Roberto Marani

List of Publications by Year
in descending order

113 papers	1,800 citations	279487 23 h-index	329751 37 g-index
115 all docs	115 docs citations	115 times ranked	1036 citing authors

#	Article	IF	Citations
1	In-field high throughput grapevine phenotyping with a consumer-grade depth camera. Computers and Electronics in Agriculture, 2019, 156, 293-306.	3.7	103
2	Ambient Assisted Living: A Review of Technologies, Methodologies and Future Perspectives for Healthy Aging of Population. Sensors, 2021, 21, 3549.	2.1	82
3	Internet of Robotic Things in Smart Domains: Applications and Challenges. Sensors, 2020, 20, 3355.	2.1	75
4	A Semiempirical SPICE Model for n-Type Conventional CNTFETs. IEEE Nanotechnology Magazine, 2011, 10, 506-512.	1.1	69
5	Modelling of Carbon Nanotube Field Effect Transistors oriented to SPICE software for A/D circuit design. Microelectronics Journal, 2013, 44, 33-38.	1.1	63
6	A Compact, Semi-empirical Model of Carbon Nanotube Field Effect Transistors Oriented to Simulation Software. Current Nanoscience, 2011, 7, 245-253.	0.7	58
7	Comparison of ABM SPICE Library with Verilog-A for Compact CNTFET Model Implementation. Current Nanoscience, 2012, 8, 556-565.	0.7	56
8	Human Gait Analysis in Neurodegenerative Diseases: A Review. IEEE Journal of Biomedical and Health Informatics, 2022, 26, 229-242.	3.9	56
9	A DC model of carbon nanotube field effect transistor for CAD applications. International Journal of Electronics, 2012, 99, 437-444.	0.9	53
10	Modeling and classification of defects in CFRP laminates by thermal non-destructive testing. Composites Part B: Engineering, 2018, 135, 129-141.	5.9	53
11	A Modified Iterative Closest Point Algorithm for 3D Point Cloud Registration. Computer-Aided Civil and Infrastructure Engineering, 2016, 31, 515-534.	6.3	46
12	Recent trends in gesture recognition: how depth data has improved classicalÂapproaches. Image and Vision Computing, 2016, 52, 56-72.	2.7	42
13	Deep neural networks for grape bunch segmentation in natural images from a consumer-grade camera. Precision Agriculture, 2021, 22, 387-413.	3.1	42
14	A Model to Improve Analysis of CNTFET Logic Gates in Verilog-A-Part I: Static Analysis. Current Nanoscience, 2015, 11, 515-526.	0.7	41
15	A Simulation Study of Analogue and Logic Circuits with CNTFETs. ECS Journal of Solid State Science and Technology, 2016, 5, M38-M43.	0.9	40
16	A Model to Improve Analysis of CNTFET Logic Gates in Verilog-A - Part II: Dynamic Analysis. Current Nanoscience, 2015, 11, 770-783.	0.7	40
17	Analysis of CNTFETs Operating in SubThreshold Region for Low Power Digital Applications. ECS Journal of Solid State Science and Technology, 2016, 5, M1-M4.	0.9	39
18	Asymmetric plasmonic grating for optical sensing of thin layers of organic materials. Sensors and Actuators B: Chemical, 2011, 160, 1056-1062.	4.0	37

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19	Experimental demonstration of a novel bio–sensing platform via plasmonic band gap formation in gold nano–patch arrays. Optics Express, 2011, 19, 21385.	1.7	36
20	Convolutional Neural Networks Based Ball Detection in Tennis Games. , 2018, , .		35
21	Deep learning for defect characterization in composite laminates inspected by step-heating thermography. Optics and Lasers in Engineering, 2021, 145, 106679.	2.0	35
22	People re-identification using skeleton standard posture and color descriptors from RGB-D data. Pattern Recognition, 2019, 89, 77-90.	5.1	34
23	A De-Embedding Procedure to Determine the Equivalent Circuit Parameters of RF CNTFETs. ECS Journal of Solid State Science and Technology, 2016, 5, M31-M34.	0.9	31
24	A Comparison of CNTFET Models through the Design of a SRAM Cell. ECS Journal of Solid State Science and Technology, 2016, 5, M118-M126.	0.9	26
25	Effects of Temperature in CNTFET-Based Design of Analog Circuits. ECS Journal of Solid State Science and Technology, 2018, 7, M16-M21.	0.9	24
26	Enhancing defects characterization in pulsed thermography by noise reduction. NDT and E International, 2019, 102, 226-233.	1.7	24
27	Gain-assisted extraordinary optical transmission through periodic arrays of subwavelength apertures. New Journal of Physics, 2012, 14, 013020.	1.2	23
28	Plasmonic bandgap formation in two-dimensional periodic arrangements of gold patches with subwavelength gaps. Optics Letters, 2011, 36, 903.	1.7	21
29	CNTFET-Based Design of Current Mirror in Comparison with MOS Technology. ECS Journal of Solid State Science and Technology, 2017, 6, M60-M68.	0.9	21
30	Effects of Temperature in CNTFET-Based Design of Digital Circuits. ECS Journal of Solid State Science and Technology, 2018, 7, M41-M48.	0.9	20
31	Recurrent and convolutional neural networks for deep terrain classification by autonomous robots. Journal of Terramechanics, 2021, 96, 119-131.	1.4	20
32	Analysis of Limits of CNTFET Devices through the Design of a Differential Amplifier. ECS Journal of Solid State Science and Technology, 2021, 10, 061009.	0.9	19
33	A Review on the Study of Temperature Effects in the Design of A/D Circuits based on CNTFET. Current Nanoscience, 2019, 15, 471-480.	0.7	19
34	Automatic detection of subsurface defects in composite materials using thermography and unsupervised machine learning. , 2016, , .		18
35	Editors' Choice—Effects of Parasitic Elements of Interconnection Lines in CNT Embedded Integrated Circuits. ECS Journal of Solid State Science and Technology, 2020, 9, 021004.	0.9	18
36	CNTFET Modelling for Electronic Circuit Design. ECS Transactions, 2009, 23, 429-437.	0.3	17

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37	High-Resolution Laser Scanning for Three-Dimensional Inspection of Drilling Tools. Advances in Mechanical Engineering, 2013, 5, 620786.	0.8	16
38	Enhancement of Extraordinary Optical Transmission in a Double Heterostructure Plasmonic Bandgap Cavity. Plasmonics, 2011, 6, 469-476.	1.8	15
39	An Embedded Vision System for Real-Time Autonomous Localization Using Laser Profilometry. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 3482-3495.	4.7	15
40	Towards Intelligent Retail: Automated on-Shelf Availability Estimation Using a Depth Camera. IEEE Access, 2020, 8, 19353-19363.	2.6	15
41	A Formula to Determine Energy Band Gap in Semiconducting Carbon Nanotubes. ECS Journal of Solid State Science and Technology, 2019, 8, M19-M21.	0.9	14
42	Semi-supervised deep learning and low-cost cameras for the semantic segmentation of natural images in viticulture. Precision Agriculture, 2022, 23, 2001-2026.	3.1	14
43	RESONANCE WAVELENGTH DEPENDENCE AND MODE FORMATION IN GOLD NANOROD OPTICAL ANTENNAS WITH FINITE THICKNESS. Progress in Electromagnetics Research B, 2011, 30, 337-353.	0.7	13
44	Design and Simulation Study of Full Adder Circuit Based on CNTFET and CMOS Technology by ADS. ECS Journal of Solid State Science and Technology, 2018, 7, M108-M122.	0.9	13
45	A New System for Continuous Monitoring of Breathing and Kinetic Activity. Journal of Sensors, 2010, 2010, 1-6.	0.6	12
46	Automated Extraction of Archaeological Traces by a Modified Variance Analysis. Remote Sensing, 2015, 7, 3565-3587.	1.8	12
47	A DC Thermal Model of Carbon Nanotube Field Effect Transistors for CAD Applications. ECS Journal of Solid State Science and Technology, 2016, 5, M3001-M3004.	0.9	12
48	A Compact Noise Model for C-CNTFETs. ECS Journal of Solid State Science and Technology, 2017, 6, M44-M49.	0.9	12
49	A Simulation Study of Noise Behavior in Basic Current Mirror using CNTFET and MOSFET. International Journal of Emerging Technology and Advanced Engineering, 2021, 11, 13-18.	0.4	12
50	A Compact 3D Omnidirectional Range Sensor of High Resolution for Robust Reconstruction of Environments. Sensors, 2015, 15, 2283-2308.	2.1	11
51	A 3D vision system for high resolution surface reconstruction. , 2013, , .		10
52	A Design Technique of CNTFET-Based Ternary Logic Gates in Verilog-A. ECS Journal of Solid State Science and Technology, 2019, 8, M45-M52.	0.9	9
53	Modification of the scattering of silver nanoparticles induced by Fabry–Pérot resonances rising from a finite Si layer. Journal of Optics (United Kingdom), 2011, 13, 015004.	1.0	8
54	Plasmonic Bandgaps in 1D Arrays of Slits on Metal Layers Excited by Out-of-Plane Sources. International Journal of Optics, 2012, 2012, 1-12.	0.6	8

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55	Effects of Temperature Dependence of Energy Bandgap on Iâ€"V Characteristics in CNTFETs Models. International Journal of Nanoscience, 2017, 16, 1750009.	0.4	8
56	A Convolution Residual Network for Heating-Invariant Defect Segmentation in Composite Materials Inspected by Lock-in Thermography. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-14.	2.4	8
57	Modelling of CNTFETs for Computer Aided Design of A/D Electronic Circuits. Current Nanoscience, 2014, 10, 326-333.	0.7	8
58	A Comparison of CNTFET and CMOS Technology through the Design of a SRAM Cell. ECS Journal of Solid State Science and Technology, 2019, 8, M1-M18.	0.9	7
59	Impact of Technology on CNTFET-Based Circuits Performance. ECS Journal of Solid State Science and Technology, 2020, 9, 051001.	0.9	7
60	Analysis of Noise in Current Mirror Circuits Based on CNTFET and MOSFET. ECS Journal of Solid State Science and Technology, 2022, 11, 031006.	0.9	7
61	An Active CNTFET Model for RF Characterization Deduced from S Parameters Measurements. Current Nanoscience, 2014, 11, 36-40.	0.7	6
62	High Quality Heart and Lung Auscultation System for Diagnostic Use on Remote Patients in Real Time. Open Biomedical Engineering Journal, 2010, 4, 250-256.	0.7	6
63	A Comparison of Temperature Dependence of I-V Characteristics in CNTFETs Models. Current Nanomaterials, 2016, 1, 61-68.	0.2	5
64	Monitoring of indoor environments by change detection in point clouds. , 2016, , .		5
65	Design of a Low-Cost Vision System for Laser Profilometry Aiding Smart Vehicles Movement. Advances in Intelligent Systems and Computing, 2016, , 17-27.	0.5	5
66	An adaptive parallel background model for high-throughput video applications and smart cameras embedding. , 2014, , .		4
67	A Powerline-Tuned Camera Trigger for AC Illumination Flickering Reduction. IEEE Embedded Systems Letters, 2017, 9, 97-100.	1.3	4
68	Effects of Temperature on Switching Time and Power Dissipation of CNTFET-Based Digital Circuits. ECS Journal of Solid State Science and Technology, 2018, 7, M63-M68.	0.9	4
69	Techniques to Improve the Performance in the CNTFET-Based Analogue Circuit Design. ECS Journal of Solid State Science and Technology, 2020, 9, 031001.	0.9	4
70	Study of CNTFETs as Memory Devices. ECS Journal of Solid State Science and Technology, 2022, 11, 031001.	0.9	4
71	Implementation of Noise Effects on CNTFET-based NOT Gate in Verilog-A. ECS Journal of Solid State Science and Technology, 2022, 11, 061002.	0.9	4
72	Investigation of a point-like and plane-wave excitation in 2D photonic bandgap microcavities using Greenâ€™s function method. Optical and Quantum Electronics, 2009, 41, 255-265.	1.5	3

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73	Plasmonic nanostructures for enhanced light concentration devoted to photovoltaic applications. , 2010, , .		3
74	A new pressure sensor-based electronic medical device for the analysis of lung sounds. , 2010, , .		3
75	Enhancement and suppression of transmission in 3D nanoslits arrays with 1- and 2D periodicities. Proceedings of SPIE, 2011, , .	0.8	3
76	Two-dimensional cross-correlation for defect detection in composite materials inspected by lock-in thermography. , 2017, , .		3
77	Deep learning-based image segmentation for grape bunch detection. , 2019, , .		3
78	Microsoft Azure Kinect Calibration for Three-Dimensional Dense Point Clouds and Reliable Skeletons. Sensors, 2022, 22, 4986.	2.1	3
79	Fast and Accurate Investigation of 2-D Multilayered Photonic Crystals by a 3-D Model Based on the Green's Function. IEEE Journal of Quantum Electronics, 2010, 46, 1549-1560.	1.0	2
80	Emission and Transmission Properties of a Doubly Resonant 3D Nanodisk Yagiâ€"Uda Antenna for Wireless Optical Communications. Plasmonics, 2013, 8, 173-183.	1.8	2
81	39. Semi-supervised semantic segmentation for grape bunch identification in natural images. , 2021, , .		2
82	An Electronic Medical Device for Preventing and Improving the Assisted Ventilation of Intensive Care Unit Patients~!2009-12-04~!2010-01-05~!2010-02-04~!. Open Electrical and Electronic Engineering Journal, 2010, 4, 16-20.	0.6	2
83	Defect detection by a deep learning approach with active IR thermography. , 2022, , .		2
84	A model to optimize a microwave PBG accelerator based on generic unit cell. Journal of the European Optical Society-Rapid Publications, 2007, 2, .	0.9	1
85	Innovative devices in biomedical electronics. , 2008, , .		1
86	3D modelling of 2D guided-wave photonic crystals. , 2010, , .		1
87	Anomalous plasmonic band gap formation in two-dimensional slit arrays with different periods. , 2011, , .		1
88	An Improved ANOVA Algorithm for Crop Mark Extraction from Large Aerial Images Using Semantics. Lecture Notes in Computer Science, 2015, , 591-603.	1.0	1
89	Design of High-Resolution Optical Systems for Fast and Accurate Surface Reconstruction. Smart Sensors, Measurement and Instrumentation, 2015, , 47-65.	0.4	1
90	A Likelihood-Based Background Model for Real Time Processing of Color Filter Array Videos. Lecture Notes in Computer Science, 2015, , 218-225.	1.0	1

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91	Three-Levels Logic Gates Design Based on CNTFETs. ECS Journal of Solid State Science and Technology, 2019, 8, M67-M70.	0.9	1
92	Design of CNTFETs Operating in High Speed Sub-Threshold Condition for Ultra-Low Power Applications. ECS Journal of Solid State Science and Technology, 2019, 8, M93-M101.	0.9	1
93	Improved Deep Learning for Defect Segmentation in Composite Laminates Inspected by Lock-in Thermography. , 2021, , .		1
94	An approach to model the temperature effects on I-V characteristics of CNTFETs. Advances in Nano Research, 2017, 5, 61-67.	0.9	1
95	Laser Profilometry Aiding Smart Vehicle Control. International Journal on Smart Sensing and Intelligent Systems, 2014, 7, 1-6.	0.4	1
96	Reviewâ€"Performance Evaluation of CNTFET-Based Analog Circuits: A Review. ECS Journal of Solid State Science and Technology, 2020, 9, 061015.	0.9	1
97	Reviewâ€"Thermal Effects in the Design of CNTFET-Based Digital Circuits. ECS Journal of Solid State Science and Technology, 0, , .	0.9	1
98	Optimization of Microwave PBG-based Hadron Accelerator with Square Cell. , 2007, , .		0
99	Design of a wireless digital measurement system for the blood arterial pressure control. , 2007, , .		0
100	Thermal and electrical layout optimisation of multilayer structure solid-state devices based on the 2-D Fourier series. , 2010, , .		0
101	Architecture and front-end for in-vivo blood glucose sensor based on impedance spectroscopy. , 2011, , .		0
102	Novel Plasmonic Bio-Sensing System Based on Two-Dimensional Gold Patch Arrays for Linear and Nonlinear Regimes. Advances in Science and Technology, 2012, 81, 15-19.	0.2	0
103	Optical properties of ordered plasmonic nanostructures in linear and nonlinear regimes. , 2012, , .		0
104	Analysis of indoor environments by range images. , 2013, , .		0
105	Improving performance of an omnidirectional range sensor for 3D modeling of environments. , 2016, , .		0
106	Variation of Iâ€"V characteristics due to process parameters as base for modeling the component variability for LDD MOSFET devices. International Journal of Modeling, Simulation, and Scientific Computing, 2018, 09, 1850015.	0.9	0
107	Reviewâ€"Performance Evaluation of CNTFET-Based Digital Circuits: A Review. ECS Journal of Solid State Science and Technology, 2020, 9, 051007.	0.9	0
108	Analytical Model Approximation for Defect Classification in Fiberglass Composites Inspected by Long-Pulse Thermography. , 2020, , .		0

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109	Performance Analysis of Gesture Recognition Classifiers for Building a Human Robot Interface. Lecture Notes in Computer Science, 2017, , 60-72.	1.0	0
110	Anomalous Human Behavior Detection Using a Network of RGB-D Sensors. Lecture Notes in Computer Science, 2018, , 3-14.	1.0	0
111	Disparity Image Analysis for 3D Characterization of Surface Anomalies. Lecture Notes in Computer Science, 2019, , 14-23.	1.0	0
112	Review—Design of a Novel Full Adder Circuit based on CNTFET Technology. ECS Journal of Solid State Science and Technology, 0, , .	0.9	0
113	Review—Design and Characterization of Digital Gates based on CNTFET and CMOS Technology. ECS Journal of Solid State Science and Technology, 2022, 11, 071004.	0.9	0