

Michael Inggs

List of Publications by Year in descending order

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173
papers

1,224
citations

566801

15
h-index

676716

22
g-index

173
all docs

173
docs citations

173
times ranked

796
citing authors

#	ARTICLE	IF	CITATIONS
1	Suppression of Spur Chirps for Fractional-N PLL-Based Heterodyne FMCW SAR. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 409-417.	2.9	1
2	Measurements and discrimination of drones and birds with a multi-frequency multistatic radar system. IET Radar, Sonar and Navigation, 2021, 15, 841-852.	0.9	15
3	Synchronization of Coherent Netted Radar Using White Rabbit Compared With One-Way Multichannel GPSDOs. IEEE Transactions on Aerospace and Electronic Systems, 2021, 57, 1413-1422.	2.6	4
4	Integer boundary spur considerations for fractional-N PLL based FMCW radar. Electronics Letters, 2020, 56, 729-732.	0.5	1
5	Evaluating the Performance of FM-Based PCL Radar in the Presence of Jamming. IEEE Transactions on Aerospace and Electronic Systems, 2019, 55, 631-643.	2.6	17
6	A Summary of the Results Achieved by the GPS Disciplined References of the NetRAD and NeXtRAD Multistatic Radars. , 2019, , .		4
7	Development of the miloSAR Testbed for the One Kilogramme radioCamera SAR for Small Drones. , 2019, , .		2
8	Report on the 2018 Trials of the Multistatic NeXtRAD Dual Band Polarimetric Radar. , 2019, , .		13
9	SdrLift: An Intermediate-Level Framework for Synthesis of Software-Defined Radio Accelerators. , 2019, , .		1
10	Measurements of Multistatic X&L Band Radar Signatures of UAVS. , 2019, , .		4
11	Sparse Bayesian learning for spinning antenna DOA super-resolution. Electronics Letters, 2018, 54, 389-391.	0.5	2
12	Automatic Configurable Hardware Code Generation for Software-Defined Radios. Computers, 2018, 7, 53.	2.1	0
13	A Dictionary Approach to Identifying Transient RFI. Radio Science, 2018, 53, 656-669.	0.8	5
14	A CNN and LSTM-based approach to classifying transient radio frequency interference. Astronomy and Computing, 2018, 25, 52-57.	0.8	33
15	Correlation analysis of simultaneously collected bistatic and monostatic sea clutter. , 2017, , .		7
16	The design and development of a FM band passive radar test-bed for long term qualification testing. , 2017, , .		6
17	Synchronizing network radar using all-in-view GPS-disciplined oscillators. , 2017, , .		10
18	Evaluating an off-the-shelf white rabbit system to synchronise network radar via optic fibre. , 2017, , .		3

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19	First measurements with NeXtRAD, a polarimetric X/L Band radar network. , 2017, , .		6
20	Noise jamming of a FM band commensal sensor. IET Radar, Sonar and Navigation, 2017, 11, 946-952.	0.9	4
21	Characterizing transient radio-frequency interference. Radio Science, 2017, 52, 841-851.	0.8	8
22	Measurements of signal penetration for p-band SAR system through trees using two trihedral corner reflectors. , 2017, , .		0
23	Capabilities of code division multiplexed electrical impedance tomography. , 2017, , .		0
24	Investigation of calibration aspects of fully and compact polarimetric SAR systems. , 2016, , .		0
25	The effect of perforating the corner reflector on maximum radar cross section. , 2016, , .		6
26	A canonical interferencelet-based approach to RFI identification. , 2016, , .		2
27	Identifying radio frequency interference with hidden Markov models. , 2016, , .		3
28	RFI in Mauritius. , 2016, , .		1
29	An empirical law for wavelet maxima interpretation of potential fields: Application to the Uinta Mountains range. Journal of Applied Geophysics, 2016, 134, 89-99.	0.9	2
30	Coherence Optimization and Its Limitations for Deformation Monitoring in Dynamic Agricultural Environments. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 5647-5654.	2.3	10
31	Design of OFDM radar pulses using genetic algorithm based techniques. IEEE Transactions on Aerospace and Electronic Systems, 2016, 52, 1953-1966.	2.6	40
32	OptiSDR â€” A domain specific language to improve developer productivity for software defined radio. , 2016, , .		0
33	Time domain classification of transient radio frequency interference. , 2016, , .		5
34	Biased estimators for spinning antenna DOA measurements. IEEE Transactions on Aerospace and Electronic Systems, 2016, 52, 1499-1513.	2.6	2
35	Analysis of polarimetric bistatic sea clutter using the NetRAD radar system. IET Radar, Sonar and Navigation, 2016, 10, 1356-1366.	0.9	15
36	Evaluating commensal sensors for detecting objects of interest in the Low Earth Orbit. , 2016, , .		1

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37	Orthogonal frequency division multiplexing phenomenology: recognition of canonical scatterers using flat spectra OFDM pulses. IET Radar, Sonar and Navigation, 2016, 10, 647-654.	0.9	3
38	Constraining errorâ€”A sliding discrete Fourier transform investigation. , 2016, 51, 54-61.		5
39	Fully Parallel Electrical Impedance Tomography Using Code Division Multiplexing. IEEE Transactions on Biomedical Circuits and Systems, 2016, 10, 556-566.	2.7	12
40	Orthogonal frequency division multiplexing phenomenology: radar technique combining genetic algorithmâ€”based pulse design and energy detector for target recognition. IET Radar, Sonar and Navigation, 2016, 10, 912-922.	0.9	4
41	High sensitivity fixed tuned direct conversion receiver for FM band commensal radar. , 2015, , .		6
42	Evaluation of High-Level open-source tool-flows for rapid prototyping of Software Defined Radios. , 2015, , .		0
43	White space symbiotic radar: A new scheme for coexistence of radio communications and radar. , 2015, , .		8
44	Convex optimization for optimal PMEPR and mismatched filter design in OFDM radar. , 2015, , .		4
45	Coherence optimisation and its limitations for deformation monitoring in agricultural regions. , 2015, , .		0
46	Noise jamming of a FM band commensal radar. , 2015, , .		6
47	Using a domain specific language for SDR to facilitate radar signal processing in heterogeneous computing architectures. , 2015, , .		1
48	Investigation of white rabbit for synchronization and timing of netted radar. , 2015, , .		9
49	Database design for an experimental, dual band, polarimetric radar. , 2015, , .		0
50	Electrical impedance tomography using code division multiplexing. , 2015, , .		2
51	SIMO radar design for small space debris detection in the LEO. , 2015, , .		5
52	Stepped OFDM radar technique to resolve range and doppler simultaneously. IEEE Transactions on Aerospace and Electronic Systems, 2015, 51, 937-950.	2.6	44
53	Waveform design for Commensal Radar. , 2015, , .		8
54	The GRSS-AARSE Summer School 2014 [Education]. IEEE Geoscience and Remote Sensing Magazine, 2015, 3, 47-50.	4.9	0

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55	Target tracking using Doppler-only measurements in FM broadcast band commensal radar. Electronics Letters, 2015, 51, 1528-1530.	0.5	9
56	FM band commensal radar technology used for the detection of small aircraft and the measurement of propeller modulation. , 2015, , .		4
57	Interval Algebra – An effective means of scheduling surveillance radar networks. Information Fusion, 2015, 23, 81-98.	11.7	4
58	A domain-specific language to facilitate software defined radio parallel executable patterns deployment on heterogeneous architectures. , 2014, , .		1
59	NeXtRAD and RHINO radar: Harnessing the herd for networked radar. , 2014, , .		3
60	Multistatic radar: System requirements and experimental validation. , 2014, , .		27
61	A Cramer Rao analysis on receiver placement in a FM band Commensal Radar system based on Doppler only measurements. , 2014, , .		4
62	Mixed-architecture process scheduling on tightly coupled reconfigurable computers. , 2014, , .		7
63	ComRad3, a multichannel direct conversion receiver for FM Broadcast Band Radar. , 2014, , .		4
64	Processing alternatives in OFDM radar. , 2014, , .		9
65	Scheduling Mixed-Architecture Processes in Tightly Coupled FPGA-CPU Reconfigurable Computers. , 2014, , .		3
66	Recursive sliding discrete Fourier transform with oversampled data. , 2014, 25, 275-279.		10
67	Parameters Affecting Interferometric Coherence – The Case of a Dynamic Agricultural Region. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 1572-1582.	2.7	11
68	Impact of the Doppler modulation on the range and Doppler processing in OFDM radar. , 2014, , .		22
69	Planning and design phases of a commensal radar system in the FM broadcast band. IEEE Aerospace and Electronic Systems Magazine, 2014, 29, 50-63.	2.3	18
70	FOPEN capabilities of commensal radars based on whitespace communication systems. , 2014, , .		15
71	The Geoscience and Remote Sensing Society and Education [Education]. IEEE Geoscience and Remote Sensing Magazine, 2014, 2, 78-81.	4.9	0
72	The phenology of an agricultural region as expressed by polarimetric decomposition and vegetation indices. , 2013, , .		2

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73	White RHINO: A low cost whitespace communications and radar hardware platform. , 2013, , .		7
74	Towards a many-core architecture for HPC. , 2013, , .		3
75	Automated gateway discovery using open firmware. , 2013, , .		0
76	Gaussâ€“Newton filtering incorporating Levenbergâ€“Marquardt methods for tracking. , 2013, 23, 1662-1667.		15
77	Commensal radar: Range-Doppler processing using a recursive DFT. , 2013, , .		6
78	Simulation and measurement of propeller modulation using FM broadcast band commensal radar. Electronics Letters, 2013, 49, 1481-1482.	0.5	5
79	Performance improvements using the separated reference configuration for a multi-static FM broadcast band radar system. , 2013, , .		4
80	Calibration of a SuperDARN radar antenna by means of a satellite beacon on a CubeSat. , 2013, , .		2
81	Current and future small satellite projects in South Africa. , 2013, , .		4
82	Recommendations for long-term operational dinsar monitoring of mining-induced deformation in a dynamic agricultural region. , 2013, , .		4
83	The GRSS Summer School Melbourne 2013 [Education]. IEEE Geoscience and Remote Sensing Magazine, 2013, 1, 42-45.	4.9	0
84	IGARSS 2012 Survey [Conference Report]. IEEE Geoscience and Remote Sensing Magazine, 2013, 1, 73-76.	4.9	0
85	GRSS Educational Activities Planning for 2013 [Education]. IEEE Geoscience and Remote Sensing Magazine, 2013, 1, 80-82.	4.9	0
86	Commensal radar using separated reference and surveillance channel configuration. Electronics Letters, 2012, 48, 1158-1160.	0.5	25
87	Doppler-only tracking with the recursive Gauss-Newton filter. , 2012, , .		7
88	A space-borne passive microwave radiometer for the space programme of a developing nation. , 2012, , .		0
89	NetRAD multistatic sea clutter database. , 2012, , .		8
90	Tutorial review of an L Band radar transceiver for use with a software defined radar baseband system. , 2012, , .		0

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91	Information sensing for radar target classification using compressive sensing. , 2012, , .		5
92	Review of radar signal attenuation due to sand and dust storms. , 2012, , .		7
93	Modelling and simulation in commensal radar system design. , 2012, , .		8
94	Design and implementation of a digital real-time target emulator for secondary surveillance radar / identification friend or foe. IEEE Aerospace and Electronic Systems Magazine, 2012, 27, 17-24.	2.3	7
95	A new probabilistic data association filter based on composite expanding and fading memory polynomial filters. , 2011, , .		3
96	Passive radar using a software-defined radio platform and opensource software tools. , 2011, , .		24
97	Cumulative detection probability of stationary and moving targets by MIMO radar. , 2011, , .		5
98	Measurements of bistatic radar sea clutter. , 2011, , .		11
99	A Signal Level Simulator for Multistatic and Netted Radar Systems. IEEE Transactions on Aerospace and Electronic Systems, 2011, 47, 178-186.	2.6	23
100	Statistical analysis of simultaneous monostatic and bistatic sea clutter at low grazing angles. Electronics Letters, 2011, 47, 621.	0.5	26
101	Real Time Processing of Networked Passive Coherent Location Radar System. International Journal of Electronics and Telecommunications, 2011, 57, 363-368.	0.5	8
102	Detection performance of MIMO passive radar systems based on FM signals. , 2011, , .		0
103	Foreword to the Special Issue on the 2009 International Geoscience and Remote Sensing Symposium (IGARSS '09). IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 3-5.	2.7	0
104	Recursive Fourier Transform hardware. , 2011, , .		3
105	Growing horns: Applying the Rhino software defined radio system to radar. , 2011, , .		12
106	Processing design of a networked passive coherent location system. , 2011, , .		8
107	Multistatic networked radar for sea clutter measurements. , 2011, , .		9
108	Evaluation of coherent netted radar carrier stability while synchronised with GPS-disciplined oscillators. , 2011, , .		13

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109	DETECTION AND MONITORING OF SURFACE SUBSIDENCE ASSOCIATED WITH MINING ACTIVITIES IN THE WITBANK COALFIELDS, SOUTH AFRICA, USING DIFFERENTIAL RADAR INTERFEROMETRY. South African Journal of Geology, 2011, 114, 77-94.	0.6	15
110	Design and evaluation of a sea clutter simulator. , 2011, , .		4
111	Detection and monitoring of surface subsidence associated with mining activities in the Witbank Coalfields, South Africa, using differential radar interferometry. , 2011, , .		1
112	A many processing element framework for the Discrete Fourier Transform. , 2010, , .		4
113	Signal level Simulator for netted text radar waveforms evaluation. IEEE Aerospace and Electronic Systems Magazine, 2010, 25, 27-29.	2.3	2
114	Autonomic subsystems for cognition in Passive Coherent Location. , 2010, , .		1
115	Null placement in a circular antenna array for Passive Coherent Location systems. , 2010, , .		10
116	Efficient Generation of f^{α} Noise Sequences for Pulsed Radar Simulation. IEEE Transactions on Aerospace and Electronic Systems, 2010, 46, 737-744.	2.6	2
117	Passive Coherent Location as Cognitive Radar. IEEE Aerospace and Electronic Systems Magazine, 2010, 25, 12-17.	2.3	20
118	A quantitative method for mono- and multistatic radar coverage area prediction. , 2010, , .		23
119	Extensible simulator for waveform diversity testing. , 2009, , .		2
120	Selecting Suitable Coherent Processing Time Window Lengths for Ground-Based ISAR Imaging of Cooperative Sea Vessels. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 3231-3240.	2.7	23
121	A signal level simulator for netted radar waveforms evaluation. , 2009, , .		1
122	Passive Coherent Location as Cognitive Radar. , 2009, , .		6
123	Quaternion-Based Transformation for Extraction of Image-Generating Doppler for ISAR. IEEE Geoscience and Remote Sensing Letters, 2008, 5, 560-563.	1.4	4
124	RFI Measurement Database Assembled During the Square Kilometre Array Site Qualification Campaigns. , 2008, , .		0
125	Low cost networked radar and sonar using open source hardware and software. , 2007, , .		1
126	A common view GPSDO to synchronize netted radar. , 2007, , .		19

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127	The Gauss-Newton algorithm in passive aircraft tracking using Doppler and bearings. , 2007, , .		2
128	The Gauss-Newton algorithm applied to track-while-scan radar. , 2007, , .		2
129	<title>Dynamically configurable GPR data acquisition and display application</title>. , 2002, 4758, 203.		1
130	<title>Polarimetric model for a stepped-frequency continuous-wave ground-penetrating radar</title>. , 2002, , .		2
131	<title>Electromagnetic model for a stepped-frequency continuous-wave ground-penetrating radar</title>. , 2002, 4758, 291.		1
132	The Multicomputer Technology Initiative at UCT. , 1999, , .		0
133	A South African airborne remote sensing facility?. , 1999, , .		0
134	Efficient RFI suppression in SAR using LMS adaptive filter integrated with range/Doppler algorithm. Electronics Letters, 1999, 35, 629.	0.5	51
135	Ship target recognition using low resolution radar and neural networks. IEEE Transactions on Aerospace and Electronic Systems, 1999, 35, 386-393.	2.6	25
136	Interpolating satellite derived wind field data using ordinary Kriging, with application to the nadir gap. IEEE Transactions on Geoscience and Remote Sensing, 1996, 34, 250-256.	2.7	10
137	Standardisation of the graphical and operator input device modules for tactical command and control man-machine interfaces. IEEE Aerospace and Electronic Systems Magazine, 1995, 10, 40-44.	2.3	0
138	Experimental evaluation of bend radiation losses in millimetric dielectric waveguide. Electronics Letters, 1981, 17, 75.	0.5	1
139	Experimental 30 GHz printed array with low loss insular guide feeder. Electronics Letters, 1981, 17, 146.	0.5	2
140	Thick-film fabrication techniques for millimetre-wave dielectric waveguide integrated circuits. Electronics Letters, 1980, 16, 245.	0.5	1
141	Communications System Design for Life Critical Applications. , 0, , .		0
142	Correlation filters applied to synthetic range profiles of aircraft targets. , 0, , .		4
143	iSAR: a multispectral, polarimetric airborne SAR system. , 0, , .		1
144	Comparison of speckle reduction techniques applied to airborne SAR imagery. , 0, , .		1

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145	Development of a low cost SFCW ground penetrating radar. , 0, , .		13
146	High resolution VHF SAR processing using synthetic range profiling. , 0, , .		19
147	Status of the SASAR System. , 0, , .		1
148	Radar remote sensing potential for Southern Africa. , 0, , .		0
149	Progress on the SASAR system: first results. , 0, , .		2
150	Laboratory implementation of a synthetic aperture imaging sonar. , 0, , .		0
151	Extended database of synthetic range profiles of commercial aircraft. , 0, , .		0
152	Sensor fusion in the detection of land mines. , 0, , .		5
153	The use of interferometric SAR in a study of reservoir induced crustal deformation. , 0, , .		3
154	High range resolution radar using narrowband linear chirps offset in frequency. , 0, , .		17
155	High resolution SAR processing using stepped-frequencies. , 0, , .		57
156	Low frequency range-Doppler SAR processing without secondary range compression. , 0, , .		2
157	Ship target recognition with the Mellin transform aided by neural networks. , 0, , .		5
158	Stepped-frequency processing by reconstruction of target reflectivity spectrum. , 0, , .		53
159	SAR processing using PVM. , 0, , .		0
160	Radiometry for landmine detection. , 0, , .		3
161	Contending with high relief and temporal decorrelation in an InSAR study of the effects of reservoir loading. , 0, , .		2
162	Detection of water in an airport tarmac using SFCW ground penetrating radar. , 0, , .		1

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163	GPR SAR simulation and image reconstruction. , 0, , .		1
164	Major conclusions relating to the Katse Dam differential InSAR study. , 0, , .		1
165	Satellite radar interferometry reveals mining induced seismic deformation in South Africa. , 0, , .		2
166	Parallel SAR processor using PVM on a Beowulf cluster. , 0, , .		1
167	Repeat pass SAR interferometry at VHF band. , 0, , .		2
168	Borehole Interferometric SAR : A preliminary study. , 0, , .		0
169	Pulse versus stepped frequency continuous wave modulation for ground penetrating radar. , 0, , .		21
170	FDTD modelling of a borehole radar wave propagation: a 3-D simulation study in conductive media. , 0, , .		0
171	Drill head mounted obstacle avoidance radar. , 0, , .		5
172	Synthetic aperture sonar 3-D imaging of targets in air using multiple, non-parallel shot lines. , 0, , .		1
173	Interpolating satellite derived wind field data using ordinary kriging, with application to the nadir gap. , 0, , .		0