Antonio Moccia

List of Publications by Year
in descending order

85 papers	1,295 citations	394421 19 h-index	395702 33 g-index
88 all docs	88 docs citations	88 times ranked	897 citing authors

#	Article	IF	Citations
1	Formation Flying SAR: Analysis of Imaging Performance by Array Theory. IEEE Transactions on Aerospace and Electronic Systems, 2021, 57, 1480-1497.	4.7	14
2	Formation-Flying SAR Receivers in Far-From-Transmitter Geometry: Signal Model and Processing Scheme. , 2021, , .		5
3	Formation-Flying SAR Receivers in FAR-from-Transmitter Geometry: X-Band SAR Antenna Design. , 2021, , .		1
4	X-Band SAR Antenna Design for a CubeSat Formation-Flying Remote Sensing Mission. , 2021, , .		1
5	PRF Selection in Formation-Flying SAR: Experimental Verification on Sentinel-1 Monostatic Repeat-Pass Data. Remote Sensing, 2020, 12, 29.	4.0	8
6	Design concepts for distributed synthetic aperture radar enabling innovative missions and imaging techniques by microsatellites. , 2020, , .		0
7	Integration of Automatic Identification System (AIS) Data and Single-Channel Synthetic Aperture Radar (SAR) Images by SAR-Based Ship Velocity Estimation for Maritime Situational Awareness. Remote Sensing, 2019, 11, 2196.	4.0	28
8	Segmentation of Marine SAR Images by Sublook Analysis and Application to Sea Traffic Monitoring. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 1463-1477.	6.3	41
9	Experimental Analysis of Radar Odometry by Commercial Ultralight Radar Sensor for Miniaturized UAS. Journal of Intelligent and Robotic Systems: Theory and Applications, 2018, 90, 485-503.	3.4	20
10	Passive SAR satellite constellation for near-persistent earth observation: Prospects and issues. IEEE Aerospace and Electronic Systems Magazine, 2018, 33, 4-15.	1.3	6
11	PCA-Based Line Detection from Range Data for Mapping and Localization-Aiding of UAVs. International Journal of Aerospace Engineering, 2017, 2017, 1-14.	0.9	9
12	Indoor Operations by FMCW Millimeter Wave SAR Onboard Small UAS: A Simulation Approach. Journal of Sensors, 2016, 2016, 1-13.	1.1	1
13	Differential GNSS and Vision-Based Tracking to Improve Navigation Performance in Cooperative Multi-UAV Systems. Sensors, 2016, 16, 2164.	3.8	55
14	Ultralight radar sensor for autonomous operations by micro-UAS. , 2016, , .		11
15	Investigation on radar-based applications for mini-UAS and MAVs. , 2016, , .		1
16	Moon-based Synthetic Aperture Radar: Review and challenges. , 2016, , .		14
17	Sense and avoid for unmanned aircraft systems. IEEE Aerospace and Electronic Systems Magazine, 2016, 31, 82-110.	1.3	63
18	Multi-purposes radar for remote sensing and navigation by mini and micro unmanned aerial vehicles. , 2016, , .		1

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19	Experimental analysis of onboard non-cooperative sense and avoid solutions based on radar, optical sensors, and data fusion. IEEE Aerospace and Electronic Systems Magazine, 2016, 31, 6-14.	1.3	12
20	Prescreening and discrimation of maritime targets in single-channel SAR images. , 2016, , .		0
21	In-flight performance analysis of a non-cooperative radar-based sense and avoid system. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2016, 230, 1592-1604.	1.3	14
22	Use of Doppler Parameters for Ship Velocity Computation in SAR Images. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 3995-4011.	6.3	32
23	Sky Region Obstacle Detection and Tracking for Vision-Based UAS Sense and Avoid. Journal of Intelligent and Robotic Systems: Theory and Applications, 2016, 84, 121-144.	3.4	13
24	Preliminary Study of a Millimeter Wave FMCW InSAR for UAS Indoor Navigation. Sensors, 2015, 15, 2309-2335.	3.8	21
25	Linear Dispersion Relation and Depth Sensitivity to Swell Parameters: Application to Synthetic Aperture Radar Imaging and Bathymetry. Scientific World Journal, The, 2015, 2015, 1-10.	2.1	12
26	Radar/electro-optical data fusion for non-cooperative UAS sense and avoid. Aerospace Science and Technology, 2015, 46, 436-450.	4.8	53
27	Compact millimeter wave FMCW InSAR for UAS indoor navigation. , 2015, , .		10
28	Performance analysis of millimeter wave FMCW InSAR for UAS indoor operations. , 2015, , .		2
29	Tracking of Coastal Swell Fields in SAR Images for Sea Depth Retrieval: Application to ALOS L-Band Data. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2015, 8, 3532-3540.	4.9	9
30	Challenges and Solutions for Vision-based Sense and Avoid. , 2015, , .		3
31	Particle Filtering for Obstacle Tracking in UAS Sense and Avoid Applications. Scientific World Journal, The, 2014, 2014, 1-12.	2.1	1
32	Ship velocity estimation by Doppler Centroid analysis of focused SAR data. , 2014, , .		4
33	L-band SAR image processing for the determination of coastal bathymetry based on swell analysis. , 2014, , .		4
34	Architectures and algorithms for non-cooperative sense and avoid. , 2014, , .		1
35	SAR Bathymetry in the Tyrrhenian Sea by COSMO-SkyMed Data: A Novel Approach. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 2834-2847.	4.9	17
36	Morphological filtering and target tracking for vision-based UAS sense and avoid. , 2014, , .		19

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37	Flight Test of a Radar-Based Tracking System for UAS Sense and Avoid. IEEE Transactions on Aerospace and Electronic Systems, 2013, 49, 1139-1160.	4.7	55
38	Galileo-based spaceâ€“airborne bistatic SAR for UAS navigation. Aerospace Science and Technology, 2013, 27, 193-200.	4.8	10
39	Real-Time Hardware-in-the-Loop Laboratory Testing for Multisensor Sense and Avoid Systems. International Journal of Aerospace Engineering, 2013, 2013, 1-9.	0.9	4
40	Flight Performance Assessment of Vision-based Detection and Tracking for UAS Sense and Avoid. , 2013, , .		2
41	Development of numerical sensor models for cooperative and non-cooperative collision avoidance. , 2013, , .		0
42	Bistatic Synthetic Aperture Radar. , 2013, , 3-59.		6
43	Sabrina. , 2013, , 447-471.		2
44	Flight Performance Analysis of an Image Processing Algorithm for Integrated Sense-and-Avoid Systems. International Journal of Aerospace Engineering, 2012, 2012, 1-8.	0.9	21
45	Real Time Corner Detection for Miniaturized Electro-Optical Sensors Onboard Small Unmanned Aerial Systems. Sensors, 2012, 12, 863-877.	3.8	17
46	Multi-sensor data fusion: A tool to enable UAS integration into civil airspace. , 2011, , .		4
47	Automatic Collision Avoidance System: Design, development and flight tests. , 2011, , .		11
48	Spatial Resolution of Bistatic Synthetic Aperture Radar: Impact of Acquisition Geometry on Imaging Performance. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 3487-3503.	6.3	77
49	Data Fusion for UAS Collision Avoidance: Results from Flight Testing. , 2011, , .		5
50	Automatic Collision Avoidance System: Design, development and flight tests. , 2011, , .		3
51	Image processing algorithm for integrated sense and avoid systems. Proceedings of SPIE, 2010, , .	0.8	3
52	Spaceborne-airborne bistatic radar for UAS navigation purposes: Preliminary analysis and strawman system identification. , 2010, , .		2
53	An Innovative Procedure for Calibration of Strapdown Electro-Optical Sensors Onboard Unmanned Air Vehicles. Sensors, 2010, 10, 639-654.	3.8	22
54	Integrated Obstacle Detection System based on Radar and Optical Sensors. , 2010, , .		7

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55	Laboratory Test Facility for Simulating a Sense and Avoid Flight System. , 2010, , .		2
56	Synthetic Aperture Radar for Earth Observation from a Lunar Base: Performance and Potential Applications. IEEE Transactions on Aerospace and Electronic Systems, 2010, 46, 1034-1051.	4.7	57
57	Effects of Orbit and Pointing Geometry of a Spaceborne Formation for Monostatic-Bistatic Radargrammetry on Terrain Elevation Measurement Accuracy. Sensors, 2009, 9, 175-195.	3.8	5
58	Performance of Stereoradargrammetric Methods Applied to Spaceborne Monostaticâ€“Bistatic Synthetic Aperture Radar. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 544-560.	6.3	24
59	Real-Time Detection of Fire Hotspots from Mini-UAV Based, Thermal-InfraRed / VIS-NIR Hyperspectral Image-Data. , 2009, , .		0
60	Hybrid space-airborne bistatic SAR geometric resolutions. Proceedings of SPIE, 2009, , .	0.8	2
61	Multi-Sensor-Based Fully Autonomous Non-Cooperative Collision Avoidance System for Unmanned Air Vehicles. Journal of Aerospace Computing, Information, and Communication, 2008, 5, 338-360.	0.8	115
62	An Integrated Electro-Optical Payload System for Forest Fires Monitoring from Airborne Platform. , 2007, , .		16
63	An Optical Flow Based Electro-Optical See-and-Avoid System for UAVs. , 2007, , .		6
64	Real-Time Simulation and Data Fusion of Navigation Sensors for Autonomous Aerial Vehicles. , 2007, , 127-136.		1
65	Microsatellite Laser Altimeter. IEEE Transactions on Aerospace and Electronic Systems, 2006, 42, 1187-1197.	4.7	1
66	Preliminary design of a space system operating a ground-penetrating radar. Acta Astronautica, 2005, 57, 851-863.	3.2	0
67	Performance of spaceborne bistatic synthetic aperture radar. IEEE Transactions on Aerospace and Electronic Systems, 2005, 41, 1383-1395.	4.7	36
68	Performance Analysis and Design of an Obstacle Detection and Identification System. , 2005, , .		13
69	Attitude and antenna pointing design of bistatic radar formations. IEEE Transactions on Aerospace and Electronic Systems, 2003, 39, 949-960.	4.7	32
70	<title>Scientific applications of a bistatic radar mission based on a small satellite</title>. , 2002, 4543, 1.		3
71	Laboratory Test System for Performance Evaluation of Advanced Star Sensors. Journal of Guidance, Control, and Dynamics, 2002, 25, 200-208.	2.8	16
72	Spaceborne along-track SAR interferometry: performance analysis and mission scenarios. IEEE Transactions on Aerospace and Electronic Systems, 2001, 37, 199-213.	4.7	58

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73	Remote sensing satellite formation for bistatic synthetic aperture radar observation. , 2001, , .		4
74	<title>Bistatic SAR for Earth observation</title>. , 2000, , .		1
75	Mission analysis and design of a bistatic synthetic aperture radar on board a small satellite. Acta Astronautica, 2000, 47, 819-829.	3.2	13
76	Orbit and Pointing Design of Remote Sensing Satellites for Natural Hazard Mapping. Journal of the Astronautical Sciences, 1999, 47, 133-150.	1.5	0
77	DEM generation by means of ERS tandem data. IEEE Transactions on Geoscience and Remote Sensing, 1998, 36, 1905-1912.	6.3	62
78	<title>Space constellation of high-resolution SARs for fast global access</title>. , 1996, 2958, 383.		0
79	Space Station based tethered interferometer for natural disaster monitoring. Journal of Spacecraft and Rockets, 1996, 33, 700-706.	1.9	7
80	Tethered system attitude control after attachment point blocking. Acta Astronautica, 1994, 32, 355-362.	3.2	3
81	Passive and active calibrator characterization using a spaceborne SAR system simulator. IEEE Transactions on Geoscience and Remote Sensing, 1994, 32, 715-721.	6.3	12
82	Attitude control by inertia wheels of a tethered interferometric SAR for topographic mapping. Meccanica, 1993, 28, 333-339.	2.0	0
83	A tethered interferometric synthetic aperture radar (SAR) for a topographic mission. IEEE Transactions on Geoscience and Remote Sensing, 1992, 30, 103-109.	6.3	37
84	Spaceborne Bistatic Synthetic Aperture Radar. , 0, , 27-65.		1
85	Fundamentals of Bistatic Synthetic Aperture Radar. , 0, , 1-26.		4