

Roberto Sabatini

List of Publications by Year in descending order

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146
papers

2,303
citations

257450

24
h-index

315739

38
g-index

150
all docs

150
docs citations

150
times ranked

1331
citing authors

#	ARTICLE	IF	CITATIONS
1	Advances in Integrated System Health Management for mission-essential and safety-critical aerospace applications. Progress in Aerospace Sciences, 2022, 128, 100758.	12.1	47
2	Design principles and digital control of advanced distributed propulsion systems. Energy, 2022, 241, 122788.	8.8	15
3	Autonomous Trajectory Optimisation for Intelligent Satellite Systems and Space Traffic Management. Acta Astronautica, 2022, 194, 185-201.	3.2	14
4	Wearable Cardiorespiratory Sensors for Aerospace Applications. Sensors, 2022, 22, 4673.	3.8	2
5	A High-Integrity and Low-Cost Navigation System for Autonomous Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 356-369.	8.0	29
6	Information Fusion as an Autonomy enabler for UAV Traffic Management. , 2021, , .		2
7	Operational efficiency analysis of Beijing multi-airport terminal airspace. Journal of Air Transport Management, 2021, 92, 102013.	4.5	6
8	Online Multimodal Inference of Mental Workload for Cognitive Human Machine Systems. Computers, 2021, 10, 81.	3.3	7
9	Laser Beam Atmospheric Propagation Modelling for Aerospace LIDAR Applications. Atmosphere, 2021, 12, 918.	2.3	20
10	Hybrid AI-Based Demand-Capacity Balancing for UAS Traffic Management and Urban Air Mobility. , 2021, , .		3
11	Evolutionary Human-Machine Interactions for UAS Traffic Management. , 2021, , .		3
12	Explanation of Machine-Learning Solutions in Air-Traffic Management. Aerospace, 2021, 8, 224.	2.2	23
13	Adaptive Human-Robot Interactions for Multiple Unmanned Aerial Vehicles. Robotics, 2021, 10, 12.	3.5	23
14	Active and Passive Electro-Optical Sensors for Health Assessment in Food Crops. Sensors, 2021, 21, 171.	3.8	19
15	Sound Propagation Modelling for Manned and Unmanned Aircraft Noise Assessment and Mitigation: A Review. Atmosphere, 2021, 12, 1424.	2.3	10
16	A Unified Collision Risk Model for Unmanned Aircraft Systems. , 2021, , .		2
17	Reinforcement Learning-Based Flow Management Techniques for Urban Air Mobility and Dense Low-Altitude Air Traffic Operations. , 2021, , .		6
18	A Multi-Criteria Clustering Method for UAS Traffic Management and Urban Air Mobility. , 2021, , .		2

#	ARTICLE	IF	CITATIONS
19	Intelligent Health and Mission Management for Multicopter UAS Integrity Assurance. , 2021, , .		0
20	Integration of a UAV-LIDAR System for Remote Sensing of CO ₂ concentrations in Smart Agriculture. , 2021, , .		1
21	Vehicular Sensor Network and Data Analytics for a Health and Usage Management System. Sensors, 2020, 20, 5892.	3.8	3
22	A Cyber-Physical-Human System for One-to-Many UAS Operations: Cognitive Load Analysis. Sensors, 2020, 20, 5467.	3.8	8
23	Facial Expression Analysis for Cognitive State Estimation in Aerospace Human-Machine Systems. , 2020, , .		3
24	Avionics Systems Panel Research and Innovation Perspectives. IEEE Aerospace and Electronic Systems Magazine, 2020, 35, 58-72.	1.3	21
25	Human-Machine System Design for Autonomous Distributed Satellite Operations. , 2020, , .		2
26	A Performance-Based Airspace Model for Unmanned Aircraft Systems Traffic Management. Aerospace, 2020, 7, 154.	2.2	22
27	Network Optimisation and Performance Analysis of a Multistatic Acoustic Navigation Sensor. Sensors, 2020, 20, 5718.	3.8	3
28	Acoustic Positioning and Navigation System for GNSS Denied/Challenged Environments. , 2020, , .		1
29	Advances in intelligent and autonomous navigation systems for small UAS. Progress in Aerospace Sciences, 2020, 115, 100617.	12.1	40
30	A Novel Navigation Performance-based Airspace Model for Urban Air Mobility. , 2020, , .		5
31	Human-Machine Interactions in Very-Low-Level UAS Operations and Traffic Management. , 2020, , .		6
32	Acoustic Positioning and Navigation System for Micro Aerial Vehicle Navigation. , 2020, , .		0
33	A comparison between finite differences and the spectral-element method for the simulation of the propagation of mechanical waves through fluid/solid interfaces. , 2020, , .		0
34	Real-Time UAS Guidance for Continuous Curved GNSS Approaches. Journal of Intelligent and Robotic Systems: Theory and Applications, 2019, 93, 151-162.	3.4	4
35	Multiobjective 4D Trajectory Optimization for Integrated Avionics and Air Traffic Management Systems. IEEE Transactions on Aerospace and Electronic Systems, 2019, 55, 170-181.	4.7	27
36	GNSS Performance Modelling and Augmentation for Urban Air Mobility. Sensors, 2019, 19, 4209.	3.8	25

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37	Uncertainty Quantification for Space Situational Awareness and Traffic Management. Sensors, 2019, 19, 4361.	3.8	19
38	Review of advanced low-emission technologies for sustainable aviation. Energy, 2019, 188, 115945.	8.8	76
39	Performance Characterisation of Wearable Cardiac Monitoring Devices for Aerospace Applications. , 2019, , .		0
40	A Sensor-Centric Approach to Space Traffic Management. , 2019, , .		1
41	Sensor Networks for Aerospace Human-Machine Systems. Sensors, 2019, 19, 3465.	3.8	27
42	Optimal energy-based 4D guidance and control for terminal descent operations. Aerospace Science and Technology, 2019, 95, 105436.	4.8	11
43	Space traffic management: towards safe and unsegregated space transport operations. Progress in Aerospace Sciences, 2019, 105, 98-125.	12.1	27
44	Experimental characterisation of eye-tracking sensors for adaptive human-machine systems. Measurement: Journal of the International Measurement Confederation, 2019, 140, 151-160.	5.0	20
45	Probabilistic Safety Assessment for UAS Separation Assurance and Collision Avoidance Systems. Aerospace, 2019, 6, 19.	2.2	9
46	Cyber Awareness Trends in Avionics. , 2019, , .		20
47	A Multistatic Ultrasonic Navigation System for GNSS-denied Environments. , 2019, , .		0
48	An immersed interface method for the solution of the standard parabolic equation in range-dependent ocean environments. Journal of the Acoustical Society of America, 2018, 143, EL243-EL247.	1.1	3
49	Cognitive Human-Machine Interfaces and Interactions for Unmanned Aircraft. Journal of Intelligent and Robotic Systems: Theory and Applications, 2018, 91, 755-774.	3.4	31
50	A Unified Analytical Framework for Aircraft Separation Assurance and UAS Sense-and-Avoid. Journal of Intelligent and Robotic Systems: Theory and Applications, 2018, 91, 735-754.	3.4	18
51	Aircraft Dynamics Model Augmentation for RPAS Navigation and Guidance. Journal of Intelligent and Robotic Systems: Theory and Applications, 2018, 91, 709-723.	3.4	3
52	Machine Learning and Cognitive Ergonomics in Air Traffic Management: Recent Developments and Considerations for Certification. Aerospace, 2018, 5, 103.	2.2	44
53	Certification challenges for next-generation avionics and air traffic management systems. IEEE Aerospace and Electronic Systems Magazine, 2018, 33, 44-53.	1.3	19
54	Network Optimization for Multistatic Ultrasonic Sensors Based Indoor Navigation System. , 2018, , .		2

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55	GNSS Performance Modelling for Positioning and Navigation in Urban Environments. , 2018, , .		7
56	Eye-Tracking Sensors for Adaptive Aerospace Human-Machine Interfaces and Interactions. , 2018, , .		2
57	Avionics Human-Machine Interfaces and Interactions for Manned and Unmanned Aircraft. Progress in Aerospace Sciences, 2018, 102, 1-46.	12.1	61
58	Acoustic Sensors for Air and Surface Navigation Applications. Sensors, 2018, 18, 499.	3.8	32
59	A Novel Vehicle-Based GNSS Integrity Augmentation System for Autonomous Airport Surface Operations. Journal of Intelligent and Robotic Systems: Theory and Applications, 2017, 87, 379-403.	3.4	16
60	An evolutionary outlook of air traffic flow management techniques. Progress in Aerospace Sciences, 2017, 88, 15-42.	12.1	69
61	Commercial airline single-pilot operations: System design and pathways to certification. IEEE Aerospace and Electronic Systems Magazine, 2017, 32, 4-21.	1.3	47
62	A New Computational Technique for the Generation of Optimised Aircraft Trajectories. Nonlinear Engineering, 2017, 6, .	2.7	5
63	Detection of Volatile Organic Compound Emissions from Energy Distribution Network Leaks by Bistatic LIDAR. Energy Procedia, 2017, 110, 396-401.	1.8	4
64	Optimal Aircraft Trajectories to Minimize the Radiative Impact of Contrails and CO 2. Energy Procedia, 2017, 110, 446-452.	1.8	11
65	Descent 4D trajectory optimisation for curved GNSS approaches. , 2017, , .		1
66	A unified approach to separation assurance and Collision Avoidance for UAS operations and traffic management. , 2017, , .		9
67	Global navigation satellite systems performance analysis and augmentation strategies in aviation. Progress in Aerospace Sciences, 2017, 95, 45-98.	12.1	47
68	A GNSS Integrity Augmentation System for Ground Vehicle Operations. Energy Procedia, 2017, 110, 149-155.	1.8	6
69	Hybrid-electric propulsion integration in unmanned aircraft. Energy, 2017, 140, 1407-1416.	8.8	57
70	A novel simulation environment for cognitive human factors engineering research. , 2017, , .		5
71	An adaptive sensor-switching framework for urban UAS navigation. , 2017, , .		1
72	Future aviation research in Australia: addressing air transport safety, efficiency and environmental sustainability. International Journal of Sustainable Aviation, 2017, 3, 87.	0.2	1

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73	A bio-inspired acoustic sensor system for UAS navigation and tracking. , 2017, , .		4
74	Benefits and challenges of liquid hydrogen fuels in commercial aviation. International Journal of Sustainable Aviation, 2017, 3, 200.	0.2	17
75	UAV Navigation using Signals of Opportunity in Urban Environments: A Review. Energy Procedia, 2017, 110, 377-383.	1.8	30
76	Introducing green life cycle management in the civil aviation industry: the state-of-the-art and the future. International Journal of Sustainable Aviation, 2016, 2, 348.	0.2	4
77	Decentralized Modeling, Analysis, Control, and Application of Distributed Dynamic Systems. Journal of Control Science and Engineering, 2016, 2016, 1-2.	1.0	0
78	A Novel 3D Multilateration Sensor Using Distributed Ultrasonic Beacons for Indoor Navigation. Sensors, 2016, 16, 1637.	3.8	27
79	A unified approach to separation assurance and collision avoidance for flight management systems. , 2016, , .		3
80	Masking and multipath analysis for unmanned aerial vehicles in an urban environment. , 2016, , .		1
81	Trajectory optimisation for avionics-based GNSS integrity augmentation system. , 2016, , .		1
82	Avionics-based GNSS integrity augmentation synergies with SBAS and GBAS for safety-critical aviation applications. , 2016, , .		8
83	4-Dimensional trajectory optimisation algorithm for air traffic management systems. , 2016, , .		7
84	Multi-objective optimisation of aircraft flight trajectories in the ATM and avionics context. Progress in Aerospace Sciences, 2016, 83, 1-36.	12.1	103
85	Cognitive pilot-aircraft interface for single-pilot operations. Knowledge-Based Systems, 2016, 112, 37-53.	7.1	67
86	A low-cost and high performance navigation system for small RPAS applications. Aerospace Science and Technology, 2016, 58, 529-545.	4.8	26
87	UAVs Assisted Delay Optimization in Heterogeneous Wireless Networks. IEEE Communications Letters, 2016, 20, 2526-2529.	4.1	80
88	Multi-objective 4D Trajectory Optimization for Online Strategic and Tactical Air Traffic Management. , 2016, , 185-200.		3
89	Modelling and Evaluation of Persistent Contrail Formation Regions for Offline and Online Strategic Flight Trajectory Planning. , 2016, , 243-277.		3
90	Aircraft dynamics model augmentation for RPAS navigation and guidance. , 2016, , .		1

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91	Cooperative and non-cooperative sense-and-avoid in the CNS+A context: A unified methodology. , 2016, , .		7
92	Stand-off measurement of industrial air pollutant emissions from unmanned aircraft. , 2016, , .		3
93	CNS+A capabilities for the integration of unmanned aircraft in controlled airspace. , 2016, , .		1
94	LIDAR obstacle warning and avoidance system for unmanned aerial vehicle sense-and-avoid. Aerospace Science and Technology, 2016, 55, 344-358.	4.8	84
95	Modelling and Evaluation of Aircraft Contrails for 4-Dimensional Trajectory Optimisation. SAE International Journal of Aerospace, 2015, 8, 248-259.	4.0	13
96	Investigation of GNSS Integrity Augmentation Synergies with Unmanned Aircraft Sense-and-Avoid Systems. , 2015, , .		7
97	4 Dimensional trajectory functionalities for air traffic management systems. , 2015, , .		25
98	The effects of tube deformities on the dynamic calibration of a tubing system. , 2015, , .		0
99	4 Dimensional trajectory functionalities for air traffic management systems: Novel flight management system for improved safety and sustainability in the CNS+A context. , 2015, , .		3
100	Novel flight management system for improved safety and sustainability in the CNS&A context. , 2015, , .		14
101	4-dimensional trajectory generation algorithms for RPAS Mission Management Systems. , 2015, , .		2
102	Assessing avionics-based GNSS integrity augmentation performance in UAS mission- and safety-critical tasks. , 2015, , .		12
103	An innovative navigation and guidance system for small unmanned aircraft using low-cost sensors. Aircraft Engineering and Aerospace Technology, 2015, 87, 540-545.	0.8	15
104	A laser obstacle detection and avoidance system for manned and unmanned aircraft applications. , 2015, , .		7
105	Airborne laser sensors and integrated systems. Progress in Aerospace Sciences, 2015, 79, 15-63.	12.1	28
106	Particle filter based multi-sensor data fusion techniques for RPAS navigation and guidance. , 2015, , .		11
107	Low-cost sensors based Multi-Sensor Data Fusion techniques for RPAS Navigation and Guidance. , 2015, , .		7
108	A unified approach to cooperative and non-cooperative Sense-and-Avoid. , 2015, , .		21

#	ARTICLE	IF	CITATIONS
109	Reverse engineering of a fixed wing Unmanned Aircraft 6-DoF model based on laser scanner measurements. , 2014, , .		10
110	Unsteady pressure measurements on a MAV wing for the design of a turbulence mitigation system. , 2014, , .		6
111	Sensing Unsteady Pressure on MAV Wings: A New Method for Turbulence Alleviation. Applied Mechanics and Materials, 2014, 629, 48-54.	0.2	5
112	A Laser Obstacle Warning and Avoidance system for Manned and Unmanned Aircraft. , 2014, , .		24
113	Unmanned Aircraft bistatic LIDAR for CO ₂ column density determination. , 2014, , .		11
114	Avionics sensor fusion for small size unmanned aircraft Sense-and-Avoid. , 2014, , .		29
115	Innovative flight test instrumentation and techniques for airborne laser systems performance analysis and mission effectiveness evaluation. , 2014, , .		3
116	New techniques for laser beam atmospheric extinction measurements from manned and unmanned aerospace vehicles. Open Engineering, 2013, 3, .	1.6	4
117	A novel approach to night vision imaging systems development, integration and verification in military aircraft. Aerospace Science and Technology, 2013, 31, 10-23.	4.8	15
118	Novel atmospheric extinction measurement techniques for aerospace laser system applications. Infrared Physics and Technology, 2013, 56, 30-50.	2.9	20
119	A New Avionics-Based GNSS Integrity Augmentation System: Part 2 “ Integrity Flags. Journal of Navigation, 2013, 66, 501-522.	1.7	48
120	4-Dimensional Trajectory Negotiation and Validation System for the Next Generation Air Traffic Management. , 2013, , .		30
121	LOW-COST NAVIGATION AND GUIDANCE SYSTEMS FOR UNMANNED AERIAL VEHICLES “ PART 2: ATTITUDE DETERMINATION AND CONTROL. Annual of Navigation, 2013, 20, 97-126.	0.3	12
122	A New Avionics-Based GNSS Integrity Augmentation System: Part 1 “ Fundamentals. Journal of Navigation, 2013, 66, 363-384.	1.7	61
123	Novel Flight Management System for Real-Time 4-Dimensional Trajectory Based Operations. , 2013, , .		32
124	Low-cost Sensors Data Fusion for Small Size Unmanned Aerial Vehicles Navigation and Guidance. International Journal of Unmanned Systems Engineering, 2013, 1, 16-47.	0.2	23
125	Advanced Flight Management System for an Unmanned Reusable Space Vehicle. International Journal of Unmanned Systems Engineering, 2013, 1, 48-67.	0.2	2
126	City-Pair Trajectory Optimization in the Presence of Winds using the GATAC Framework. , 2013, , .		3

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127	Airborne laser systems for atmospheric sounding in the near infrared. Proceedings of SPIE, 2012, , .	0.8	16
128	Design and Validation of a Detailed Aircraft Performance Model for Trajectory Optimisation. , 2012, , .		17
129	Low-Cost Navigation and Guidance Systems for Unmanned Aerial Vehicles " Part 1: Vision-Based and Integrated Sensors. Annual of Navigation, 2012, 19, 71-98.	0.3	16
130	Towards the Development of a Multi-Disciplinary Flight Trajectory Optimization Tool: GATAC. , 2012, , .		1
131	Night vision imaging systems design, integration, and verification in military fighter aircraft. , 2012, , .		4
132	Innovative Methods for Planetary Atmospheric Sounding by Lasers. , 2008, , .		7
133	Environmental Impact Assessment, on the Operation of Conventional and More Electric Large Commercial Aircraft. SAE International Journal of Aerospace, 0, 6, 56-64.	4.0	11
134	Reverse Engineering of a Fixed Wing Unmanned Aircraft 6-DoF Model for Navigation and Guidance Applications. Applied Mechanics and Materials, 0, 629, 164-169.	0.2	10
135	Flight Management System for Unmanned Reusable Space Vehicle Atmospheric and Re-Entry Trajectory Optimisation. Applied Mechanics and Materials, 0, 629, 304-309.	0.2	3
136	Real-Time Trajectory Optimisation Models for Next Generation Air Traffic Management Systems. Applied Mechanics and Materials, 0, 629, 327-332.	0.2	28
137	Experimental Determination of Low-Cost Servomotor Reliability for Small Unmanned Aircraft Applications. Applied Mechanics and Materials, 0, 629, 202-207.	0.2	1
138	A Laser Obstacle Warning and Avoidance System for Unmanned Aircraft Sense-and-Avoid. Applied Mechanics and Materials, 0, 629, 355-360.	0.2	18
139	Bistatic LIDAR System for the Characterisation of Aviation-Related Pollutant Column Densities. Applied Mechanics and Materials, 0, 629, 257-262.	0.2	5
140	Next Generation Flight Management System for Real-Time Trajectory Based Operations. Applied Mechanics and Materials, 0, 629, 344-349.	0.2	32
141	Communication, Navigation and Surveillance Performance Criteria for Safety-Critical Avionic Systems. , 0, , .		3
142	Multi-Sensor Data Fusion Techniques for RPAS Detect, Track and Avoid. , 0, , .		6
143	A Novel Approach to Cooperative and Non-Cooperative RPAS Detect-and-Avoid. , 0, , .		4
144	Low-Cost RPAS Navigation and Guidance System using Square Root Unscented Kalman Filter. , 0, , .		0

#	ARTICLE	IF	CITATIONS
145	Automated ATM System Enabling 4DT-Based Operations. , 0, , .		4
146	Bistatic DIAL for Multi-Species Aviation Pollutant Measurements from RPAS. , 0, , .		2