

# Daniel J Toal

## List of Publications by Year in descending order

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108  
papers

1,405  
citations

516710

16  
h-index

434195

31  
g-index

111  
all docs

111  
docs citations

111  
times ranked

1090  
citing authors

#	ARTICLE	IF	CITATIONS
1	Underwater manipulators: A review. Ocean Engineering, 2018, 163, 431-450.	4.3	203
2	Inspection-Class Remotely Operated Vehicles—A Review. Journal of Marine Science and Engineering, 2017, 5, 13.	2.6	131
3	Neural network augmented identification of underwater vehicle models. Control Engineering Practice, 2007, 15, 715-725.	5.5	67
4	Experimental Investigations of Electromagnetic Wave Propagation in Seawater. , 2006, , .		66
5	Neural network control of underwater vehicles. Engineering Applications of Artificial Intelligence, 2005, 18, 533-547.	8.1	57
6	Fully automatic visual servoing control for work-class marine intervention ROVs. Control Engineering Practice, 2018, 74, 153-167.	5.5	55
7	Underwater Depth and Temperature Sensing Based on Fiber Optic Technology for Marine and Fresh Water Applications. Sensors, 2017, 17, 1228.	3.8	53
8	A survey of state-of-the-art on visual SLAM. Expert Systems With Applications, 2022, 205, 117734.	7.6	50
9	Automated Ground Vehicle (AGV) and Sensor Technologies- A Review. , 2018, , .		39
10	A secure end-to-end IoT solution. Sensors and Actuators A: Physical, 2017, 263, 291-299.	4.1	34
11	Collision Detection for Underwater ROV Manipulator Systems. Sensors, 2018, 18, 1117.	3.8	28
12	Vision based autonomous docking for work class ROVs. Ocean Engineering, 2020, 196, 106840.	4.3	28
13	An Optical Fibre Depth (Pressure) Sensor for Remote Operated Vehicles in Underwater Applications. Sensors, 2017, 17, 406.	3.8	27
14	Review of Machine Vision Applications in Unmanned Underwater Vehicles. , 2006, , .		25
15	Stereo Vision Sensing: Review of existing systems. , 2018, , .		22
16	Fault-Tolerant Control for ROVs Using Control Reallocation and Power Isolation. Journal of Marine Science and Engineering, 2018, 6, 40.	2.6	21
17	Direct interconnection of offshore electricity generators. Energy, 2011, 36, 1543-1553.	8.8	20
18	Analysis of parallel connected synchronous generators in a novel offshore wind farm model. Energy, 2011, 36, 6387-6397.	8.8	17

#	ARTICLE	IF	CITATIONS
19	Real-Time Underwater StereoFusion. Sensors, 2018, 18, 3936.	3.8	17
20	Object recognition within smart manufacturing. Procedia Manufacturing, 2019, 38, 408-414.	1.9	17
21	Proximal object and hazard detection for autonomous underwater vehicle with optical fibre sensors. Robotics and Autonomous Systems, 2005, 53, 214-229.	5.1	16
22	A Low-Cost Remote Solar Energy Monitoring System for a Buoyed IoT Ocean Observation Platform. , 2019, , .		16
23	Neural network augmented identification of underwater vehicle models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 263-268.	0.4	15
24	Precision navigation sensors facilitate full auto pilot control of Smart ROV for ocean energy applications. , 2011, , .		15
25	An Overview of Popular Digital Image Processing Filtering Operations. , 2019, , .		15
26	Guidance, navigation and control system for the Tethra unmanned underwater vehicle. International Journal of Control, 2007, 80, 1050-1076.	1.9	14
27	Novel method for underwater navigation aiding using a companion underwater robot as a guiding platforms. , 2013, , .		14
28	Real-Time Video Latency Measurement between a Robot and Its Remote Control Station: Causes and Mitigation. Wireless Communications and Mobile Computing, 2018, 2018, 1-19.	1.2	12
29	Vision-Based Localization System Suited to Resident Underwater Vehicles. Sensors, 2020, 20, 529.	3.8	12
30	Control Allocation with Actuator Dynamics for Aircraft Flight Controls. , 2007, , .		11
31	OceanRINGS: System concept & applications. , 2012, , .		11
32	Buoyancy Control for an Autonomous Underwater Vehicle. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 199-204.	0.4	10
33	Modelling of a synchronous offshore pumping mode airborne wind energy farm. Energy, 2014, 71, 569-578.	8.8	10
34	Design of an advanced AUV for deployment close to the seabed and other hazards. , 2005, , .		9
35	A Flexible Multi-Mode of Operation Survey Platform for Surface and Underwater Operations. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 212-217.	0.4	9
36	Computer Vision Applications in the Navigation of Unmanned Underwater Vehicles. , 0, , .		9

#	ARTICLE	IF	CITATIONS
37	Analysis of direct interconnection technique for offshore airborne wind energy systems under normal and fault conditions. <i>Renewable Energy</i> , 2019, 131, 284-296.	8.9	9
38	Remote acoustic analysis for tool condition monitoring. <i>Procedia Manufacturing</i> , 2019, 38, 840-847.	1.9	9
39	Underwater Image Enhancement and Mosaicking System Based on A-KAZE Feature Matching. <i>Journal of Marine Science and Engineering</i> , 2020, 8, 449.	2.6	8
40	Implementation and application of a real-time sidescan sonar simulator. , 2005, , .		7
41	Automated Optimisation of Simultaneous Multibeam and Sidescan Sonar Seabed Mapping. , 2007, , .		7
42	Novel miniature pressure and temperature optical fibre sensor based on an extrinsic Fabry-Perot Interferometer (EFPI) and Fibre Bragg Gratings (FBG) for the Ocean environment. , 2014, , .		7
43	Interdisciplinary Methodology to Extend Technology Readiness Levels in SONAR Simulation from Laboratory Validation to Hydrography Demonstrator. <i>Journal of Marine Science and Engineering</i> , 2019, 7, 159.	2.6	7
44	Neuro-Fuzzy Dynamic Position Prediction for Autonomous Work-Class ROV Docking. <i>Sensors</i> , 2020, 20, 693.	3.8	7
45	Subsumption and Fuzzy-Logic, Experiments in Behavior-Based Control of Mobile Robots. <i>International Journal of Smart Engineering System Design</i> , 2003, 5, 161-175.	0.2	6
46	A low directivity ultrasonic sensor for collision avoidance and station keeping on inspection-class AUVs. <i>Journal of Marine Engineering and Technology</i> , 2008, 7, 1-11.	4.1	6
47	Assistive tools for system integration, deployment, monitoring, and maintenance of ocean energy devices. <i>Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment</i> , 2010, 224, 155-172.	0.5	6
48	Secure and Efficient Key Coordination Algorithm for Line Topology Network Maintenance for Use in Maritime Wireless Sensor Networks. <i>Sensors</i> , 2016, 16, 2204.	3.8	6
49	Closing the gap between industrial robots and underwater manipulators. , 2015, , .		6
50	Modelling of waves and ocean currents for real-time simulation of ocean dynamics. , 2007, , .		5
51	REAL-TIME VISION BASED AUV NAVIGATION SYSTEM USING A COMPLEMENTARY SENSOR SUITE. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2007, 40, 373-378.	0.4	5
52	A flexible, multi-mode of operation, high-resolution survey platform for surface and underwater operations. <i>Underwater Technology</i> , 2009, 28, 159-174.	0.3	5
53	Non-Reversing Generators in a Novel Design for Pumping Mode Airborne Wind Energy Farm. <i>Green Energy and Technology</i> , 2013, , 587-597.	0.6	5
54	A Simulated and Experimental Analysis of Evaporation Duct Effects on Microwave Communications in the Irish Sea. <i>IEEE Transactions on Antennas and Propagation</i> , 2022, 70, 4728-4737.	5.1	5

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55	“Pull to position”™, a different approach to the control of robot arms for mobile robots. Journal of Materials Processing Technology, 2002, 123, 393-398.	6.3	4
56	Identification of underwater vehicle dynamics with neural networks. , 0, , .		4
57	Smart ROVLATIS: From Design Concepts to Test Trials. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 346-357.	0.4	4
58	Design & development of assistive tools for future applications in the field of renewable ocean energy. , 2011, , .		4
59	Real-Time Adaptive Control of Multiple Colocated Acoustic Sensors for an Unmanned Underwater Vehicle. IEEE Journal of Oceanic Engineering, 2013, 38, 419-432.	3.8	4
60	Real-time reconstruction of underwater environments: From 2D to 3D. , 2015, , .		4
61	Memory storage administration of security encryption keys for line topology in maritime wireless sensor networks. , 2016, , .		4
62	Development and Testing of a Control System for the Automatic Flight of Tethered Parafoils. Journal of Field Robotics, 2017, 34, 519-538.	6.0	4
63	Long term, inspection class ROV deployment approach for remote monitoring and inspection. , 2018, , .		4
64	An efficient implementation of FPGA based high speed IPsec (AH/ESP) core. International Journal of Internet Protocol Technology, 2018, 11, 97.	0.2	4
65	Real-Time Secure/Unsecure Video Latency Measurement/Analysis with FPGA-Based Bump-in-the-Wire Security. Sensors, 2019, 19, 2984.	3.8	4
66	Integration of autonomous intelligent vehicles into manufacturing environments: Challenges. Procedia Manufacturing, 2019, 38, 1683-1690.	1.9	4
67	Integration of an MES and AIV Using a LabVIEW Middleware Scheduler Suitable for Use in Industry 4.0 Applications. Applied Sciences (Switzerland), 2020, 10, 7054.	2.5	4
68	Multi-mode Operations Marine Robotic Vehicle “ a Mechatronics Case Study. , 2010, , 103-120.		4
69	A Real-Time Subsea Environment Visualisation Framework for Simulation of Vision Based UUV Control Architectures. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 25-30.	0.4	3
70	Experimental Setups for Vision-Based Navigation of Unmanned Underwater Vehicles in Near Intervention Operations. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 149-154.	0.4	3
71	Towards real time vision based UUV navigation using GPU technology. , 2009, , .		3
72	Design of control law and control allocation for B747-200 using a linear quadratic regulator and the active set method. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2010, 224, 817-830.	1.3	3

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73	Analysis of active power control algorithms of variable speed wind generators for power system frequency stabilization. Turkish Journal of Electrical Engineering and Computer Sciences, 2016, 24, 234-246.	1.4	3
74	Bump in the wire (BITW) security solution for a marine ROV remote control application. Journal of Information Security and Applications, 2018, 38, 111-121.	2.5	3
75	Geometric Insight into the Control Allocation Problem for Open-Frame ROVs and Visualisation of Solution. Robotics, 2020, 9, 7.	3.5	3
76	A novel wideangle ultrasonic sensor utilizing a curved radiator developed for use in an AUV obstacle avoidance system. , 2005, , .		2
77	A Control System Development for Submersible Sea Cage System. , 2007, , .		2
78	Novel Multi-Sonar Controller and Other Advanced Features Developed and Tested on Latis, a Smart, Remotely Operated Vehicle. Proceedings of the Institution of Mechanical Engineers Part M: Journal of Engineering for the Maritime Environment, 2010, 224, 309-325.	0.5	2
79	Smart inspection ROV for use in challenging conditions. , 2015, , .		2
80	Power Control of Direct Interconnection Technique for Airborne Wind Energy Systems. Energies, 2018, 11, 3134.	3.1	2
81	An Experimental Study of the Effects of the Evaporation Duct on Microwave Propagation. , 2019, , .		2
82	Adaptive Neuro-Fuzzy Network Enhanced Automatic Visual Servoing Algorithm for ROV Manipulators. , 2019, , .		2
83	Cluster head election and rotation for medical-based wireless sensor networks. , 2017, , .		2
84	Vector Fuzzy c-Spherical Shells (VFCSS) over Non-Crisp Numbers for Satellite Imaging. Remote Sensing, 2021, 13, 4482.	4.0	2
85	Autonomous Tracking System of a Moving Target for Underwater Operations of Work-class ROVs. , 2021, , .		2
86	Autonomous submersible robots. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 383-386.	0.4	1
87	Implementing a Layered Control Architecture on an Open Framed AUV. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 61-66.	0.4	1
88	A Survey of AI Techniques for Control of Underwater Vehicles. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 145-150.	0.4	1
89	Identification and control of underwater vehicles with the aid of neural networks. , 0, , .		1
90	Approach to the Real-Time Adaptive Control of Multiple High-Frequency Sonar Survey Systems for Unmanned Underwater Vehicles. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 61-66.	0.4	1

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91	Investigation of Vision in near Seabed Navigation on new Smart ROVLATIS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 282-285.	0.4	1
92	Direct interconnection of offshore airborne wind energy systems. , 2015, , .		1
93	Implementing Secure Key Coordination Scheme for Line Topology Wireless Sensor Networks. , 0, , .		1
94	A comparative study of Image Filters and Machine Learning for use in Machined Part Recognition. , 2019, , .		1
95	Multi-Sonar Integration and the Advent of Sensor Intelligence. , 0, , .		1
96	Pitfalls of simulation for mobile robot controller development. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 377-382.	0.4	0
97	Compensation of jammed control surface of large transport aircraft by control reconfiguration. , 2007, , .		0
98	Centre of Gravity Movement as Redundant Pitch Attitude Control in Control Allocation. , 2008, , .		0
99	The Integrated Marine Acoustic Controller System. , 2009, , .		0
100	Application of Evolutionary Computing in Control Allocation. , 0, , .		0
101	Airborne wind energy: Simulation of directly interconnected synchronous generators for a novel wind energy technology. , 2013, , .		0
102	A novel self-locking mechanism to connect two ROVs. , 2013, , .		0
103	Smart event triggered ocean monitoring platform: Initial design and results. , 2014, , .		0
104	User interface for interaction with heterogeneous vehicles for cyber-physical systems. , 2016, , .		0
105	Lagrangian waverider and wave filtering system for use in ROV control. , 2017, , .		0
106	Voxel Map Based Collision Detection for Underwater Manipulators. , 2018, , .		0
107	A New Control Algorithm for Directly Interconnected Offshore Wind Turbine Generators. , 2019, , .		0
108	A Study on Directly Interconnected Offshore Wind Systems during Wind Gust Conditions. Energies, 2022, 15, 168.	3.1	0