Franck Ruffier

List of Publications by Year
in descending order

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71	1,817	394421	315739
papers	citations	19 h-index	38 g-index

77	77	77	1108
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Miniature curved artificial compound eyes. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9267-9272.	7.1	289
2	Optic flow regulation: the key to aircraft automatic guidance. Robotics and Autonomous Systems, 2005, 50, 177-194.	5.1	177
3	A Bio-Inspired Flying Robot Sheds Light on Insect Piloting Abilities. Current Biology, 2007, 17, 329-335.	3.9	157
4	Optic flow-based collision-free strategies: From insects to robots. Arthropod Structure and Development, 2017, 46, 703-717.	1.4	112
5	Visually guided micro-aerial vehicle: automatic take off, terrain following, landing and wind reaction. , 2004, , .		85
6	A vision-based autopilot for a miniature air vehicle: joint speed control and lateral obstacle avoidance. Autonomous Robots, 2008, 25, 103-122.	4.8	80
7	A bee in the corridor: centering and wall-following. Die Naturwissenschaften, 2008, 95, 1181-1187.	1.6	68
8	Honeybees' Speed Depends on Dorsal as Well as Lateral, Ventral and Frontal Optic Flows. PLoS ONE, 2011, 6, e19486.	2.5	62
9	Honeybees change their height to restore their optic flow. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2010, 196, 307-313.	1.6	48
10	Flying over uneven moving terrain based on optic-flow cues without any need for reference frames or accelerometers. Bioinspiration and Biomimetics, 2015, 10, 026003.	2.9	41
11	Toward Optic Flow Regulation for Wall-Following and Centring Behaviours. International Journal of Advanced Robotic Systems, 2006, 3, 23.	2.1	39
12	Modelling honeybee visual guidance in a 3-D environment. Journal of Physiology (Paris), 2010, 104, 27-39.	2.1	34
13	Outdoor field performances of insectâ€based visual motion sensors. Journal of Field Robotics, 2011, 28, 529-541.	6.0	34
14	OCTAVE: a bioinspired visuo-motor control system for the guidance of micro-air-vehicles. , 2003, , .		31
15	Optic Flow Regulation in Unsteady Environments: A Tethered MAV Achieves Terrain Following and Targeted Landing Over a Moving Platform. Journal of Intelligent and Robotic Systems: Theory and Applications, 2015, 79, 275-293.	3.4	29
16	A miniature bio-inspired optic flow sensor based on low temperature co-fired ceramics (LTCC) technology. Sensors and Actuators A: Physical, 2007, 133, 88-95.	4.1	28
17	Biomimetic optic flow sensing applied to a lunar landing scenario. , 2010, , .		28
18	A biomimetic vision-based hovercraft accounts for beesâ€™ complex behaviour in various corridors. Bioinspiration and Biomimetics, 2014, 9, 036003.	2.9	28

#	Article	IF	Citations
19	Aerial robot piloted in steep relief by optic flow sensors. , 2008, , .		26
20	Altitude control in honeybees: joint vision-based learning and guidance. Scientific Reports, 2017, 7, 9231.	3.3	26
21	Hardware Architecture and Cutting-Edge Assembly Process of a Tiny Curved Compound Eye. Sensors, 2014, 14, 21702-21721.	3.8	24
22	X4-MaG: A Low-Cost Open-Source Micro-Quadrotor and its Linux-Based Controller. International Journal of Micro Air Vehicles, 2015, 7, 89-109.	1.3	21
23	A bio-inspired analog silicon retina with Michaelis-Menten auto-adaptive pixels sensitive to small and large changes in light. Optics Express, 2015, 23, 5614.	3.4	21
24	Two-Directional 1-g Visual Motion Sensor Inspired by the Fly's Eye. IEEE Sensors Journal, 2013, 13, 1025-1035.	4.7	19
25	Low-speed optic-flow sensor onboard an unmanned helicopter flying outside over fields. , 2013, , .		16
26	Minimalistic optic flow sensors applied to indoor and outdoor visual guidance and odometry on a car-like robot. Bioinspiration and Biomimetics, 2016, 11, 066007.	2.9	16
27	Optic flow cues help explain altitude control over sea in freely flying gulls. Journal of the Royal Society Interface, 2019, 16, 20190486.	3.4	16
28	Sparse deep predictive coding captures contour integration capabilities of the early visual system. PLoS Computational Biology, 2021, 17, e1008629.	3.2	16
29	Optic Flow Based Visual Guidance: From Flying Insects to Miniature Aerial Vehicles. , 0, , .		15
30	Time-of-Travel Methods for Measuring Optical Flow on Board a Micro Flying Robot. Sensors, 2017, 17, 571.	3.8	15
31	Visual control of two aerial micro-robots by insect-based autopilots. Advanced Robotics, 2004, 18, 771-786.	1.8	14
32	A novel 1-gram insect based device measuring visual motion along 5 optical directions. , 2011, , .		14
33	Informational Framework for Minimalistic Visual Odometry on Outdoor Robot. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 2988-2995.	4.7	13
34	Characteristics of Three Miniature Bio-inspired Optic Flow Sensors in Natural Environments. , 2010, , .		12
35	Biomimetic Autopilot Based on Minimalistic Motion Vision for Navigating along Corridors Comprising U-shaped and S-shaped Turns. Journal of Bionic Engineering, 2015, 12, 47-60.	5.0	12
36	A fully-autonomous hovercraft inspired by bees: Wall following and speed control in straight and tapered corridors. , 2012, , .		11

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37	A bio-inspired sighted robot chases like a hoverfly. Bioinspiration and Biomimetics, 2019, 14, 036002.	2.9	10
38	Effect of Top-Down Connections in Hierarchical Sparse Coding. Neural Computation, 2020, 32, 2279-2309.	2.2	10
39	A Shape-Adjusted Tridimensional Reconstruction of Cultural Heritage Artifacts Using a Miniature Quadrotor. Remote Sensing, 2016, 8, 858.	4.0	9
40	Signal-Based Self-Organization of a Chain of UAVs for Subterranean Exploration. Frontiers in Robotics and AI, 2021, 8, 614206.	3.2	9
41	Neuromimetic Robots Inspired by Insect Vision. Advances in Science and Technology, 2008, 58, 127-136.	0.2	8
42	A mouse sensor and a 2-pixel motion sensor exposed to continuous illuminance changes. , 2011, , .		7
43	Visual motion sensing onboard a 50-g helicopter flying freely under complex VICON-lighting conditions. , 2012, , .		7
44	Oscillations make a self-scaled model for honeybeesâ€™ visual odometer reliable regardless of flight trajectory. Journal of the Royal Society Interface, 2021, 18, 20210567.	3.4	7
45	A tiny directional sound sensor inspired by crickets designed for micro-air vehicles. , 2011, , .		5
46	Controlling docking, altitude and speed in a circular high-roofed tunnel thanks to the optic flow. , 2012, , .		5
47	A biphasic navigational strategy in loggerhead sea turtles. Scientific Reports, 2020, 10, 18130.	3.3	5
48	A 3D insect-inspired visual autopilot for corridor-following. , 2008, , .		4
49	Combining sound and optic fow cues to reach a sound source despite lateral obstacles. , 2008, , .		4
50	Interpolation based “time of travel” scheme in a Visual Motion Sensor using a small 2D retina. , 2012, , .		4
51	Estimation of the distance from a surface based on local optic flow divergence. , 2021, , .		4
52	Suboptimal lunar landing GNC using nongimbaled optic-flow sensors. IEEE Transactions on Aerospace and Electronic Systems, 2015, 51, 2525-2545.	4.7	3
53	A quasi-panoramic bio-inspired eye for flying parallel to walls. , 2017, , .		3
54	Ecological design of augmentation improves helicopter ship landing maneuvers: An approach in augmented virtuality. PLoS ONE, 2021, 16, e0255779.	2.5	3

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55	Optic Flow Based Autopilots: Speed Control and Obstacle Avoidance. , 2009, , 29-50.		3
56	Toward an Autonomous Lunar Landing Based on Low-Speed Optic Flow Sensors. , 2013, , 681-699.		3
57	Insect Inspired Autopilots. Journal of Aero Aqua Bio-mechanisms, 2010, 1, 2-10.	1.0	3
58	Floor and ceiling mirror configurations to study altitude control in honeybees. Biology Letters, 2022, 18, 20210534.	2.3	3
59	CURVACE â€“ CURVed Artificial Compound Eyes. Procedia Computer Science, 2011, 7, 308-309.	2.0	2
60	Backup state observer based on Optic Flow applied to lunar landing. , 2014, , .		2
61	Robotic-flapper maneuvers and fruitfly turns. Science, 2018, 361, 1073-1074.	12.6	2
62	Helicopter Pilots Synchronize Their Altitude with Ship Heave to Minimize Energy When Landing on a Shipâ€™s Deck. International Journal of Aerospace Psychology, 2021, 31, 135-148.	0.9	2
63	Special issue featuring selected papers from the International Workshop on Bio-Inspired Robots (Nantes, France, 6â€“8 April 2011). Bioinspiration and Biomimetics, 2012, 7, 020201.	2.9	1
64	INSECT INSPIRED VISUAL MOTION SENSING AND FLYING ROBOTS. World Scientific Series in Nanoscience and Nanotechnology, 2014, , 565-611.	0.1	1
65	Optic flow-based nonlinear control and sub-optimal guidance for lunar landing. , 2014, , .		1
66	Towards an automatic parking system using bio-inspired 1-D optical flow sensors. , 2015, , .		1
67	Optic-flow based car-like robot operating in a 5-decade light level range. , 2016, , .		1
68	Bio-inspired Landing Approaches and Their Potential Use on Extraterrestrial Bodies. , 2013, , 221-246.		1
69	Field Programmable Gate Array (FPGA) for Bio-Inspired Visuo-Motor Control Systems Applied to Micro-Air Vehicles. , 2009, , .		0
70	Guest editorial: Visual guidance systems forÂsmallÂUnmannedÂAerialÂVehicles. Autonomous Robots, 2009, 27, 145-146.	4.8	0
71	Event-based speed control on a sensor-less miniature thruster. , 2014, , .		0