

# Aly E Fathy

## List of Publications by Year in descending order

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243625

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98  
all docs

98  
docs citations

98  
times ranked

1831  
citing authors

#	ARTICLE	IF	CITATIONS
1	Frequency-Reconfigurable Antennas for Multiradio Wireless Platforms. IEEE Microwave Magazine, 2009, 10, 66-83.	0.8	192
2	Investigation of High-Accuracy Indoor 3-D Positioning Using UWB Technology. IEEE Transactions on Microwave Theory and Techniques, 2008, 56, 1316-1330.	4.6	168
3	Real-Time Noncoherent UWB Positioning Radar With Millimeter Range Accuracy: Theory and Experiment. IEEE Transactions on Microwave Theory and Techniques, 2010, 58, 9-20.	4.6	160
4	Phase-Based Methods for Heart Rate Detection Using UWB Impulse Doppler Radar. IEEE Transactions on Microwave Theory and Techniques, 2016, 64, 3319-3331.	4.6	112
5	Development and Implementation of a Real-Time See-Through-Wall Radar System Based on FPGA. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 1270-1280.	6.3	108
6	DEVELOPMENT OF A NOVEL UWB VIVALDI ANTENNA ARRAY USING SIW TECHNOLOGY. Progress in Electromagnetics Research, 2009, 90, 369-384.	4.4	101
7	Dielectric Rod Antenna Array With Substrate Integrated Waveguide Planar Feed Network for Wideband Applications. IEEE Transactions on Antennas and Propagation, 2012, 60, 1312-1319.	5.1	95
8	Noncontact Multiple Heartbeats Detection and Subject Localization Using UWB Impulse Doppler Radar. IEEE Microwave and Wireless Components Letters, 2015, 25, 690-692.	3.2	94
9	Substrate-Integrated Waveguide Ku-Band Cavity-Backed 2 $\times$ 2 Microstrip Patch Array Antenna. IEEE Antennas and Wireless Propagation Letters, 2009, 8, 1054-1056.	4.0	92
10	Through-the-Wall Radar Life Detection and Monitoring. IEEE MTT-S International Microwave Symposium Digest IEEE MTT-S International Microwave Symposium, 2007, , .	0.0	74
11	Substrate-Integrated Cavity-Backed Patch Arrays: A Low-Cost Approach for Bandwidth Enhancement. IEEE Transactions on Antennas and Propagation, 2011, 59, 1155-1163.	5.1	69
12	Advanced System Level Simulation Platform for Three-Dimensional UWB Through-Wall Imaging SAR Using Time-Domain Approach. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 1986-2000.	6.3	61
13	Comparison Study of Noncontact Vital Signs Detection Using a Doppler Stepped-Frequency Continuous-Wave Radar and Camera-Based Imaging Photoplethysmography. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 3519-3529.	4.6	58
14	Analysis and Design of Wide-Scan Angle Wide-Band Phased Arrays of Substrate-Integrated Cavity-Backed Patches. IEEE Transactions on Antennas and Propagation, 2013, 61, 3034-3041.	5.1	53
15	Development of an UWB Indoor 3D Positioning Radar with Millimeter Accuracy. , 2006, , .		48
16	Estimation of Cardiopulmonary Parameters From Ultra Wideband Radar Measurements Using the State Space Method. IEEE Transactions on Biomedical Circuits and Systems, 2016, 10, 1037-1046.	4.0	39
17	Simultaneous localization and respiration detection of multiple people using low cost UWB biometric pulse Doppler radar sensor. , 2012, , .		38
18	Reconfigurable Pico-Pulse Generator for UWB Applications. , 2006, , .		37

#	ARTICLE	IF	CITATIONS
19	UWB MicroDoppler Radar for human Gait analysis, tracking more than one person, and vital sign detection of moving persons. , 2013, , .		35
20	An Electromagnetic Model of Human Vital Signs Detection and Its Experimental Validation. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2018, 8, 338-349.	3.6	35
21	Integration of UWB and Wireless Pressure Mapping in Surgical Navigation. IEEE Transactions on Microwave Theory and Techniques, 2009, 57, 2550-2564.	4.6	32
22	Short-Time State-Space Method for Micro-Doppler Identification of Walking Subject Using UWB Impulse Doppler Radar. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 3521-3534.	4.6	30
23	Development of a High SAR Conformal Antenna for Hyperthermia Tumors Treatment. IEEE Transactions on Antennas and Propagation, 2014, 62, 5830-5840.	5.1	23
24	Performance Enhancement of a Sub-Sampling Circuit for Ultra-Wideband Signal Processing. IEEE Microwave and Wireless Components Letters, 2007, 17, 873-875.	3.2	22
25	Development and Implementation of Ultra-Wideband See-Through-Wall Imaging System Based on Sampling Oscilloscope. IEEE Antennas and Wireless Propagation Letters, 2008, 7, 465-468.	4.0	20
26	An Elegant Solution: An Alternative Ultra-Wideband Transceiver Based on Stepped-Frequency Continuous-Wave Operation and Compressive Sensing. IEEE Microwave Magazine, 2016, 17, 53-63.	0.8	20
27	Quantitative Evaluation of Channel Micro-Doppler Capacity for MIMO UWB Radar Human Activity Signals Based on Time-Frequency Signatures. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 6138-6151.	6.3	20
28	Contactless Radar-Based Sensors: Recent Advances in Vital-Signs Monitoring of Multiple Subjects. IEEE Microwave Magazine, 2022, 23, 47-60.	0.8	19
29	A system level design approach to UWB localization. , 2009, , .		17
30	A three-dimensional multiphysics modeling of thin-film amorphous silicon solar cells. Energy Science and Engineering, 2015, 3, 520-534.	4.0	17
31	A multi-tag access scheme for indoor UWB localization systems used in medical environments. , 2011, , .		16
32	A novel approach to the design of a broadband high efficiency Class-E power amplifier with over 87% bandwidth. , 2017, , .		16
33	Vital Sign Detection in Any Orientation Using a Distributed Radar Network via Modified Independent Component Analysis. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 4774-4790.	4.6	16
34	Millimeter accuracy UWB positioning system using sequential sub-sampler and time difference estimation algorithm. , 2010, , .		15
35	Towards Low Cost, High Speed Data Sampling Module for Multifunctional Real-Time UWB Radar. IEEE Transactions on Aerospace and Electronic Systems, 2013, 49, 1301-1316.	4.7	15
36	Design Procedure for Compact Dual-Circularly Polarized Slotted Substrate Integrated Waveguide Antenna Arrays. IEEE Transactions on Antennas and Propagation, 2019, 67, 3839-3852.	5.1	15

#	ARTICLE	IF	CITATIONS
37	Design of a wideband eight-way single ridge substrate integrated waveguide power divider. IET Microwaves, Antennas and Propagation, 2015, 9, 648-656.	1.4	14
38	DESIGN OF A WIDE BAND EIGHT-WAY COMPACT SIW POWER COMBINER FED BY A LOW LOSS GCPW-TO-SIW TRANSITION. Progress in Electromagnetics Research C, 2012, 26, 97-110.	0.9	13
39	Phase based motion characteristics measurement for fall detection by using stepped-frequency continuous wave radar. , 2016, , .		13
40	Steerable miniaturised printed quadrifilar helical array antenna using digital phase shifters for BGAN/GPS applications. IET Microwaves, Antennas and Propagation, 2018, 12, 1196-1204.	1.4	13
41	Generalization of Channel Micro-Doppler Capacity Evaluation for Improved Finer-Grained Human Activity Classification Using MIMO UWB Radar. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 4748-4761.	4.6	13
42	Development of online closed-loop frequency shifting strategies to improve heating performance of foods in a solid-state microwave system. Food Research International, 2022, 154, 110985.	6.2	13
43	Real-time noncoherent UWB positioning radar with millimeter range accuracy in a 3D indoor environment. , 2009, , .		12
44	Micro-Doppler signatures for intelligent human gait recognition using a UWB impulse radar. , 2011, , .		12
45	High efficiency thin-film amorphous silicon solar cells. Energy Science and Engineering, 2016, 4, 334-343.	4.0	12
46	A reconfigurable multiband patch antenna for wireless applications using MEMS switches. Microwave and Optical Technology Letters, 2009, 51, 1892-1896.	1.4	11
47	Towards sub-millimeter accuracy in UWB positioning for indoor medical environments. , 2011, , .		11
48	Design of single-ridge SIW power dividers with over 75% bandwidth. , 2014, , .		11
49	Noncontact Human Gait Analysis and Limb Joint Tracking Using Doppler Radar. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2019, 3, 61-70.	3.4	11
50	A System-Level Simulation Framework for UWB Localization. IEEE Transactions on Microwave Theory and Techniques, 2010, , .	4.6	10
51	Modeling and Jitter Improvement of SRD-Based Ultra-Wideband Pulse Generator. IEEE Transactions on Microwave Theory and Techniques, 2014, 62, 1736-1747.	4.6	10
52	Design equations of arbitrary power split ratio waveguide T-junctions using a curve fitting approach. International Journal of RF and Microwave Computer-Aided Engineering, 2009, 19, 91-98.	1.2	9
53	UWB micro-doppler radar for human gait analysis using joint range-time-frequency representation. Proceedings of SPIE, 2013, , .	0.8	9
54	16-element Vivaldi antenna array fed by a single ridge substrate integrated waveguide with over 75% bandwidth. , 2014, , .		7

#	ARTICLE	IF	CITATIONS
55	Feasibility of Folded and Double Dipole Radio Frequency Quadrupole (RFQ) Cavities for Particle Accelerators. IEEE Transactions on Nuclear Science, 2014, 61, 799-807.	2.0	6
56	A Novel Reconfigurable Mini-Maze Antenna for Multi-Service Wireless Universal Receiver Using RF MEMS. , 2006, , .		5
57	Performance of flexible antennas with protective super-hydrophobic coating layers at RF frequencies. , 2016, , .		5
58	Overview of human vital signs detection using radar techniques. , 2017, , .		5
59	Novel reconfigurable multi-band antennas for multi-radio platforms. , 2008, , .		4
60	Experimental assessment of the cross coupling and polarization effects on ultra-wide band see-through-wall imaging reconstruction. , 2009, , .		4
61	Novel compact tapered microstrip slot antenna for microwave breast imaging. , 2011, , .		4
62	UWB 4-element ridge-SIW vivaldi antenna array. , 2014, , .		4
63	Design Guidelines of a Double-Gap Microwave Rebuncher Cavity for a 400MHz, 2.5 MeV Energy Light Ion Accelerator with Lower Gap Voltage and Field. IEEE Transactions on Nuclear Science, 2014, 61, 817-823.	2.0	4
64	Accuracy investigation of SFCW radar in human vital signs detection for subject's relative position. , 2017, , .		4
65	A compact wideband balun design using <sc>doubleâ€sided</sc> parallel strip lines with over 9:1 bandwidth. International Journal of RF and Microwave Computer-Aided Engineering, 2020, 30, e22425.	1.2	4
66	Non-Contact Multi-Subject Human Gait Analysis Using A State-Space Method With Enhanced 1-D Block Representation. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2021, 5, 155-167.	3.4	4
67	Low Cost IR-UWB Radar for Multisubject Non-Contact Vital Sign Detection. , 2021, , .		4
68	Real-time UWB indoor positioning system with millimeter 3-D dynamic accuracy. , 2009, , .		3
69	UWB signal acquisition in positioning systems: Bayesian compressed sensing with redundancy. , 2009, , .		3
70	Applications of Twisted Hollow Waveguides as Accelerating Structures. IEEE Transactions on Nuclear Science, 2009, 56, 1479-1486.	2.0	3
71	Planar high-gain antipodal linearly tapered slot antenna for passive millimeter-wave focal plane array imaging. , 2013, , .		3
72	Compact, mobile, low power UWB system for through-wall imaging. , 2014, , .		3

#	ARTICLE	IF	CITATIONS
73	UWB baby and sleep apnea monitor. , 2015, , .		3
74	A 1-D block processing for non-invasive detection of 2-D cardiac and respiratory rates. , 2018, , .		3
75	Three-dimensional through wall imaging using an UWB SAR. , 2010, , .		2
76	Compact folded feed network development for a ku-band DBS slotted SIW array antennas. , 2011, , .		2
77	Investigation of Electromagnetic Field Perturbation With Respect to Mechanical Imperfections in Radio-Frequency Quadrupole (RFQ) Structure. IEEE Transactions on Nuclear Science, 2012, 59, 2428-2434.	2.0	2
78	Novel antenna using substrate integrated waveguide for passive millimeter-wave focal plane array imaging. , 2014, , .		2
79	Short time state space method for human motion identification. , 2015, , .		2
80	Contactless monitoring and classification of human motion activities by using SFCW radar. , 2016, , .		2
81	Overview of vital sign detection-simulation and measurements. , 2016, , .		2
82	Circuit and EM modeling of wideband high power VHF/UHF combiners. International Journal of RF and Microwave Computer-Aided Engineering, 2009, 19, 481-491.	1.2	1
83	Investigation of pulse dispersion in a carrier-based UWB system with LO leakage cancellation. International Journal of RF and Microwave Computer-Aided Engineering, 2009, 19, 669-675.	1.2	1
84	A comprehensive system-level simulation paradigm for UWB systems. , 2010, , .		1
85	A novel approach for the design of a modified excitation signal using a narrow pulse generator for high-resolution time-domain reflectometry applications. Microwave and Optical Technology Letters, 2014, 56, 2987-2990.	1.4	1
86	Compact monostatic/bistatic UWB radar for wall characterization. , 2014, , .		1
87	Signal Detection and Noise Modeling of a 1-D Pulse-Based Ultra-Wideband Ranging System and Its Accuracy Assessment. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 1746-1757.	4.6	1
88	Strategies for designing high efficient thin-film amorphous silicon solar cells. , 2015, , .		1
89	Flexible RF-antennas coated by a super hydrophobic paint for minimal water absorption. , 2016, , .		1
90	Development of an <sc>ultra-wide</sc> band and low <sc>cross-polarization</sc> reflectarray antenna using novel unit cells with wide-range linear phase. International Journal of RF and Microwave Computer-Aided Engineering, 2021, 31, e22670.	1.2	1

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91	A 2x4 substrate-integrated waveguide probe-fed cavity-backed patch array. , 2010, , .		0
92	Wideband textile slot antenna array. , 2013, , .		0
93	Adaptive bias LINC transmitter design using EDA software for power efficiency improvement. International Journal of RF and Microwave Computer-Aided Engineering, 2013, 23, 309-317.	1.2	0
94	Planar antipodal linearly tapered slot antenna using grounded coplanar waveguide-to-substrate integrated waveguide transition for passive millimeter-wave imaging. , 2014, , .		0
95	Digital correlation receiver for location accuracy improvement in pulsed ultra wide-band localization system. , 2014, , .		0
96	Radar big data reduction using hardware and software solutions. , 2017, , .		0
97	Continuous Long Term Patient Motion Monitoring Using Ultra Wide Band Radar. , 2018, , .		0
98	Automatic and Accurate Non-contact Obstructive Sleep Apnea Detection using Wavelet Information Entropy Spectrum. , 2019, , .		0