

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
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189
all docs

189
docs citations

189
times ranked

2502
citing authors

#	ARTICLE	IF	CITATIONS
1	Multiple Access in Large-Scale LoRaWAN: Challenges, Solutions, and Future Perspectives. IEEE Consumer Electronics Magazine, 2024, , 1-9.	2.3	4
2	Experimentation framework for wireless communication systems under jamming scenarios. IET Cyber-Physical Systems: Theory and Applications, 2022, 7, 93-111.	3.3	2
3	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
4	Energy-Efficient Respiratory Anomaly Detection in Premature Newborn Infants. Electronics (Switzerland), 2022, 11, 682.	3.1	7
5	Software-Defined Radar Testbed for Multi-Target Tracking. , 2022, , .		0
6	UHF RFID tag localization using pattern reconfigurable reader antenna. , 2022, , .		3
7	Solutionâ€Processed Ti ₃ C ₂ T _x MXene Antennas for Radioâ€Frequency Communication. Advanced Materials, 2021, 33, e2003225.	21.0	109
8	Passive RFID-Based Diaper Moisture Sensor. IEEE Sensors Journal, 2021, 21, 1665-1674.	4.7	28
9	UHF RFID Channel Emulation Testbed for Wireless IoT Systems. IEEE Access, 2021, 9, 68523-68534.	4.2	6
10	Noncooperative Sub-6GHz Reconfigurable Antenna DoA Estimation to Aid mmWave Analog Beamforming: Algorithm and Measurements. IEEE Access, 2021, 9, 101876-101885.	4.2	1
11	Channel Emulation for the Characterization of Wearable RFID Systems. , 2021, 2021, , .		0
12	An Adaptively Parameterized Algorithm Estimating Respiratory Rate from a Passive Wearable RFID Smart Garment. , 2021, 2021, 774-784.		1
13	On the Design of Pattern Reconfigurable Alford Loop Antennas. , 2021, , .		1
14	Passive UHF RFID-Based Knitted Wearable Compression Sensor. IEEE Internet of Things Journal, 2021, 8, 13763-13773.	8.7	32
15	Wearable Smart Garment Devices for Passive Biomedical Monitoring. , 2021, , 85-128.		0
16	A Pattern Reconfigurable Conformal mmWave Antenna for 5G Applications. , 2021, , .		0
17	Physical Layer Encryption for Wireless OFDM Communication Systems. Journal of Hardware and Systems Security, 2020, 4, 230-245.	1.3	10
18	Pattern Reconfigurable UHF RFID Reader Antenna Array. IEEE Access, 2020, 8, 187365-187372.	4.2	13

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19	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
20	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
21	TSV-based antenna for on-chip wireless communication. IET Microwaves, Antennas and Propagation, 2020, 14, 302-307.	1.4	2
22	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
23	Extraction of Knitted RFID Antenna Design Parameter from Transmission Line Measurements. , 2020, , .		2
24	Fusion Learning on Multiple-Tag RFID Measurements for Respiratory Rate Monitoring. , 2020, 2020, 472-480.		3
25	Real-time Online Learning for Pattern Reconfigurable Antenna State Selection. , 2020, , .		3
26	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
27	Activity Segmentation Using Wearable Sensors for DVT/PE Risk Detection. , 2019, 2019, 477-483.		3
28	Radar Cross Section Measurement Comparison of UAVs at C-band and V-band. , 2019, , .		2
29	Evaluation of Physical Layer Secret Key Generation for IoT Devices. , 2019, , .		10
30	Grid Software Defined Radio Network Testbed for Hybrid Measurement and Emulation. , 2019, , .		16
31	Design and fabrication of two-port three-beam switched beam antenna array for 60 GHz communication. IET Microwaves, Antennas and Propagation, 2019, 13, 1438-1442.	1.4	6
32	Securing Wireless Communication via Hardware-Based Packet Obfuscation. Journal of Hardware and Systems Security, 2019, 3, 261-272.	1.3	1
33	Impact of Reconfigurable Antennas on MU-MIMO Over Measurements in a Reverberation Chamber. , 2018, , .		0
34	Waveform Design of UAV Data Links in Urban Environments for Interference Mitigation. , 2018, , .		6
35	mm Wave Antenna Gain Switching to Mitigate Indoor Blockage. , 2018, , .		1
36	Adaptive Link Optimization for 802.11 UAV Uplink Using a Reconfigurable Antenna. , 2018, , .		7

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37	2D titanium carbide (MXene) for wireless communication. Science Advances, 2018, 4, eaau0920.	10.3	381
38	A 4 by 10 series 60 GHz microstrip array antenna fed by butler matrix for 5G applications. , 2018, , .		8
39	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
40	On the Use of Radio Frequency Identification for Continuous Biomedical Monitoring. , 2017, , .		7
41	Enhanced 5G spectrum sharing using a new adaptive NC-OFDM waveform with reconfigurable antennas. , 2017, , .		4
42	Design and implementation of the Secondary User-Enhanced Spectrum Sharing (SUESS) radio. , 2017, , .		1
43	Computational electromagnetic simulation and performance analysis of reconfigurable antennas for outdoor 60 GHz applications. , 2017, , .		3
44	Physical gate based preamble obfuscation for securing wireless communication. , 2017, , .		6
45	Sub-Microsecond Network Synchronization for Distributed Wireless PHY Protocols. , 2017, , .		1
46	Wireless NoCs Using Directional and Substrate Propagation Antennas. , 2017, , .		1
47	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
48	On implementing an unconventional infant vital signs monitor with passive RFID tags. , 2017, , .		20
49	Performance analysis of a reconfigurable antenna array in WLAN channel models. , 2017, , .		2
50	Independent source architecture for developing FPGA-based physical layer security techniques. , 2017, , .		0
51	Experimental Results of Novel DoA Estimation Algorithms for Compact Reconfigurable Antennas. International Journal of Antennas and Propagation, 2017, 2017, 1-13.	1.2	3
52	Reinforcement learning system to mitigate small-cell interference through directionality. , 2017, , .		2
53	Enhancing indoor spatial reuse through adaptive antenna beamsteering. , 2016, , .		2
54	A Multi-Disciplinary Framework for Continuous Biomedical Monitoring Using Low-Power Passive RFID-Based Wireless Wearable Sensors. , 2016, , .		19

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55	Experimental evaluation of a reconfigurable antenna system for blind interference alignment. , 2016, , .		10
56	Enhancing Blind Interference Alignment with Reinforcement Learning. , 2016, , .		5
57	Real-time detection of apnea via signal processing of time-series properties of RFID-based smart garments. , 2016, , .		11
58	Wireless communications engineering education via Augmented Reality. , 2016, , .		9
59	An improved design of wearable strain sensor based on knitted RFID technology. , 2016, , .		19
60	Secure and robust symmetric key generation using physical layer techniques under various wireless environments. , 2016, , .		22
61	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
62	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
63	Performance of pattern diversity in reconfigurable antenna arrays. , 2016, , .		0
64	Enabling synchronous directional channel access on SDRs for spectrum sharing applications. , 2016, , .		2
65	Wireless Network-on-Chip analysis of propagation technique for on-chip communication. , 2016, , .		2
66	BeamViewer: Visualization of dynamic antenna radiation patterns using Augmented Reality. , 2016, , .		6
67	WiART - visualize and interact with wireless networks using augmented reality. , 2016, , .		1
68	Real-time wireless physical layer encryption. , 2016, , .		7
69	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
70	Reconfigurable antennas and link adaptation algorithms for MIMO-OFDM wireless systems. Eurasip Journal on Wireless Communications and Networking, 2015, 2015, .	2.4	2
71	Transceiver I/Q imbalance and widely-linear spatial processing in large antenna systems. , 2015, , .		1
72	Leveraging an Agile RF Transceiver for Rapid Prototyping of Small-Cell Systems. , 2015, , .		1

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73	Analyzing the benefits of pattern diversity for MIMO wireless systems. , 2015, , .		1
74	Hardware implementation of low-overhead data aided timing and Carrier Frequency Offset correction for OFDM signals. , 2015, , .		1
75	Wireless cybersecurity education via a software defined radio laboratory. , 2015, , .		8
76	Passive RFID tag based heart rate monitoring from an ECG signal. , 2015, 2015, 4403-6.		13
77	Innovative propagation mechanism for inter-chip and intra-chip communication. , 2015, , .		11
78	Performance of Reconfigurable Antennas in a Below-Decks Environment. IEEE Antennas and Wireless Propagation Letters, 2015, 14, 1093-1096.	4.0	2
79	Towards integrating pattern reconfigurable antennas in WiMAX/LTE radios. , 2015, , .		0
80	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
81	Characterization of pattern reconfigurable antenna arrays for MIMO systems. , 2015, , .		2
82	Rapid Prototyping of Wireless Physical Layer Modules Using Flexible Software/Hardware Design Flow. , 2015, , .		3
83	On the use of lumped filters for designing dual-band planar antennas with omnidirectional and directional radiation patterns. , 2015, , .		2
84	FPGA Implementation of Trained Coarse Carrier Frequency Offset Estimation and Correction for OFDM Signals (Abstract Only). , 2015, , .		1
85	A real-time and protocol-aware reactive jamming framework built on software-defined radios. , 2014, , .		27
86	Precoded massive MU-MIMO uplink transmission under transceiver I/Q imbalance. , 2014, , .		9
87	Smart and Reconfigurable Antenna Applications in Wireless Sensor Networks. International Journal of Distributed Sensor Networks, 2014, 10, 658792.	2.2	1
88	Planar reconfigurable antenna with integrated switching control circuitry. , 2014, , .		19
89	Wideband Planar Four-Element Linear Antenna Array. IEEE Antennas and Wireless Propagation Letters, 2014, 13, 1663-1666.	4.0	36
90	Wireless strain sensor through a flexible tag antenna employing inductively-coupled RFID microchip. , 2014, , .		6

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91	FPGA-based latency-insensitive OFDM pipeline for wireless research. , 2014, , .		15
92	Learning State Selection for Reconfigurable Antennas: A Multi-Armed Bandit Approach. IEEE Transactions on Antennas and Propagation, 2014, 62, 1027-1038.	5.1	56
93	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
94	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
95	Reconfigurable antennas in highly multipath environments. , 2014, , .		1
96	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
97	Investigation of switching techniques for reconfigurable multiband planar antennas. , 2014, , .		0
98	Interference Suppression with Antenna Arrays in OFDM Systems under Transceiver I/Q Imbalance. , 2014, , .		1
99	Online Learning for Spectrum Sensing and Reconfigurable Antenna Control. , 2014, , .		5
100	Reconfigurable Antenna Based DoA Estimation and Localization in Cognitive Radios: Low Complexity Algorithms and Practical Measurements. , 2014, , .		9
101	A MATLAB platform for characterizing MIMO-OFDM communications with software-defined radios. , 2014, , .		3
102	Design and analysis of reconfigurable antennas for WiMAX applications. , 2013, , .		3
103	Wideband planar antenna with reconfigurable omnidirectional and directional radiation patterns. Electronics Letters, 2013, 49, 516-518.	1.0	18
104	Improved design of a CRLH leaky-wave antenna and its application for DoA estimation. , 2013, , .		11
105	Optical control of pattern-reconfigurable planar antennas. , 2013, , .		3
106	Widely-linear beamforming and RF impairment suppression in massive antenna arrays. Journal of Communications and Networks, 2013, 15, 383-397.	2.6	50
107	Reconfigurable Antenna Assisted Intrusion Detection in Wireless Networks. International Journal of Distributed Sensor Networks, 2013, 9, 564503.	2.2	0
108	Modified MUSIC algorithm for doa estimation using CRLH leaky-wave antennas. , 2013, , .		6

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109	GMM Based Semi-Supervised Learning for Channel-Based Authentication Scheme. , 2013, , .		12
110	Design and harmonic balance analysis of a wideband planar antenna having reconfigurable omnidirectional and directional patterns. , 2013, , .		9
111	A reconfigurable antenna with omnidirectional and directional patterns for MIMO systems. , 2013, , .		5
112	RF-aware widely-linear beamforming and null-steering in cognitive Radio transmitters. , 2013, , .		1
113	DoA estimation through modified unitary MUSIC algorithm for CRLH leaky-wave antennas. , 2013, , .		16
114	Modified MUSIC Algorithm for DoA Estimation Using CRLH Leaky-Wave Antennas. , 2013, , .		3
115	A Software Defined Testbed for Reconfigurable Antenna Cognitive Radio. , 2012, , .		0
116	Impact of pattern reconfigurable antennas on Interference Alignment over measured channels. , 2012, , .		10
117	Performance of link adaptation algorithms and reconfigurable antennas for MIMO-OFDM wireless systems. , 2012, , .		3
118	Learning algorithm for reconfigurable antenna state selection. , 2012, , .		6
119	OMAN: A Mobile Ad Hoc Network Design System. IEEE Transactions on Mobile Computing, 2012, 11, 1179-1191.	5.8	7
120	High-data-rate ultrasonic through-metal communication. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2012, 59, 2051-2053.	3.0	21
121	A Reconfigurable Antenna-Based Solution for Stationary Device Authentication in Wireless Networks. International Journal of Antennas and Propagation, 2012, 2012, 1-11.	1.2	3
122	Application of Adaptive OFDM Bit Loading for High Data Rate Through-Metal Communication. , 2011, , .		13
123	IEEE-Based Implementation of Engineering Projects in Community Service. , 2011, , .		5
124	Performance of a reconfigurable antenna configuration selection scheme in a MIMO-OFDM system with modulation rate adaptation. , 2011, , .		2
125	Optimization of Adaptive Modulation and Coding techniques for OFDM systems. , 2011, , .		1
126	SDC testbed: Software defined communications testbed for wireless radio and optical networking. , 2011, , .		19

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127	Measurement of the MIMO UWB OFDM channel. , 2011, , .		0
128	Reconfigurable antennas and configuration selection methods for MIMO ad hoc networks. Eurasip Journal on Wireless Communications and Networking, 2011, 2011, .	2.4	4
129	Impact of Mutual Coupling on Adaptive Switching Between MIMO Transmission Strategies and Antenna Configurations. Wireless Personal Communications, 2010, 52, 69.	2.7	4
130	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
131	ALOHA with Collision Resolution: Physical layer description and software defined radio implementation. , 2010, , .		1
132	Reconfigurable antennas and distributed bit loading for MIMO ad-hoc networks. , 2010, , .		1
133	Enhancing wireless security through reconfigurable antennas. , 2010, , .		8
134	Sensor Placement for Urban Homeland Security Applications. International Journal of Distributed Sensor Networks, 2010, 6, 859263.	2.2	1
135	ALOHA With Collision Resolution (ALOHA-CR): Theory and Software Defined Radio Implementation. IEEE Transactions on Signal Processing, 2010, 58, 4396-4410.	5.3	16
136	Evaluation of the reconfigurable Printed Fractal Tree antenna for enhanced pattern diversity in MIMO systems. , 2010, , .		1
137	Performance of transparent conductive polymer antennas in a MIMO ad-hoc network. , 2010, , .		17
138	Securing wireless links at the physical layer through reconfigurable antennas. , 2010, , .		0
139	ALOHA with Collision Resolution: MAC layer analysis and software defined radio implementation. , 2010, , .		1
140	High bit rate ultrasonic communication through metal channels. , 2009, , .		29
141	Experimental evaluation of game theoretic power allocation in MIMO ad-hoc networks. IEEE Transactions on Wireless Communications, 2009, 8, 2292-2295.	9.2	2
142	Metamaterial-Substrate Antenna Array for MIMO Communication System. IEEE Transactions on Antennas and Propagation, 2009, 57, 3283-3292.	5.1	62
143	Simulation of waveform interactions for interference analysis of military networks. , 2009, , .		2
144	Stacked reconfigurable circular patch antenna for adaptive MIMO systems. , 2009, , .		3

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145	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
146	Optically transparent conductive polymer RFID meandering dipole antenna. , 2009, , .		52
147	Collision resolution based on pulse shape diversity. , 2009, , .		3
148	A technique for antenna configuration selection for reconfigurable circular patch arrays. IEEE Transactions on Wireless Communications, 2009, 8, 1456-1467.	9.2	24
149	BER performance of MIMO diffuse free-space optical systems. Proceedings of SPIE, 2009, , .	0.8	0
150	4x4 space-time codes for free-space optical interconnects. Proceedings of SPIE, 2009, , .	0.8	12
151	Design and Evaluation of a Reconfigurable Antenna Array for MIMO Systems. IEEE Transactions on Antennas and Propagation, 2008, 56, 869-881.	5.1	219
152	Performance Analysis of Metamaterial Substrate Based MIMO Antenna Arrays. , 2008, , .		1
153	MIMO communication system with reconfigurable circular patch antennas. , 2008, , .		1
154	Reconfigurable antennas for MIMO ad-hoc networks. , 2008, , .		3
155	Cross-layer multicommodity capacity expansion on ad hoc wireless networks of cognitive radios. , 2008, , .		6
156	Reconfigurable spiral antenna array for pattern diversity in wideband MIMO communication systems. , 2008, , .		10
157	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
158	A New Protocol to Mitigate the Unheard RTS/CTS Problem in Networks with Switched Beam Antennas. , 2007, , .		6
159	Modeling MIMO-UWB OFDM systems with Computational Electromagnetics. , 2007, , .		1
160	Echo-Cancellation for Ultrasonic Data Transmission through a Metal Channel. , 2007, , .		10
161	Two port reconfigurable circular patch antenna for MIMO systems. , 2007, , .		10
162	Power Management in MIMO Ad Hoc Networks: A Game-Theoretic Approach. IEEE Transactions on Wireless Communications, 2007, 6, 1164-1170.	9.2	44

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163	Experimental Characterization of Resource Allocation Algorithms in MIMO-OFDM Ad Hoc Networks. , 2007, , .		1
164	Robust optimal power control for ad hoc networks. , 2006, , .		3
165	Software Defined Radio Demonstration of MIMO-OFDM Rate Adaptation. , 2006, , .		0
166	A Computational Fluid Dynamics Approach for Optimization of a Sensor Network. , 2006, , .		5
167	Reconfigurable antenna solution for MIMO-OFDM systems. Electronics Letters, 2006, 42, 446.	1.0	45
168	MIMO space-time coding for diffuse optical communication. Microwave and Optical Technology Letters, 2006, 48, 1108-1110.	1.4	18
169	Computational electromagnetic simulation of smart antenna systems in urban microcellular environments. IEEE Transactions on Vehicular Technology, 2003, 52, 733-742.	6.3	16
170	Modelling realistic electromagnetic effects on MIMO system capacity. Electronics Letters, 2002, 38, 1624.	1.0	14
171	Experimental study of mutual coupling compensation in smart antenna applications. IEEE Transactions on Wireless Communications, 2002, 1, 480-487.	9.2	122
172	Vector channel modeling and prediction for the improvement of downlink received power. IEEE Transactions on Communications, 2002, 50, 1121-1129.	7.8	37
173	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
174	Simulation of mutual coupling effect in circular arrays for direction-finding applications. Microwave and Optical Technology Letters, 2000, 26, 331-336.	1.4	53
175	Effect of mutual coupling on direction finding in smart antenna applications. Electronics Letters, 2000, 36, 1889.	1.0	59
176	<title>Ray tracing to evaluate smart antenna system performance for wireless communications</title>. , 1999, , .		3
177	<title>Experimental studies of indoor propagation characteristics of a smart antenna system at 1.8 GHz</title>. , 1999, , .		0
178	A Methodology for Developing New Interaction Techniques. Advances in Human Factors/Ergonomics, 1995, 20, 109-114.	0.1	0
179	Using ray tracing to study urban vector channel propagation characteristics. , 0, , .		7
180	The quantitative effects of inaccurate uplink spatial signature observations on downlink signal to interference ratio. , 0, , .		4

#	ARTICLE	IF	CITATIONS
181	Effects of base station antenna height and mobile terminal movement on the vector propagation channels. , 0, , .		2
182	Smart antenna array calibration procedure including amplitude and phase mismatch and mutual coupling effects. , 0, , .		26
183	Combined effect of polarization diversity and mutual coupling on MIMO capacity. , 0, , .		4
184	Physical layer characterization of smart-antenna equipped mobile ad-hoc network nodes in an urban environment. , 0, , .		4
185	Modeling MIMO-OFDM ad-hoc communication systems with computational electromagnetics. , 0, , .		1
186	Modeling effects of mutual coupling considered at both ends of a mimo channel using computational electromagnetics. , 0, , .		1
187	Millimetre wave coarse beamforming using outband sub-6GHz reconfigurable antennas. IET Communications, 0, , .	2.2	0