Roberto Sabatini

List of Publications by Year
in descending order

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	Multi-objective optimisation of aircraft flight trajectories in the ATM and avionics context. Progress in Aerospace Sciences, 2016, 83, 1-36.	12.1	103
2	LIDAR obstacle warning and avoidance system for unmanned aerial vehicle sense-and-avoid. Aerospace Science and Technology, 2016, 55, 344-358.	4.8	84
3	UAVs Assisted Delay Optimization in Heterogeneous Wireless Networks. IEEE Communications Letters, 2016, 20, 2526-2529.	4.1	80
4	Review of advanced low-emission technologies for sustainable aviation. Energy, 2019, 188, 115945.	8.8	76
5	An evolutionary outlook of air traffic flow management techniques. Progress in Aerospace Sciences, 2017, 88, 15-42.	12.1	69
6	Cognitive pilot-aircraft interface for single-pilot operations. Knowledge-Based Systems, 2016, 112, 37-53.	7.1	67
7	A New Avionics-Based GNSS Integrity Augmentation System: Part 1 â€" Fundamentals. Journal of Navigation, 2013, 66, 363-384.	1.7	61
8	Avionics Human-Machine Interfaces and Interactions for Manned and Unmanned Aircraft. Progress in Aerospace Sciences, 2018, 102, 1-46.	12.1	61
9	Hybrid-electric propulsion integration in unmanned aircraft. Energy, 2017, 140, 1407-1416.	8.8	57
10	A New Avionics-Based GNSS Integrity Augmentation System: Part 2 â€" Integrity Flags. Journal of Navigation, 2013, 66, 501-522.	1.7	48
11	Commercial airline single-pilot operations: System design and pathways to certification. IEEE Aerospace and Electronic Systems Magazine, 2017, 32, 4-21.	1.3	47
12	Global navigation satellite systems performance analysis and augmentation strategies in aviation. Progress in Aerospace Sciences, 2017, 95, 45-98.	12.1	47
13	Advances in Integrated System Health Management for mission-essential and safety-critical aerospace applications. Progress in Aerospace Sciences, 2022, 128, 100758.	12.1	47
14	Machine Learning and Cognitive Ergonomics in Air Traffic Management: Recent Developments and Considerations for Certification. Aerospace, 2018, 5, 103.	2.2	44
15	Advances in intelligent and autonomous navigation systems for small UAS. Progress in Aerospace Sciences, 2020, 115, 100617.	12.1	40
16	Novel Flight Management System for Real-Time 4-Dimensional Trajectory Based Operations. , 2013, , .		32
17	Next Generation Flight Management System for Real-Time Trajectory Based Operations. Applied Mechanics and Materials, 0, 629, 344-349.	0.2	32
18	Acoustic Sensors for Air and Surface Navigation Applications. Sensors, 2018, 18, 499.	3.8	32

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19	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
20	4-Dimensional Trajectory Negotiation and Validation System for the Next Generation Air Traffic Management. , 2013, , .		30
21	UAV Navigation using Signals of Opportunity in Urban Environments: A Review. Energy Procedia, 2017, 110, 377-383.	1.8	30
22	Avionics sensor fusion for small size unmanned aircraft Sense-and-Avoid. , 2014, , .		29
23	A High-Integrity and Low-Cost Navigation System for Autonomous Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 356-369.	8.0	29
24	Real-Time Trajectory Optimisation Models for Next Generation Air Traffic Management Systems. Applied Mechanics and Materials, 0, 629, 327-332.	0.2	28
25	Airborne laser sensors and integrated systems. Progress in Aerospace Sciences, 2015, 79, 15-63.	12.1	28
26	A Novel 3D Multilateration Sensor Using Distributed Ultrasonic Beacons for Indoor Navigation. Sensors, 2016, 16, 1637.	3.8	27
27	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
28	Sensor Networks for Aerospace Human-Machine Systems. Sensors, 2019, 19, 3465.	3.8	27
29	Space traffic management: towards safe and unsegregated space transport operations. Progress in Aerospace Sciences, 2019, 105, 98-125.	12.1	27
30	A low-cost and high performance navigation system for small RPAS applications. Aerospace Science and Technology, 2016, 58, 529-545.	4.8	26
31	4 Dimensional trajectory functionalities for air traffic management systems. , 2015, , .		25
32	GNSS Performance Modelling and Augmentation for Urban Air Mobility. Sensors, 2019, 19, 4209.	3.8	25
33	A Laser Obstacle Warning and Avoidance system for Manned and Unmanned Aircraft. , 2014, , .		24
34	Explanation of Machine-Learning Solutions in Air-Traffic Management. Aerospace, 2021, 8, 224.	2.2	23
35	Adaptive Human-Robot Interactions for Multiple Unmanned Aerial Vehicles. Robotics, 2021, 10, 12.	3.5	23
36	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

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37	A Performance-Based Airspace Model for Unmanned Aircraft Systems Traffic Management. Aerospace, 2020, 7, 154.	2.2	22
38	A unified approach to cooperative and non-cooperative Sense-and-Avoid. , 2015, , .		21
39	Avionics Systems Panel Research and Innovation Perspectives. IEEE Aerospace and Electronic Systems Magazine, 2020, 35, 58-72.	1.3	21
40	Novel atmospheric extinction measurement techniques for aerospace laser system applications. Infrared Physics and Technology, 2013, 56, 30-50.	2.9	20
41	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
42	Cyber Awareness Trends in Avionics. , 2019, , .		20
43	Laser Beam Atmospheric Propagation Modelling for Aerospace LIDAR Applications. Atmosphere, 2021, 12, 918.	2.3	20
44	Certification challenges for next-generation avionics and air traffic management systems. IEEE Aerospace and Electronic Systems Magazine, 2018, 33, 44-53.	1.3	19
45	Uncertainty Quantification for Space Situational Awareness and Traffic Management. Sensors, 2019, 19, 4361.	3.8	19
46	Active and Passive Electro-Optical Sensors for Health Assessment in Food Crops. Sensors, 2021, 21, 171.	3.8	19
47	A Laser Obstacle Warning and Avoidance System for Unmanned Aircraft Sense-and-Avoid. Applied Mechanics and Materials, 0, 629, 355-360.	0.2	18
48	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
49	Design and Validation of a Detailed Aircraft Performance Model for Trajectory Optimisation. , 2012, , .		17
50	Benefits and challenges of liquid hydrogen fuels in commercial aviation. International Journal of Sustainable Aviation, 2017, 3, 200.	0.2	17
51	Airborne laser systems for atmospheric sounding in the near infrared. Proceedings of SPIE, 2012, , .	0.8	16
52	Low-Cost Navigation and Guidance Systems for Unmanned Aerial Vehicles â€" Part 1: Vision-Based and Integrated Sensors. Annual of Navigation, 2012, 19, 71-98.	0.3	16
53	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
54	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

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55	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
56	Design principles and digital control of advanced distributed propulsion systems. Energy, 2022, 241, 122788.	8.8	15
57	Novel flight management system for improved safety and sustainability in the CNS+A context. , 2015, , .		14
58	Autonomous Trajectory Optimisation for Intelligent Satellite Systems and Space Traffic Management. Acta Astronautica, 2022, 194, 185-201.	3.2	14
59	Modelling and Evaluation of Aircraft Contrails for 4-Dimensional Trajectory Optimisation. SAE International Journal of Aerospace, 2015, 8, 248-259.	4.0	13
60	LOW-COST NAVIGATION AND GUIDANCE SYSTEMS FOR UNMANNED AERIAL VEHICLES â€" PART 2: ATTITUDE DETERMINATION AND CONTROL. Annual of Navigation, 2013, 20, 97-126.	0.3	12
61	Assessing avionics-based GNSS integrity augmentation performance in UAS mission- and safety-critical tasks. , 2015, , .		12
62	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
63	Unmanned Aircraft bistatic LIDAR for CO_2 column density determination. , 2014, , .		11
64	Particle filter based multi-sensor data fusion techniques for RPAS navigation and guidance. , 2015, , .		11
65	Optimal Aircraft Trajectories to Minimize the Radiative Impact of Contrails and CO 2. Energy Procedia, 2017, 110, 446-452.	1.8	11
66	Optimal energy-based 4D guidance and control for terminal descent operations. Aerospace Science and Technology, 2019, 95, 105436.	4.8	11
67	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
68	Reverse engineering of a fixed wing Unmanned Aircraft 6-DoF model based on laser scanner measurements. , 2014, , .		10
69	Sound Propagation Modelling for Manned and Unmanned Aircraft Noise Assessment and Mitigation: A Review. Atmosphere, 2021, 12, 1424.	2.3	10
70	A unified approach to separation assurance and Collision Avoidance for UAS operations and traffic management. , 2017, , .		9
71	Probabilistic Safety Assessment for UAS Separation Assurance and Collision Avoidance Systems. Aerospace, 2019, 6, 19.	2.2	9
72	Avionics-based GNSS integrity augmentation synergies with SBAS and GBAS for safety-critical aviation applications. , 2016, , .		8

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73	A Cyber-Physical-Human System for One-to-Many UAS Operations: Cognitive Load Analysis. Sensors, 2020, 20, 5467.	3.8	8
74	Innovative Methods for Planetary Atmospheric Sounding by Lasers. , 2008, , .		7
75	Investigation of GNSS Integrity Augmentation Synergies with Unmanned Aircraft Sense-and-Avoid Systems. , 2015, , .		7
76	A laser obstacle detection and avoidance system for manned and unmanned aircraft applications. , 2015, , .		7
77	Low-cost sensors based Multi-Sensor Data Fusion techniques for RPAS Navigation and Guidance. , 2015, , .		7
78	4-Dimensional trajectory optimisation algorithm for air traffic management systems. , 2016, , .		7
79	Cooperative and non-cooperative sense-and-avoid in the CNS+A context: A unified methodology. , 2016, , .		7
80	GNSS Performance Modelling for Positioning and Navigation in Urban Environments. , 2018, , .		7
81	Online Multimodal Inference of Mental Workload for Cognitive Human Machine Systems. Computers, 2021, 10, 81.	3.3	7
82	Unsteady pressure measurements on a MAV wing for the design of a turbulence mitigation system. , 2014, , .		6
83	Multi-Sensor Data Fusion Techniques for RPAS Detect, Track and Avoid. , 0, , .		6
84	A GNSS Integrity Augmentation System for Ground Vehicle Operations. Energy Procedia, 2017, 110, 149-155.	1.8	6
85	Operational efficiency analysis of Beijing multi-airport terminal airspace. Journal of Air Transport Management, 2021, 92, 102013.	4.5	6
86	Human-Machine Interactions in Very-Low-Level UAS Operations and Traffic Management. , 2020, , .		6
87	Reinforcement Learning-Based Flow Management Techniques for Urban Air Mobility and Dense Low-Altitude Air Traffic Operations. , 2021, , .		6
88	Bistatic LIDAR System for the Characterisation of Aviation-Related Pollutant Column Densities. Applied Mechanics and Materials, 0, 629, 257-262.	0.2	5
89	Sensing Unsteady Pressure on MAV Wings: A New Method for Turbulence Alleviation. Applied Mechanics and Materials, 2014, 629, 48-54.	0.2	5
90	A New Computational Technique for the Generation of Optimised Aircraft Trajectories. Nonlinear Engineering, 2017, 6, .	2.7	5

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91	A novel simulation environment for cognitive human factors engineering research. , 2017, , .		5
92	A Novel Navigation Performance-based Airspace Model for Urban Air Mobility. , 2020, , .		5
93	Night vision imaging systems design, integration, and verification in military fighter aircraft. , 2012, , .		4
94	New techniques for laser beam atmospheric extinction measurements from manned and unmanned aerospace vehicles. Open Engineering, 2013, 3, .	1.6	4
95	A Novel Approach to Cooperative and Non-Cooperative RPAS Detect-and-Avoid. , 0, , .		4
96	Automated ATM System Enabling 4DT-Based Operations. , 0, , .		4
97	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
98	Detection of Volatile Organic Compound Emissions from Energy Distribution Network Leaks by Bistatic LIDAR. Energy Procedia, 2017, 110, 396-401.	1.8	4
99	A bio-inspired acoustic sensor system for UAS navigation and tracking. , 2017, , .		4
100	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
101	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
102	Innovative flight test instrumentation and techniques for airborne laser systems performance analysis and mission effectiveness evaluation. , 2014, , .		3
103	Communication, Navigation and Surveillance Performance Criteria for Safety-Critical Avionic Systems. , 0, , .		3
104	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
105	A unified approach to separation assurance and collision avoidance for flight management systems. , 2016, , .		3
106	Multi-objective 4D Trajectory Optimization for Online Strategic and Tactical Air Traffic Management. , 2016, , 185-200.		3
107	Modelling and Evaluation of Persistent Contrail Formation Regions for Offline and Online Strategic Flight Trajectory Planning. , 2016, , 243-277.		3
108	Stand-off measurement of industrial air pollutant emissions from unmanned aircraft. , 2016, , .		3

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109	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
110	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
111	Vehicular Sensor Network and Data Analytics for a Health and Usage Management System. Sensors, 2020, 20, 5892.	3.8	3
112	Facial Expression Analysis for Cognitive State Estimation in Aerospace Human-Machine Systems. , 2020, , .		3
113	Network Optimisation and Performance Analysis of a Multistatic Acoustic Navigation Sensor. Sensors, 2020, 20, 5718.	3.8	3
114	Hybrid AI-Based Demand-Capacity Balancing for UAS Traffic Management and Urban Air Mobility. , 2021, , .		3
115	Evolutionary Human-Machine Interactions for UAS Traffic Management. , 2021, , .		3
116	City-Pair Trajectory Optimization in the Presence of Winds using the GATAC Framework. , 2013, , .		3
117	Bistatic DIAL for Multi-Species Aviation Pollutant Measurements from RPAS. , 0, , .		2
118	4-dimensional trajectory generation algorithms for RPAS Mission Management Systems. , 2015, , .		2
119	Network Optimization for Multistatic Ultrasonic Sensors Based Indoor Navigation System. , 2018, , .		2
120	Eye-Tracking Sensors for Adaptive Aerospace Human-Machine Interfaces and Interactions. , 2018, , .		2
121	Human-Machine System Design for Autonomous Distributed Satellite Operations. , 2020, , .		2
122	Information Fusion as an Autonomy enabler for UAV Traffic Management. , 2021, , .		2
123	Advanced Flight Management System for an Unmanned Reusable Space Vehicle. International Journal of Unmanned Systems Engineering, 2013, 1, 48-67.	0.2	2
124	A Unified Collision Risk Model for Unmanned Aircraft Systems. , 2021, , .		2
125	A Multi-Criteria Clustering Method for UAS Traffic Management and Urban Air Mobility. , 2021, , .		2
126	Wearable Cardiorespiratory Sensors for Aerospace Applications. Sensors, 2022, 22, 4673.	3.8	2

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127	Towards the Development of a Multi-Disciplinary Flight Trajectory Optimization Tool: GATAC. , 2012, , .		1
128	Experimental Determination of Low-Cost Servomotor Reliability for Small Unmanned Aircraft Applications. Applied Mechanics and Materials, 0, 629, 202-207.	0.2	1
129	Masking and multipath analysis for unmanned aerial vehicles in an urban environment. , 2016, , .		1
130	Trajectory optimisation for avionics-based GNSS integrity augmentation system. , 2016, , .		1
131	Aircraft dynamics model augmentation for RPAS navigation and guidance. , 2016, , .		1
132	CNS+A capabilities for the integration of unmanned aircraft in controlled airspace. , 2016, , .		1
133	Descent 4D trajectory optimisation for curved GNSS approaches. , 2017, , .		1
134	An adaptive sensor-switching framework for urban UAS navigation. , 2017, , .		1
135	Future aviation research in Australia: addressing air transport safety, efficiency and environmental sustainability. International Journal of Sustainable Aviation, 2017, 3, 87.	0.2	1
136	A Sensor-Centric Approach to Space Traffic Management. , 2019, , .		1
137	Acoustic Positioning and Navigation System for GNSS Denied/Challenged Environments. , 2020, , .		1
138	Integration of a UAV-LIDAR System for Remote Sensing of CO_2 concentrations in Smart Agriculture. , 2021, , .		1
139	Low-Cost RPAS Navigation and Guidance System using Square Root Unscented Kalman Filter. , 0, , .		0
140	The effects of tube deformities on the dynamic calibration of a tubing system. , 2015, , .		0
141	Decentralized Modeling, Analysis, Control, and Application of Distributed Dynamic Systems. Journal of Control Science and Engineering, 2016, 2016, 1-2.	1.0	0
142	Performance Characterisation of Wearable Cardiac Monitoring Devices for Aerospace Applications. , 2019, , .		0
143	A Multistatic Ultrasonic Navigation System for GNSS-denied Environments. , 2019, , .		0
144	Intelligent Health and Mission Management for Multicopter UAS Integrity Assurance. , 2021, , .		0

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145	Acoustic Positioning and Navigation System for Micro Aerial Vehicle Navigation. , 2020, , .		0
146	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