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	High resolution SAR processing using stepped-frequencies. , 0, , .		57
2	Stepped-frequency processing by reconstruction of target reflectivity spectrum. , 0, , .		53
3	Efficient RFI suppression in SAR using LMS adaptive filter integrated with range/Doppler algorithm. Electronics Letters, 1999, 35, 629.	0.5	51
4	Stepped OFDM radar technique to resolve range and doppler simultaneously. IEEE Transactions on Aerospace and Electronic Systems, 2015, 51, 937-950.	2.6	44
5	Design of OFDM radar pulses using genetic algorithm based techniques. IEEE Transactions on Aerospace and Electronic Systems, 2016, 52, 1953-1966.	2.6	40
6	A CNN and LSTM-based approach to classifying transient radio frequency interference. Astronomy and Computing, 2018, 25, 52-57.	0.8	33
7	Multistatic radar: System requirements and experimental validation. , 2014, , .		27
8	Statistical analysis of simultaneous monostatic and bistatic sea clutter at low grazing angles. Electronics Letters, 2011, 47, 621.	0.5	26
9	Ship target recognition using low resolution radar and neural networks. IEEE Transactions on Aerospace and Electronic Systems, 1999, 35, 386-393.	2.6	25
10	Commensal radar using separated reference and surveillance channel configuration. Electronics Letters, 2012, 48, 1158-1160.	0.5	25
11	Passive radar using a software-defined radio platform and opensource software tools. , 2011, , .		24
12	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
13	A quantitative method for mono- and multistatic radar coverage area prediction. , 2010, , .		23
14	A Signal Level Simulator for Multistatic and Netted Radar Systems. IEEE Transactions on Aerospace and Electronic Systems, 2011, 47, 178-186.	2.6	23
15	Impact of the Doppler modulation on the range and Doppler processing in OFDM radar. , 2014, , .		22
16	Pulse versus stepped frequency continuous wave modulation for ground penetrating radar. , 0, , .		21
17	Passive Coherent Location as Cognitive Radar. IEEE Aerospace and Electronic Systems Magazine, 2010, 25, 12-17.	2.3	20
18	High resolution VHF SAR processing using synthetic range profiling. , 0, , .		19

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19	A common view GPSDO to synchronize netted radar. , 2007, , .		19
20	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
21	High range resolution radar using narrowband linear chirps offset in frequency. , 0, , .		17
22	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
23	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
24	Gaussâ€“Newton filtering incorporating Levenbergâ€“Marquardt methods for tracking. , 2013, 23, 1662-1667.		15
25	FOPEN capabilities of commensal radars based on whitespace communication systems. , 2014, , .		15
26	Analysis of polarimetric bistatic sea clutter using the NetRAD radar system. IET Radar, Sonar and Navigation, 2016, 10, 1356-1366.	0.9	15
27	Measurements and discrimination of drones and birds with a multiâ€frequency multistatic radar system. IET Radar, Sonar and Navigation, 2021, 15, 841-852.	0.9	15
28	Development of a low cost SFCW ground penetrating radar. , 0, , .		13
29	Evaluation of coherent netted radar carrier stability while synchronised with GPS-disciplined oscillators. , 2011, , .		13
30	Report on the 2018 Trials of the Multistatic NeXtRAD Dual Band Polarimetric Radar. , 2019, , .		13
31	Growing horns: Applying the Rhino software defined radio system to radar. , 2011, , .		12
32	Fully Parallel Electrical Impedance Tomography Using Code Division Multiplexing. IEEE Transactions on Biomedical Circuits and Systems, 2016, 10, 556-566.	2.7	12
33	Measurements of bistatic radar sea clutter. , 2011, , .		11
34	Parameters Affecting Interferometric Coherenceâ€”The Case of a Dynamic Agricultural Region. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 1572-1582.	2.7	11
35	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
36	Null placement in a circular antenna array for Passive Coherent Location systems. , 2010, , .		10

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37	Recursive sliding discrete Fourier transform with oversampled data. , 2014, 25, 275-279.		10
38	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
39	Synchronizing network radar using all-in-view GPS-disciplined oscillators. , 2017, , .		10
40	Multistatic networked radar for sea clutter measurements. , 2011, , .		9
41	Processing alternatives in OFDM radar. , 2014, , .		9
42	Investigation of white rabbit for synchronization and timing of netted radar. , 2015, , .		9
43	Target tracking using Dopplerâ€only measurements in FM broadcast band commensal radar. Electronics Letters, 2015, 51, 1528-1530.	0.5	9
44	Real Time Processing of Networked Passive Coherent Location Radar System. International Journal of Electronics and Telecommunications, 2011, 57, 363-368.	0.5	8
45	Processing design of a networked passive coherent location system. , 2011, , .		8
46	NetRAD multistatic sea clutter database. , 2012, , .		8
47	Modelling and simulation in commensal radar system design. , 2012, , .		8
48	White space symbiotic radar: A new scheme for coexistence of radio communications and radar. , 2015, , .		8
49	Waveform design for Commensal Radar. , 2015, , .		8
50	Characterizing transient radioâ€frequency interference. Radio Science, 2017, 52, 841-851.	0.8	8
51	Doppler-only tracking with the recursive Gauss-Newton filter. , 2012, , .		7
52	Review of radar signal attenuation due to sand and dust storms. , 2012, , .		7
53	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
54	White RHINO: A low cost whitespace communications and radar hardware platform. , 2013, , .		7

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55	Mixed-architecture process scheduling on tightly coupled reconfigurable computers. , 2014, , .		7
56	Correlation analysis of simultaneously collected bistatic and monostatic sea clutter. , 2017, , .		7
57	Passive Coherent Location as Cognitive Radar. , 2009, , .		6
58	Commensal radar: Range-Doppler processing using a recursive DFT. , 2013, , .		6
59	High sensitivity fixed tuned direct conversion receiver for FM band commensal radar. , 2015, , .		6
60	Noise jamming of a FM band commensal radar. , 2015, , .		6
61	The effect of perforating the corner reflector on maximum radar cross section. , 2016, , .		6
62	The design and development of a FM band passive radar test-bed for long term qualification testing. , 2017, , .		6
63	First measurements with NeXtRAD, a polarimetric X/L Band radar network. , 2017, , .		6
64	Sensor fusion in the detection of land mines. , 0, , .		5
65	Ship target recognition with the Mellin transform aided by neural networks. , 0, , .		5
66	Drill head mounted obstacle avoidance radar. , 0, , .		5
67	Cumulative detection probability of stationary and moving targets by MIMO radar. , 2011, , .		5
68	Information sensing for radar target classification using compressive sensing. , 2012, , .		5
69	Simulation and measurement of propeller modulation using FM broadcast band commensal radar. Electronics Letters, 2013, 49, 1481-1482.	0.5	5
70	SIMO radar design for small space debris detection in the LEO. , 2015, , .		5
71	Time domain classification of transient radio frequency interference. , 2016, , .		5
72	Constraining errorâ€"A sliding discrete Fourier transform investigation. , 2016, 51, 54-61.		5

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73	A Dictionary Approach to Identifying Transient RFI. Radio Science, 2018, 53, 656-669.	0.8	5
74	Correlation filters applied to synthetic range profiles of aircraft targets. , 0, , .		4
75	Quaternion-Based Transformation for Extraction of Image-Generating Doppler for ISAR. IEEE Geoscience and Remote Sensing Letters, 2008, 5, 560-563.	1.4	4
76	A many processing element framework for the Discrete Fourier Transform. , 2010, , .		4
77	Design and evaluation of a sea clutter simulator. , 2011, , .		4
78	Performance improvements using the separated reference configuration for a multi-static FM broadcast band radar system. , 2013, , .		4
79	Current and future small satellite projects in South Africa. , 2013, , .		4
80	Recommendations for long-term operational dinsar monitoring of mining-induced deformation in a dynamic agricultural region. , 2013, , .		4
81	A Cramer Rao analysis on receiver placement in a FM band Commensal Radar system based on Doppler only measurements. , 2014, , .		4
82	ComRad3, a multichannel direct conversion receiver for FM Broadcast Band Radar. , 2014, , .		4
83	Convex optimization for optimal PMEPR and mismatched filter design in OFDM radar. , 2015, , .		4
84	FM band commensal radar technology used for the detection of small aircraft and the measurement of propeller modulation. , 2015, , .		4
85	Interval Algebra â€“ An effective means of scheduling surveillance radar networks. Information Fusion, 2015, 23, 81-98.	11.7	4
86	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
87	Noise jamming of a FM band commensal sensor. IET Radar, Sonar and Navigation, 2017, 11, 946-952.	0.9	4
88	A Summary of the Results Achieved by the GPS Disciplined References of the NetRAD and NeXtRAD Multistatic Radars. , 2019, , .		4
89	Measurements of Multistatic X&L Band Radar Signatures of UAVS. , 2019, , .		4
90	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

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91	The use of interferometric SAR in a study of reservoir induced crustal deformation. , 0, , .		3
92	Radiometry for landmine detection. , 0, , .		3
93	A new probabilistic data association filter based on composite expanding and fading memory polynomial filters. , 2011, , .		3
94	Recursive Fourier Transform hardware. , 2011, , .		3
95	Towards a many-core architecture for HPC. , 2013, , .		3
96	NeXtRAD and RHINO radar: Harnessing the herd for networked radar. , 2014, , .		3
97	Scheduling Mixed-Architecture Processes in Tightly Coupled FPGA-CPU Reconfigurable Computers. , 2014, , .		3
98	Identifying radio frequency interference with hidden Markov models. , 2016, , .		3
99	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
100	Evaluating an off-the-shelf white rabbit system to synchronise network radar via optic fibre. , 2017, , .		3
101	Experimental 30 GHz printed array with low loss insular guide feeder. Electronics Letters, 1981, 17, 146.	0.5	2
102	Progress on the SASAR system: first results. , 0, , .		2
103	Low frequency range-Doppler SAR processing without secondary range compression. , 0, , .		2
104	Contending with high relief and temporal decorrelation in an InSAR study of the effects of reservoir loading. , 0, , .		2
105	Satellite radar interferometry reveals mining induced seismic deformation in South Africa. , 0, , .		2
106	Repeat pass SAR interferometry at VHF band. , 0, , .		2
107	<title>Polarimetric model for a stepped-frequency continuous-wave ground-penetrating radar</title>. , 2002, , .		2
108	The Gauss-Newton algorithm in passive aircraft tracking using Doppler and bearings. , 2007, , .		2

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109	The Gauss-Newton algorithm applied to track-while-scan radar. , 2007, , .		2
110	Extensible simulator for waveform diversity testing. , 2009, , .		2
111	Signal level Simulator for netted text radar waveforms evaluation. IEEE Aerospace and Electronic Systems Magazine, 2010, 25, 27-29.	2.3	2
112	Efficient Generation of f^{alpha} Noise Sequences for Pulsed Radar Simulation. IEEE Transactions on Aerospace and Electronic Systems, 2010, 46, 737-744.	2.6	2
113	The phenology of an agricultural region as expressed by polarimetric decomposition and vegetation indices. , 2013, , .		2
114	Calibration of a SuperDARN radar antenna by means of a satellite beacon on a CubeSat. , 2013, , .		2
115	Electrical impedance tomography using code division multiplexing. , 2015, , .		2
116	A canonical interferencelet-based approach to RFI identification. , 2016, , .		2
117	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
118	Biased estimators for spinning antenna DOA measurements. IEEE Transactions on Aerospace and Electronic Systems, 2016, 52, 1499-1513.	2.6	2
119	Sparse Bayesian learning for spinning antenna DOA superâ€resolution. Electronics Letters, 2018, 54, 389-391.	0.5	2
120	Development of the miloSAR Testbed for the One Kilogramme radioCamera SAR for Small Drones. , 2019, , .		2
121	Thick-film fabrication techniques for millimetre-wave dielectric waveguide integrated circuits. Electronics Letters, 1980, 16, 245.	0.5	1
122	Experimental evaluation of bend radiation losses in millimetric dielectric waveguide. Electronics Letters, 1981, 17, 75.	0.5	1
123	iSAR: a multispectral, polarimetric airborne SAR system. , 0, , .		1
124	Comparison of speckle reduction techniques applied to airborne SAR imagery. , 0, , .		1
125	Status of the SASAR System. , 0, , .		1
126	Detection of water in an airport tarmac using SFCW ground penetrating radar. , 0, , .		1

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127	GPR SAR simulation and image reconstruction. , 0, , .		1
128	Major conclusions relating to the Katse Dam differential InSAR study. , 0, , .		1
129	Parallel SAR processor using PVM on a Beowulf cluster. , 0, , .		1
130	<title>Dynamically configurable GPR data acquisition and display application</title>. , 2002, 4758, 203.		1
131	<title>Electromagnetic model for a stepped-frequency continuous-wave ground-penetrating radar</title>. , 2002, 4758, 291.		1
132	Synthetic aperture sonar 3-D imaging of targets in air using multiple, non-parallel shot lines. , 0, , .		1
133	Low cost networked radar and sonar using open source hardware and software. , 2007, , .		1
134	A signal level simulator for netted radar waveforms evaluation. , 2009, , .		1
135	Autonomic subsystems for cognition in Passive Coherent Location. , 2010, , .		1
136	Detection and monitoring of surface subsidence associated with mining activities in the Witbank Coalfields, South Africa, using differential radar interferometry. , 2011, , .		1
137	A domain-specific language to facilitate software defined radio parallel executable patterns deployment on heterogeneous architectures. , 2014, , .		1
138	Using a domain specific language for SDR to facilitate radar signal processing in heterogeneous computing architectures. , 2015, , .		1
139	RFI in Mauritius. , 2016, , .		1
140	Evaluating commensal sensors for detecting objects of interest in the Low Earth Orbit. , 2016, , .		1
141	SdrLift: An Intermediate-Level Framework for Synthesis of Software-Defined Radio Accelerators. , 2019, , .		1
142	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
143	Integer boundary spur considerations for fractionalâ€N PLL based FMCW radar. Electronics Letters, 2020, 56, 729-732.	0.5	1
144	Communications System Design for Life Critical Applications. , 0, , .		0

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145	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
146	Radar remote sensing potential for Southern Africa. , 0, , .		0
147	Laboratory implementation of a synthetic aperture imaging sonar. , 0, , .		0
148	Extended database of synthetic range profiles of commercial aircraft. , 0, , .		0
149	SAR processing using PVM. , 0, , .		0
150	The Multicomputer Technology Initiative at UCT. , 1999, , .		0
151	A South African airborne remote sensing facility?. , 1999, , .		0
152	Borehole Interferometric SAR : A preliminary study. , 0, , .		0
153	FDTD modelling of a borehole radar wave propagation: a 3-D simulation study in conductive media. , 0, , .		0
154	RFI Measurement Database Assembled During the Square Kilometre Array Site Qualification Campaigns. , 2008, , .		0
155	Detection performance of MIMO passive radar systems based on FM signals. , 2011, , .		0
156	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
157	A space-borne passive microwave radiometer for the space programme of a developing nation. , 2012, , .		0
158	Tutorial review of an L Band radar transceiver for use with a software defined radar baseband system. , 2012, , .		0
159	Automated gateware discovery using open firmware. , 2013, , .		0
160	The GRSS Summer School Melbourne 2013 [Education]. IEEE Geoscience and Remote Sensing Magazine, 2013, 1, 42-45.	4.9	0
161	IGARSS 2012 Survey [Conference Report]. IEEE Geoscience and Remote Sensing Magazine, 2013, 1, 73-76.	4.9	0
162	GRSS Educational Activities Planning for 2013 [Education]. IEEE Geoscience and Remote Sensing Magazine, 2013, 1, 80-82.	4.9	0

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163	The Geoscience and Remote Sensing Society and Education [Education]. IEEE Geoscience and Remote Sensing Magazine, 2014, 2, 78-81.	4.9	0
164	Evaluation of High-Level open-source tool-flows for rapid prototyping of Software Defined Radios. , 2015, , .		0
165	Coherence optimisation and its limitations for deformation monitoring in agricultural regions. , 2015, , .		0
166	Database design for an experimental, dual band, polarimetric radar. , 2015, , .		0
167	The GRSS-AARSE Summer School 2014 [Education]. IEEE Geoscience and Remote Sensing Magazine, 2015, 3, 47-50.	4.9	0
168	Investigation of calibration aspects of fully and compact polarimetric SAR systems. , 2016, , .		0
169	OptiSDR â€" A domain specific language to improve developer productivity for software defined radio. , 2016, , .		0
170	Measurements of signal penetration for p-band SAR system through trees using two trihedral corner reflectors. , 2017, , .		0
171	Capabilities of code division multiplexed electrical impedance tomography. , 2017, , .		0
172	Automatic Configurable Hardware Code Generation for Software-Defined Radios. Computers, 2018, 7, 53.	2.1	0
173	Interpolating satellite derived wind field data using ordinary kriging, with application to the nadir gap. , 0, , .		0