

Kapil R Dandekar

List of Publications by Year in descending order

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187
papers

2,658
citations

331670

21
h-index

254184

43
g-index

189
all docs

189
docs citations

189
times ranked

2502
citing authors

#	ARTICLE	IF	CITATIONS
1	2D titanium carbide (MXene) for wireless communication. Science Advances, 2018, 4, eaau0920.	10.3	381
2	Design and Evaluation of a Reconfigurable Antenna Array for MIMO Systems. IEEE Transactions on Antennas and Propagation, 2008, 56, 869-881.	5.1	219
3	Experimental study of mutual coupling compensation in smart antenna applications. IEEE Transactions on Wireless Communications, 2002, 1, 480-487.	9.2	122
4	Solutionâ€Processed Ti ₃ C ₂ T _x MXene Antennas for Radioâ€Frequency Communication. Advanced Materials, 2021, 33, e2003225.	21.0	109
5	On the Use of Knitted Antennas and Inductively Coupled RFID Tags for Wearable Applications. IEEE Transactions on Biomedical Circuits and Systems, 2016, 10, 1047-1057.	4.0	99
6	Metamaterial-Substrate Antenna Array for MIMO Communication System. IEEE Transactions on Antennas and Propagation, 2009, 57, 3283-3292.	5.1	62
7	Effect of mutual coupling on direction finding in smart antenna applications. Electronics Letters, 2000, 36, 1889.	1.0	59
8	Learning State Selection for Reconfigurable Antennas: A Multi-Armed Bandit Approach. IEEE Transactions on Antennas and Propagation, 2014, 62, 1027-1038.	5.1	56
9	Experimental Analysis of Pattern and Polarization Reconfigurable Circular Patch Antennas for MIMO Systems. IEEE Transactions on Vehicular Technology, 2010, 59, 2352-2362.	6.3	55
10	Simulation of mutual coupling effect in circular arrays for direction-finding applications. Microwave and Optical Technology Letters, 2000, 26, 331-336.	1.4	53
11	Optically transparent conductive polymer RFID meandering dipole antenna. , 2009, , .		52
12	Widely-linear beamforming and RF impairment suppression in massive antenna arrays. Journal of Communications and Networks, 2013, 15, 383-397.	2.6	50
13	Reconfigurable antenna solution for MIMO-OFDM systems. Electronics Letters, 2006, 42, 446.	1.0	45
14	Power Management in MIMO Ad Hoc Networks: A Game-Theoretic Approach. IEEE Transactions on Wireless Communications, 2007, 6, 1164-1170.	9.2	44
15	Vector channel modeling and prediction for the improvement of downlink received power. IEEE Transactions on Communications, 2002, 50, 1121-1129.	7.8	37
16	Wideband Planar Four-Element Linear Antenna Array. IEEE Antennas and Wireless Propagation Letters, 2014, 13, 1663-1666.	4.0	36
17	Sectorized Antenna-based DoA Estimation and Localization: Advanced Algorithms and Measurements. IEEE Journal on Selected Areas in Communications, 2015, 33, 2272-2286.	14.0	33
18	Analysis and Augmented Spatial Processing for Uplink OFDMA MU-MIMO Receiver With Transceiver I/Q Imbalance and External Interference. IEEE Transactions on Wireless Communications, 2016, 15, 3422-3439.	9.2	32

#	ARTICLE	IF	CITATIONS
19	Passive UHF RFID-Based Knitted Wearable Compression Sensor. IEEE Internet of Things Journal, 2021, 8, 13763-13773.	8.7	32
20	High bit rate ultrasonic communication through metal channels. , 2009, , .		29
21	Passive RFID-Based Diaper Moisture Sensor. IEEE Sensors Journal, 2021, 21, 1665-1674.	4.7	28
22	A real-time and protocol-aware reactive jamming framework built on software-defined radios. , 2014, , .		27
23	Smart antenna array calibration procedure including amplitude and phase mismatch and mutual coupling effects. , 0, , .		26
24	DoA Estimation Using Compact CRLH Leaky-Wave Antennas: Novel Algorithms and Measured Performance. IEEE Transactions on Antennas and Propagation, 2017, 65, 4836-4849.	5.1	26
25	A technique for antenna configuration selection for reconfigurable circular patch arrays. IEEE Transactions on Wireless Communications, 2009, 8, 1456-1467.	9.2	24
26	Secure and robust symmetric key generation using physical layer techniques under various wireless environments. , 2016, , .		22
27	High-data-rate ultrasonic through-metal communication. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2012, 59, 2051-2053.	3.0	21
28	Optical Control of Reconfigurable Antennas and Application to a Novel Pattern-Reconfigurable Planar Design. Journal of Lightwave Technology, 2014, 32, 3394-3402.	4.6	20
29	On implementing an unconventional infant vital signs monitor with passive RFID tags. , 2017, , .		20
30	SDC testbed: Software defined communications testbed for wireless radio and optical networking. , 2011, , .		19
31	Planar reconfigurable antenna with integrated switching control circuitry. , 2014, , .		19
32	A Multi-Disciplinary Framework for Continuous Biomedical Monitoring Using Low-Power Passive RFID-Based Wireless Wearable Sensors. , 2016, , .		19
33	An improved design of wearable strain sensor based on knitted RFID technology. , 2016, , .		19
34	Ensemble Learning Approach via Kalman Filtering for a Passive Wearable Respiratory Monitor. IEEE Journal of Biomedical and Health Informatics, 2019, 23, 1022-1031.	6.3	19
35	MIMO space-time coding for diffuse optical communication. Microwave and Optical Technology Letters, 2006, 48, 1108-1110.	1.4	18
36	Performance Improvement of a Wideband MIMO System by Using Two-Port RLWA. IEEE Antennas and Wireless Propagation Letters, 2009, 8, 830-834.	4.0	18

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37	Wideband planar antenna with reconfigurable omnidirectional and directional radiation patterns. Electronics Letters, 2013, 49, 516-518.	1.0	18
38	Performance of transparent conductive polymer antennas in a MIMO ad-hoc network. , 2010, , .		17
39	Efficiency measurement of the flexible on-body antenna at varying levels of stretch in a reverberation chamber. IET Microwaves, Antennas and Propagation, 2020, 14, 154-158.	1.4	17
40	Computational electromagnetic simulation of smart antenna systems in urban microcellular environments. IEEE Transactions on Vehicular Technology, 2003, 52, 733-742.	6.3	16
41	ALOHA With Collision Resolution (ALOHA-CR): Theory and Software Defined Radio Implementation. IEEE Transactions on Signal Processing, 2010, 58, 4396-4410.	5.3	16
42	DoA estimation through modified unitary MUSIC algorithm for CRLH leaky-wave antennas. , 2013, , .		16
43	Grid Software Defined Radio Network Testbed for Hybrid Measurement and Emulation. , 2019, , .		16
44	FPGA-based latency-insensitive OFDM pipeline for wireless research. , 2014, , .		15
45	TSV Antennas for Multi-Band Wireless Communication. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2020, 10, 100-113.	3.6	15
46	Modelling realistic electromagnetic effects on MIMO system capacity. Electronics Letters, 2002, 38, 1624.	1.0	14
47	On the Effect of Sweat on Sheet Resistance of Knitted Conductive Yarns in Wearable Antenna Design. IEEE Antennas and Wireless Propagation Letters, 2020, 19, 542-546.	4.0	14
48	Application of Adaptive OFDM Bit Loading for High Data Rate Through-Metal Communication. , 2011, , .		13
49	Passive RFID tag based heart rate monitoring from an ECG signal. , 2015, 2015, 4403-6.		13
50	Pattern Reconfigurable UHF RFID Reader Antenna Array. IEEE Access, 2020, 8, 187365-187372.	4.2	13
51	4x4 space-time codes for free-space optical interconnects. Proceedings of SPIE, 2009, , .	0.8	12
52	GMM Based Semi-Supervised Learning for Channel-Based Authentication Scheme. , 2013, , .		12
53	Improved design of a CRLH leaky-wave antenna and its application for DoA estimation. , 2013, , .		11
54	Bit-Loaded PAPR Reduction for High-Data-Rate Through-Metal Control Network Applications. IEEE Transactions on Industrial Electronics, 2014, 61, 2362-2369.	7.9	11

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55	Innovative propagation mechanism for inter-chip and intra-chip communication. , 2015, , .		11
56	Real-time detection of apnea via signal processing of time-series properties of RFID-based smart garments. , 2016, , .		11
57	Echo-Cancellation for Ultrasonic Data Transmission through a Metal Channel. , 2007, , .		10
58	Two port reconfigurable circular patch antenna for MIMO systems. , 2007, , .		10
59	Reconfigurable spiral antenna array for pattern diversity in wideband MIMO communication systems. , 2008, , .		10
60	Impact of pattern reconfigurable antennas on Interference Alignment over measured channels. , 2012, , .		10
61	Experimental evaluation of a reconfigurable antenna system for blind interference alignment. , 2016, , .		10
62	Evaluation of Physical Layer Secret Key Generation for IoT Devices. , 2019, , .		10
63	Physical Layer Encryption for Wireless OFDM Communication Systems. Journal of Hardware and Systems Security, 2020, 4, 230-245.	1.3	10
64	Design and harmonic balance analysis of a wideband planar antenna having reconfigurable omnidirectional and directional patterns. , 2013, , .		9
65	Precoded massive MU-MIMO uplink transmission under transceiver I/Q imbalance. , 2014, , .		9
66	Performance Evaluation of MIMO OFDM Systems in On-Ship Below-Deck Environments. IEEE Antennas and Wireless Propagation Letters, 2014, 13, 173-176.	4.0	9
67	Reconfigurable Antenna Based DoA Estimation and Localization in Cognitive Radios: Low Complexity Algorithms and Practical Measurements. , 2014, , .		9
68	Wireless communications engineering education via Augmented Reality. , 2016, , .		9
69	Enhancing wireless security through reconfigurable antennas. , 2010, , .		8
70	Wireless cybersecurity education via a software defined radio laboratory. , 2015, , .		8
71	A 4 by 10 series 60 GHz microstrip array antenna fed by butler matrix for 5G applications. , 2018, , .		8
72	Using ray tracing to study urban vector channel propagation characteristics. , 0, , .		7

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73	OMAN: A Mobile Ad Hoc Network Design System. IEEE Transactions on Mobile Computing, 2012, 11, 1179-1191.	5.8	7
74	An Empirical Study on the Performance of Wireless OFDM Communications in Highly Reverberant Environments. IEEE Transactions on Wireless Communications, 2016, 15, 4802-4812.	9.2	7
75	Real-time wireless physical layer encryption. , 2016, , .		7
76	On the Use of Radio Frequency Identification for Continuous Biomedical Monitoring. , 2017, , .		7
77	Adaptive Link Optimization for 802.11 UAV Uplink Using a Reconfigurable Antenna. , 2018, , .		7
78	Energy-Efficient Respiratory Anomaly Detection in Premature Newborn Infants. Electronics (Switzerland), 2022, 11, 682.	3.1	7
79	A New Protocol to Mitigate the Unheard RTS/CTS Problem in Networks with Switched Beam Antennas. , 2007, , .		6
80	Cross-layer multicommodity capacity expansion on ad hoc wireless networks of cognitive radios. , 2008, , .		6
81	Learning algorithm for reconfigurable antenna state selection. , 2012, , .		6
82	Modified MUSIC algorithm for doa estimation using CRLH leaky-wave antennas. , 2013, , .		6
83	Wireless strain sensor through a flexible tag antenna employing inductively-coupled RFID microchip. , 2014, , .		6
84	BeamViewer: Visualization of dynamic antenna radiation patterns using Augmented Reality. , 2016, , .		6
85	Physical gate based preamble obfuscation for securing wireless communication. , 2017, , .		6
86	Waveform Design of UAV Data Links in Urban Environments for Interference Mitigation. , 2018, , .		6
87	Design and fabrication of twoâ€port threeâ€beam switched beam antenna array for 60 GHz communication. IET Microwaves, Antennas and Propagation, 2019, 13, 1438-1442.	1.4	6
88	UHF RFID Channel Emulation Testbed for Wireless IoT Systems. IEEE Access, 2021, 9, 68523-68534.	4.2	6
89	A Computational Fluid Dynamics Approach for Optimization of a Sensor Network. , 2006, , .		5
90	IEEE-Based Implementation of Engineering Projects in Community Service. , 2011, , .		5

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91	A reconfigurable antenna with omnidirectional and directional patterns for MIMO systems. , 2013, , .		5
92	Online Learning for Spectrum Sensing and Reconfigurable Antenna Control. , 2014, , .		5
93	Enhancing Blind Interference Alignment with Reinforcement Learning. , 2016, , .		5
94	The quantitative effects of inaccurate uplink spatial signature observations on downlink signal to interference ratio. , 0, , .		4
95	Combined effect of polarization diversity and mutual coupling on MIMO capacity. , 0, , .		4
96	Physical layer characterization of smart-antenna equipped mobile ad-hoc network nodes in an urban environment. , 0, , .		4
97	Impact of Mutual Coupling on Adaptive Switching Between MIMO Transmission Strategies and Antenna Configurations. <i>Wireless Personal Communications</i> , 2010, 52, 69.	2.7	4
98	Reconfigurable antennas and configuration selection methods for MIMO ad hoc networks. <i>Eurasip Journal on Wireless Communications and Networking</i> , 2011, 2011, .	2.4	4
99	Enhanced 5G spectrum sharing using a new adaptive NC-OFDM waveform with reconfigurable antennas. , 2017, , .		4
100	Multiple Access in Large-Scale LoRaWAN: Challenges, Solutions, and Future Perspectives. <i>IEEE Consumer Electronics Magazine</i> , 2024, , 1-9.	2.3	4
101	<title>Ray tracing to evaluate smart antenna system performance for wireless communications</title>. , 1999, , .		3
102	Robust optimal power control for ad hoc networks. , 2006, , .		3
103	Reconfigurable antennas for MIMO ad-hoc networks. , 2008, , .		3
104	Stacked reconfigurable circular patch antenna for adaptive MIMO systems. , 2009, , .		3
105	Collision resolution based on pulse shape diversity. , 2009, , .		3
106	Performance of link adaptation algorithms and reconfigurable antennas for MIMO-OFDM wireless systems. , 2012, , .		3
107	A Reconfigurable Antenna-Based Solution for Stationary Device Authentication in Wireless Networks. <i>International Journal of Antennas and Propagation</i> , 2012, 2012, 1-11.	1.2	3
108	Design and analysis of reconfigurable antennas for WiMAX applications. , 2013, , .		3

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109	Optical control of pattern-reconfigurable planar antennas. , 2013, , .		3
110	A MATLAB platform for characterizing MIMO-OFDM communications with software-defined radios. , 2014, , .		3
111	Rapid Prototyping of Wireless Physical Layer Modules Using Flexible Software/Hardware Design Flow. , 2015, , .		3
112	Computational electromagnetic simulation and performance analysis of reconfigurable antennas for outdoor 60 GHz applications. , 2017, , .		3
113	Experimental Results of Novel DoA Estimation Algorithms for Compact Reconfigurable Antennas. International Journal of Antennas and Propagation, 2017, 2017, 1-13.	1.2	3
114	A Miniaturized Reconfigurable CRLH Leaky-Wave Antenna Using Complementary Split-Ring Resonators. Journal of Electrical and Computer Engineering, 2018, 2018, 1-12.	0.9	3
115	Activity Segmentation Using Wearable Sensors for DVT/PE Risk Detection. , 2019, 2019, 477-483.		3
116	Modified MUSIC Algorithm for DoA Estimation Using CRLH Leaky-Wave Antennas. , 2013, , .		3
117	Fusion Learning on Multiple-Tag RFID Measurements for Respiratory Rate Monitoring. , 2020, 2020, 472-480.		3
118	Real-time Online Learning for Pattern Reconfigurable Antenna State Selection. , 2020, , .		3
119	UHF RFID tag localization using pattern reconfigurable reader antenna. , 2022, , .		3
120	Effects of base station antenna height and mobile terminal movement on the vector propagation channels. , 0, , .		2
121	Modeling and prediction of the wireless vector channel encountered by smart antenna systems. Microwave and Optical Technology Letters, 2002, 35, 281-283.	1.4	2
122	Experimental evaluation of game theoretic power allocation in MIMO ad-hoc networks. IEEE Transactions on Wireless Communications, 2009, 8, 2292-2295.	9.2	2
123	Simulation of waveform interactions for interference analysis of military networks. , 2009, , .		2
124	Performance of a reconfigurable antenna configuration selection scheme in a MIMO-OFDM system with modulation rate adaptation. , 2011, , .		2
125	Reconfigurable antennas and link adaptation algorithms for MIMO-OFDM wireless systems. Eurasip Journal on Wireless Communications and Networking, 2015, 2015, .	2.4	2
126	Performance of Reconfigurable Antennas in a Below-Decks Environment. IEEE Antennas and Wireless Propagation Letters, 2015, 14, 1093-1096.	4.0	2

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127	Characterization of pattern reconfigurable antenna arrays for MIMO systems. , 2015, , .		2
128	On the use of lumped filters for designing dual-band planar antennas with omnidirectional and directional radiation patterns. , 2015, , .		2
129	Enhancing indoor spatial reuse through adaptive antenna beamsteering. , 2016, , .		2
130	Enabling synchronous directional channel access on SDRs for spectrum sharing applications. , 2016, , .		2
131	Wireless Network-on-Chip analysis of propagation technique for on-chip communication. , 2016, , .		2
132	Performance analysis of a reconfigurable antenna array in WLAN channel models. , 2017, , .		2
133	Reinforcement learning system to mitigate small-cell interference through directionality. , 2017, , .		2
134	Radar Cross Section Measurement Comparison of UAVs at C-band and V-band. , 2019, , .		2
135	TSVâ€based antenna for onâ€chip wireless communication. IET Microwaves, Antennas and Propagation, 2020, 14, 302-307.	1.4	2
136	Extraction of Knitted RFID Antenna Design Parameter from Transmission Line Measurements. , 2020, , .		2
137	Experimentation framework for wireless communication systems under jamming scenarios. IET Cyber-Physical Systems: Theory and Applications, 2022, 7, 93-111.	3.3	2
138	Modeling MIMO-OFDM ad-hoc communication systems with computational electromagnetics. , 0, , .		1
139	Modeling effects of mutual coupling considered at both ends of a mimo channel using computational electromagnetics. , 0, , .		1
140	Impact of Mutual Coupling and Antenna Efficiencies on Adaptive Switching Between MIMO Transmission Strategies. Vehicular Technology Conference-Fall (VTC-FALL), Proceedings, IEEE, 2007, , .	0.0	1
141	Modeling MIMO-UWB OFDM systems with Computational Electromagnetics. , 2007, , .		1
142	Experimental Characterization of Resource Allocation Algorithms in MIMO-OFDM Ad Hoc Networks. , 2007, , .		1
143	Performance Analysis of Metamaterial Substrate Based MIMO Antenna Arrays. , 2008, , .		1
144	MIMO communication system with reconfigurable circular patch antennas. , 2008, , .		1

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145	ALOHA with Collision Resolution: Physical layer description and software defined radio implementation. , 2010, , .		1
146	Reconfigurable antennas and distributed bit loading for MIMO ad-hoc networks. , 2010, , .		1
147	Sensor Placement for Urban Homeland Security Applications. International Journal of Distributed Sensor Networks, 2010, 6, 859263.	2.2	1
148	Evaluation of the reconfigurable Printed Fractal Tree antenna for enhanced pattern diversity in MIMO systems. , 2010, , .		1
149	ALOHA with Collision Resolution: MAC layer analysis and software defined radio implementation. , 2010, , .		1
150	Optimization of Adaptive Modulation and Coding techniques for OFDM systems. , 2011, , .		1
151	RF-aware widely-linear beamforming and null-steering in cognitive Radio transmitters. , 2013, , .		1
152	Smart and Reconfigurable Antenna Applications in Wireless Sensor Networks. International Journal of Distributed Sensor Networks, 2014, 10, 658792.	2.2	1
153	Reconfigurable antennas in highly multipath environments. , 2014, , .		1
154	Interference Suppression with Antenna Arrays in OFDM Systems under Transceiver I/Q Imbalance. , 2014, , .		1
155	Transceiver I/Q imbalance and widely-linear spatial processing in large antenna systems. , 2015, , .		1
156	Leveraging an Agile RF Transceiver for Rapid Prototyping of Small-Cell Systems. , 2015, , .		1
157	Analyzing the benefits of pattern diversity for MIMO wireless systems. , 2015, , .		1
158	Hardware implementation of low-overhead data aided timing and Carrier Frequency Offset correction for OFDM signals. , 2015, , .		1
159	WiART - visualize and interact with wireless networks using augmented reality. , 2016, , .		1
160	Design and implementation of the Secondary User-Enhanced Spectrum Sharing (SUESS) radio. , 2017, , .		1
161	Sub-Microsecond Network Synchronization for Distributed Wireless PHY Protocols. , 2017, , .		1
162	Wireless NoCs Using Directional and Substrate Propagation Antennas. , 2017, , .		1

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163	mm Wave Antenna Gain Switching to Mitigate Indoor Blockage. , 2018, , .		1
164	Securing Wireless Communication via Hardware-Based Packet Obfuscation. Journal of Hardware and Systems Security, 2019, 3, 261-272.	1.3	1
165	Noncooperative Sub-6GHz Reconfigurable Antenna DoA Estimation to Aid mmWave Analog Beamforming: Algorithm and Measurements. IEEE Access, 2021, 9, 101876-101885.	4.2	1
166	An Adaptively Parameterized Algorithm Estimating Respiratory Rate from a Passive Wearable RFID Smart Garment. , 2021, 2021, 774-784.		1
167	On the Design of Pattern Reconfigurable Alford Loop Antennas. , 2021, , .		1
168	FPGA Implementation of Trained Coarse Carrier Frequency Offset Estimation and Correction for OFDM Signals (Abstract Only). , 2015, , .		1
169	Anomalous Radio Frequency Conductivity and Sheet Resistance of 2D Ti ₃ C ₂ T _x MXene. IEEE Access, 2022, 10, 25850-25856.	4.2	1
170	A Methodology for Developing New Interaction Techniques. Advances in Human Factors/Ergonomics, 1995, 20, 109-114.	0.1	0
171	Software Defined Radio Demonstration of MIMO-OFDM Rate Adaptation. , 2006, , .		0
172	BER performance of MIMO diffuse free-space optical systems. Proceedings of SPIE, 2009, , .	0.8	0
173	Securing wireless links at the physical layer through reconfigurable antennas. , 2010, , .		0
174	Measurement of the MIMO UWB OFDM channel. , 2011, , .		0
175	A Software Defined Testbed for Reconfigurable Antenna Cognitive Radio. , 2012, , .		0
176	Reconfigurable Antenna Assisted Intrusion Detection in Wireless Networks. International Journal of Distributed Sensor Networks, 2013, 9, 564503.	2.2	0
177	Investigation of switching techniques for reconfigurable multiband planar antennas. , 2014, , .		0
178	Towards integrating pattern reconfigurable antennas in WiMAX/LTE radios. , 2015, , .		0
179	Performance of pattern diversity in reconfigurable antenna arrays. , 2016, , .		0
180	Independent source architecture for developing FPGA-based physical layer security techniques. , 2017, , .		0

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181	Impact of Reconfigurable Antennas on MU-MIMO Over Measurements in a Reverberation Chamber. , 2018, , .		0
182	Channel Emulation for the Characterization of Wearable RFID Systems. , 2021, 2021, .		0
183	Millimetre wave coarse beamforming using outband sub-6GHz reconfigurable antennas. IET Communications, 0, , .	2.2	0
184	<title>Experimental studies of indoor propagation characteristics of a smart antenna system at 1.8 GHz</title>. , 1999, , .		0
185	Wearable Smart Garment Devices for Passive Biomedical Monitoring. , 2021, , 85-128.		0
186	A Pattern Reconfigurable Conformal mmWave Antenna for 5G Applications. , 2021, , .		0
187	Software-Defined Radar Testbed for Multi-Target Tracking. , 2022, , .		0