, 13, 8093	3.6
3	Design and Energy Analysis for Fuel Cell Hybrid Electric Vehicle. *Power Systems*, **2021**, 707-733	0.4
2	Multi-Objective Energy Management Strategy for PV/FC Hybrid Power Systems. *Electronics (Switzerland)*, **2021**, 10, 1721	2.6
1	Design, Modeling, and Model-Free Control of Permanent Magnet-Assisted Synchronous Reluctance Motor for e-Vehicle Applications. *Sustainability*, **2022**, 14, 5423	3.6