

# Faycal Bensaali

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

124  
papers

1,256  
citations

20  
h-index

28  
g-index

148  
ext. papers

1,931  
ext. citations

4  
avg, IF

5.46  
L-index

#	Paper	IF	Citations
124	Blockchain-based recommender systems: Applications, challenges and future opportunities. <i>Computer Science Review</i> , <b>2022</b> , 43, 100439	8.3	7
123	An innovative edge-based Internet of Energy solution for promoting energy saving in buildings. <i>Sustainable Cities and Society</i> , <b>2022</b> , 78, 103571	10.1	5
122	The Emergence of Hybrid Edge-Cloud Computing for Energy Efficiency in Buildings. <i>Lecture Notes in Networks and Systems</i> , <b>2022</b> , 70-83	0.5	2
121	Endorsing Energy Efficiency Through Accurate Appliance-Level Power Monitoring, Automation and Data Visualization. <i>Smart Innovation, Systems and Technologies</i> , <b>2022</b> , 603-617	0.5	2
120	Smart fusion of sensor data and human feedback for personalized energy-saving recommendations. <i>Applied Energy</i> , <b>2022</b> , 305, 117775	10.7	2
119	Latest trends of security and privacy in recommender systems: A comprehensive review and future perspectives. <i>Computers and Security</i> , <b>2022</b> , 118, 102746	4.9	4
118	Scheduling Techniques for Liver Segmentation: ReduceLRonPlateau vs OneCycleLR. <i>Communications in Computer and Information Science</i> , <b>2022</b> , 204-212	0.3	1
117	Detection of Appliance-Level Abnormal Energy Consumption in Buildings Using Autoencoders and Micro-moments. <i>Lecture Notes in Networks and Systems</i> , <b>2022</b> , 179-193	0.5	2
116	Intelligent Edge-Based Recommender System for Internet of Energy Applications. <i>IEEE Systems Journal</i> , <b>2021</b> , 1-10	4.3	5
115	Assessing Learning Outcomes in Extracorporeal Membrane Oxygenation Simulations With a Novel Simulator and Instructor Application. <i>IEEE Transactions on Learning Technologies</i> , <b>2021</b> , 14, 568-575	4	1
114	Techno-economic assessment of building energy efficiency systems using behavioral change: A case study of an edge-based micro-moments solution. <i>Journal of Cleaner Production</i> , <b>2021</b> , 331, 129786	10.3	4
113	On the Applicability of 2D Local Binary Patterns for Identifying Electrical Appliances in Non-intrusive Load Monitoring. <i>Advances in Intelligent Systems and Computing</i> , <b>2021</b> , 188-205	0.4	6
112	Improving In-Home Appliance Identification Using Fuzzy-Neighbors-Preserving Analysis Based QR-Decomposition. <i>Advances in Intelligent Systems and Computing</i> , <b>2021</b> , 303-311	0.4	6
111	Smart power consumption abnormality detection in buildings using micromoments and improved K-nearest neighbors. <i>International Journal of Intelligent Systems</i> , <b>2021</b> , 36, 2865-2894	8.4	13
110	Smart non-intrusive appliance identification using a novel local power histogramming descriptor with an improved k-nearest neighbors classifier. <i>Sustainable Cities and Society</i> , <b>2021</b> , 67, 102764	10.1	13
109	Artificial intelligence based anomaly detection of energy consumption in buildings: A review, current trends and new perspectives. <i>Applied Energy</i> , <b>2021</b> , 287, 116601	10.7	61
108	An IoT-based framework for remote fall monitoring. <i>Biomedical Signal Processing and Control</i> , <b>2021</b> , 67, 102532	4.9	3

107	A Modular Approach for a Patient Unit for Extracorporeal Membrane Oxygenation Simulator. <i>Membranes</i> , <b>2021</b> , 11,	3.8	3
106	A Micro-Moment System for Domestic Energy Efficiency Analysis. <i>IEEE Systems Journal</i> , <b>2021</b> , 15, 1256-1263	4.5	4
105	The emergence of explainability of intelligent systems: Delivering explainable and personalized recommendations for energy efficiency. <i>International Journal of Intelligent Systems</i> , <b>2021</b> , 36, 656-680	8.4	20
104	An intelligent nonintrusive load monitoring scheme based on 2D phase encoding of power signals. <i>International Journal of Intelligent Systems</i> , <b>2021</b> , 36, 72-93	8.4	8
103	Appliance-Level Monitoring with Micro-Moment Smart Plugs. <i>Lecture Notes in Networks and Systems</i> , <b>2021</b> , 942-953	0.5	2
102	A High-Realism and Cost-Effective Training Simulator for Extracorporeal Membrane Oxygenation. <i>IEEE Access</i> , <b>2021</b> , 9, 20893-20901	3.5	2
101	A survey of recommender systems for energy efficiency in buildings: Principles, challenges and prospects. <i>Information Fusion</i> , <b>2021</b> , 72, 1-21	16.7	19
100	A Review of Human Circulatory System Simulation: Bridging the Gap between Engineering and Medicine. <i>Membranes</i> , <b>2021</b> , 11,	3.8	1
99	Incorporating patient concerns into design requirements for IoMT-based systems: The fall detection case study. <i>Health Informatics Journal</i> , <b>2021</b> , 27, 1460458220982640	3	0
98	Smart Sensing and End-User Behavioral Change in Residential Buildings: An Edge Internet of Energy Perspective. <i>IEEE Sensors Journal</i> , <b>2021</b> , 1-1	4	3
97	Reshaping Consumption Habits by Exploiting Energy-Related Micro-moment Recommendations: A Case Study. <i>Communications in Computer and Information Science</i> , <b>2021</b> , 65-84	0.3	4
96	<b>2020</b> ,		4
95	REHAB-C: Recommendations for Energy HABits Change. <i>Future Generation Computer Systems</i> , <b>2020</b> , 112, 394-407	7.5	21
94	A model for predicting room occupancy based on motion sensor data <b>2020</b> ,		9
93	. <i>IEEE Systems Journal</i> , <b>2020</b> , 14, 1592-1601	4.3	
92	Lattice-Boltzmann interactive blood flow simulation pipeline. <i>International Journal of Computer Assisted Radiology and Surgery</i> , <b>2020</b> , 15, 629-639	3.9	
91	Data fusion strategies for energy efficiency in buildings: Overview, challenges and novel orientations. <i>Information Fusion</i> , <b>2020</b> , 64, 99-120	16.7	24
90	Achieving Domestic Energy Efficiency Using Micro-Moments and Intelligent Recommendations. <i>IEEE Access</i> , <b>2020</b> , 8, 15047-15055	3.5	29

89	Robust event-based non-intrusive appliance recognition using multi-scale wavelet packet tree and ensemble bagging tree. <i>Applied Energy</i> , <b>2020</b> , 267, 114877	10.7	37
88	Energy Data Visualizations on Smartphones for Triggering Behavioral Change: Novel Vs. Conventional <b>2020</b> ,		6
87	Real-time personalised energy saving recommendations <b>2020</b> ,		8
86	Cloud Energy Micro-Moment Data Classification: A Platform Study <b>2020</b> ,		4
85	Towards next generation cannulation simulators. <i>Qatar Medical Journal</i> , <b>2020</b> , 2019,	0.5	78
84	Smart Energy Usage and Visualization Based on Micro-moments. <i>Advances in Intelligent Systems and Computing</i> , <b>2020</b> , 557-566	0.4	10
83	A Novel Approach for Detecting Anomalous Energy Consumption Based on Micro-Moments and Deep Neural Networks. <i>Cognitive Computation</i> , <b>2020</b> , 12, 1381-1401	4.4	25
82	Effective non-intrusive load monitoring of buildings based on a novel multi-descriptor fusion with dimensionality reduction. <i>Applied Energy</i> , <b>2020</b> , 279, 115872	10.7	16
81	Building power consumption datasets: Survey, taxonomy and future directions. <i>Energy and Buildings</i> , <b>2020</b> , 227, 110404	7	27
80	A novel gateway-based solution for remote elderly monitoring. <i>Journal of Biomedical Informatics</i> , <b>2020</b> , 109, 103521	10.2	3
79	Data Analytics, Automations, and Micro-Moment Based Recommendations for Energy Efficiency <b>2020</b> ,		8
78	Secure compressive sensing for ECG monitoring. <i>Computers and Security</i> , <b>2020</b> , 88, 101649	4.9	7
77	Real-time ECG monitoring using compressive sensing on a heterogeneous multicore edge-device. <i>Microprocessors and Microsystems</i> , <b>2020</b> , 72, 102839	2.4	20
76	A skills acquisition study on ECMOjo: a screen-based simulator for extracorporeal membrane oxygenation. <i>Perfusion (United Kingdom)</i> , <b>2020</b> , 35, 110-116	1.9	3
75	Endorsing domestic energy saving behavior using micro-moment classification. <i>Applied Energy</i> , <b>2019</b> , 250, 1302-1311	10.7	23
74	The Role of Micro-Moments: A Survey of Habitual Behavior Change and Recommender Systems for Energy Saving. <i>IEEE Systems Journal</i> , <b>2019</b> , 13, 3376-3387	4.3	33
73	A Method Towards Cerebral Aneurysm Detection in Clinical Settings. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 8-15	0.9	
72	Zynq SoC based acceleration of the lattice Boltzmann method. <i>Concurrency Computation Practice and Experience</i> , <b>2019</b> , 31, e5184	1.4	6

71	Moving object tracking in clinical scenarios: application to cardiac surgery and cerebral aneurysm clipping. <i>International Journal of Computer Assisted Radiology and Surgery</i> , <b>2019</b> , 14, 2165-2176	3.9	7
70	Evaluating Internet of Medical Things (IoMT)-Based Systems from a Human-Centric Perspective. <i>Internet of Things (Netherlands)</i> , <b>2019</b> , 8, 100125	6.9	12
69	An IoT-Based Framework for Elderly Remote Monitoring <b>2019</b> ,		1
68	“Want to ... Change” Micro-moment based Recommendations can Change Users’ Energy Habits <b>2019</b> ,		17
67	Leveraging Quality of Service and Cost in Cyber-Physical Systems Design. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 208-217	0.9	
66	Zynq SoC based Lattice-Boltzmann Simulation Environment <b>2019</b> ,		1
65	Preliminary Implementation of the Next Generation Cannulation Simulator <b>2019</b> ,		1
64	IoT-Based Fall and ECG Monitoring System: Wireless Communication System Based Firebase Realtime Database <b>2019</b> ,		4
63	Hemelb Acceleration and Visualization for Cerebral Aneurysms <b>2019</b> ,		1
62	Boosting Domestic Energy Efficiency Through Accurate Consumption Data Collection <b>2019</b> ,		6
61	Using thermochromism to simulate blood oxygenation in extracorporeal membrane oxygenation. <i>Perfusion (United Kingdom)</i> , <b>2019</b> , 34, 106-115	1.9	8
60	An Efficient Compressive Sensing Method for Connected Health Applications. <i>Advances in Intelligent Systems and Computing</i> , <b>2019</b> , 365-373	0.4	1
59	Compressive Sensing Based ECG Biometric System. <i>Advances in Intelligent Systems and Computing</i> , <b>2019</b> , 126-137	0.4	3
58	Extracorporeal membrane oxygenation simulation-based training: methods, drawbacks and a novel solution. <i>Perfusion (United Kingdom)</i> , <b>2019</b> , 34, 183-194	1.9	9
57	HD number plate localization and character segmentation on the Zynq heterogeneous SoC. <i>Journal of Real-Time Image Processing</i> , <b>2019</b> , 16, 2351-2365	1.9	2
56	Inequality Indexes as Sparsity Measures Applied to Ventricular Ectopic Beats Detection and its Efficient Hardware Implementation. <i>IEEE Access</i> , <b>2018</b> , 6, 9464-9472	3.5	3
55	. <i>IEEE Sensors Journal</i> , <b>2018</b> , 18, 4633-4642	4	11
54	Empowering Technology Enabled Care Using IoT and Smart Devices: A Review. <i>IEEE Sensors Journal</i> , <b>2018</b> , 18, 1790-1809	4	30

53	Generalised and Versatile Connected Health Solution on the Zynq SoC. <i>Studies in Computational Intelligence</i> , <b>2018</b> , 454-474	0.8	
52	An interactive software tool for gas identification. <i>Journal of Natural Gas Science and Engineering</i> , <b>2018</b> , 55, 612-624	4.6	4
51	Optical character recognition on heterogeneous SoC for HD automatic number plate recognition system. <i>Eurasip Journal on Image and Video Processing</i> , <b>2018</b> , 2018,	2.5	6
50	Real-time automated image segmentation technique for cerebral aneurysm on reconfigurable system-on-chip. <i>Journal of Computational Science</i> , <b>2018</b> , 27, 35-45	3.4	8
49	A Reconfigurable Connected Health Platform Using ZYNQ System on Chip. <i>Lecture Notes in Networks and Systems</i> , <b>2018</b> , 857-867	0.5	1
48	Design and Performance Evaluation of a Committee Machine for Gas Identification. <i>Lecture Notes in Networks and Systems</i> , <b>2018</b> , 936-945	0.5	
47	Revolutionizing ECMO simulation with affordable yet high-Fidelity technology. <i>American Journal of Emergency Medicine</i> , <b>2018</b> , 36, 1310-1312	2.9	14
46	Towards the design and implementation of a human circulatory system for Extracorporeal Membrane Oxygenation simulation. <i>Egyptian Journal of Critical Care Medicine</i> , <b>2018</b> , 6, 87-89	0	0
45	<b>2018</b> ,		5
44	. <i>IEEE Access</i> , <b>2018</b> , 6, 69130-69140	3.5	21
43	Compressive Sensing-Based IoT Applications: A Review. <i>Journal of Sensor and Actuator Networks</i> , <b>2018</b> , 7, 45	3.8	31
42	Guest Editorial Special Issue on Real-Time Data Processing for Internet of Things. <i>IEEE Internet of Things Journal</i> , <b>2018</b> , 5, 3487-3490	10.7	2
41	The Accuracy and Efficacy of Real-Time Compressed ECG Signal Reconstruction on a Heterogeneous Multicore Edge-Device <b>2018</b> ,		5
40	Enhancing Clinical Learning Through an Innovative Instructor Application for ECMO Patient Simulators. <i>Simulation and Gaming</i> , <b>2018</b> , 49, 497-514	1.9	5
39	System-on-Chip Solution for Patients Biometric: A Compressive Sensing-Based Approach. <i>IEEE Sensors Journal</i> , <b>2018</b> , 18, 9629-9639	4	37
38	Addressing the challenges of ECMO simulation. <i>Perfusion (United Kingdom)</i> , <b>2018</b> , 33, 568-576	1.9	19
37	Novel Approach to Non-Invasive Blood Glucose Monitoring Based on Transmittance and Refraction of Visible Laser Light. <i>IEEE Access</i> , <b>2017</b> , 5, 9163-9174	3.5	27
36	ECG encryption and identification based security solution on the Zynq SoC for connected health systems. <i>Journal of Parallel and Distributed Computing</i> , <b>2017</b> , 106, 143-152	4.4	17

35	An Adaptive Joint Sparsity Recovery for Compressive Sensing Based EEG System. <i>Wireless Communications and Mobile Computing</i> , <b>2017</b> , 2017, 1-10	1.9	6
34	Design and implementation of a modular ECMO simulator. <i>Qatar Medical Journal</i> , <b>2017</b> , 2017, 62	0.5	10
33	Using thermochromic ink for medical simulations. <i>Qatar Medical Journal</i> , <b>2017</b> , 2017, 63	0.5	9
32	Electronic nose system on the Zynq SoC platform. <i>Microprocessors and Microsystems</i> , <b>2017</b> , 53, 145-156	2.4	6
31	. <i>IEEE Sensors Journal</i> , <b>2017</b> , 17, 5169-5179	4	20
30	Compressive sensing based electronic nose platform <b>2017</b> , 60, 350-359		7
29	IoT Based Compressive Sensing for ECG Monitoring <b>2017</b> ,		6
28	Real-Time Communication Network Using Firebase Cloud IoT Platform for ECMO Simulation <b>2017</b> ,		14
27	CS-based fall detection for connected health applications <b>2017</b> ,		6
26	<b>2017</b> ,		8
25	Joint sparsity recovery for compressive sensing based EEG system <b>2017</b> ,		4
24	MLP Neural Network Based Gas Classification System on Zynq SoC. <i>IEEE Access</i> , <b>2016</b> , 4, 8138-8146	3.5	50
23	An Empirical Study for PCA- and LDA-Based Feature Reduction for Gas Identification. <i>IEEE Sensors Journal</i> , <b>2016</b> , 16, 5734-5746	4	38
22	<b>2016</b> ,		6
21	HD Qatari ANPR system <b>2016</b> ,		2
20	High Level Synthesis Based E-Nose System for Gas Applications <b>2016</b> ,		2
19	Improved number plate character segmentation algorithm and its efficient FPGA implementation. <i>Journal of Real-Time Image Processing</i> , <b>2015</b> , 10, 91-103	1.9	8
18	A Wireless Oxygen Saturation and Heart Rate Monitoring and Alarming System Based on the Qatar Early Warning Scoring System <b>2015</b> ,		4

17	<b>2015,</b>		3
16	A multi-sensing reconfigurable platform for gas applications <b>2014,</b>		4
15	HLS based hardware acceleration on the zynq SoC: A case study for fall detection system <b>2014,</b>		3
14	Automatic Number Plate Recognition on FPGA <b>2013,</b>		7
13	Standard definition ANPR system on FPGA and an approach to extend it to HD <b>2013,</b>		6
12	Real-time optical character recognition on field programmable gate array for automatic number plate recognition system. <i>IET Circuits, Devices and Systems</i> , <b>2013</b> , 7, 337-344	1.1	19
11	Improved number plate localisation algorithm and its efficient field programmable gate arrays implementation. <i>IET Circuits, Devices and Systems</i> , <b>2013</b> , 7, 93-103	1.1	9
10	Field programmable gate arrays-based number plate binarization and adjustment for automatic number plate recognition systems. <i>Journal of Electronic Imaging</i> , <b>2013</b> , 22, 013009	0.7	
9	Hardware PCA for gas identification systems using high level synthesis on the Zynq SoC <b>2013,</b>		1
8	Automatic number plate recognition system on an ARM-DSP and FPGA heterogeneous SoC platforms <b>2013,</b>		3
7	OCR-based neural network for ANPR <b>2012,</b>		18
6	Comparison of real-time DSP-based edge detection techniques for license plate detection <b>2010,</b>		7
5	Floating-Point Matrix Product on FPGA <b>2007,</b>		6
4	Power Modeling and Efficient FPGA Implementation of Color Space Conversion <b>2006,</b>		3
3	Accelerating colour space conversion on reconfigurable hardware. <i>Image and Vision Computing</i> , <b>2005</b> , 23, 935-942	3.7	15
2	Design and Efficient FPGA Implementation of an RGB to YCrCb Color Space Converter Using Distributed Arithmetic. <i>Lecture Notes in Computer Science</i> , <b>2004</b> , 991-995	0.9	9
1	FPGA-based coprocessor for matrix algorithms implementation <b>2003</b> , 4877, 271		