Franck Ruffier

List of Publications by Year
in descending order

71 papers	1,817 citations	394421 19 h-index	315739 38 g-index
77 all docs	77 docs citations	77 times ranked	1108 citing authors

#	Article	IF	Citations
1	Floor and ceiling mirror configurations to study altitude control in honeybees. Biology Letters, 2022, 18, 20210534.	2.3	3
2	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
3	Signal-Based Self-Organization of a Chain of UAVs for Subterranean Exploration. Frontiers in Robotics and AI, 2021, 8, 614206.	3.2	9
4	Estimation of the distance from a surface based on local optic flow divergence. , 2021, , .		4
5	Ecological design of augmentation improves helicopter ship landing maneuvers: An approach in augmented virtuality. PLoS ONE, 2021, 16, e0255779.	2.5	3
6	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
7	Sparse deep predictive coding captures contour integration capabilities of the early visual system. PLoS Computational Biology, 2021, 17, e1008629.	3.2	16
8	A biphasic navigational strategy in loggerhead sea turtles. Scientific Reports, 2020, 10, 18130.	3.3	5
9	Effect of Top-Down Connections in Hierarchical Sparse Coding. Neural Computation, 2020, 32, 2279-2309.	2.2	10
10	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
11	A bio-inspired sighted robot chases like a hoverfly. Bioinspiration and Biomimetics, 2019, 14, 036002.	2.9	10
12	Informational Framework for Minimalistic Visual Odometry on Outdoor Robot. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 2988-2995.	4.7	13
13	Robotic-flapper maneuvers and fruitfly turns. Science, 2018, 361, 1073-1074.	12.6	2
14	Altitude control in honeybees: joint vision-based learning and guidance. Scientific Reports, 2017, 7, 9231.	3.3	26
15	Optic flow-based collision-free strategies: From insects to robots. Arthropod Structure and Development, 2017, 46, 703-717.	1.4	112
16	A quasi-panoramic bio-inspired eye for flying parallel to walls. , 2017, , .		3
17	Time-of-Travel Methods for Measuring Optical Flow on Board a Micro Flying Robot. Sensors, 2017, 17, 571.	3.8	15
18	A Shape-Adjusted Tridimensional Reconstruction of Cultural Heritage Artifacts Using a Miniature Quadrotor. Remote Sensing, 2016, 8, 858.	4.0	9

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19	Optic-flow based car-like robot operating in a 5-decade light level range. , 2016, , .		1
20	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
21	Towards an automatic parking system using bio-inspired 1-D optical flow sensors. , 2015, , .		1
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	Suboptimal lunar landing GNC using nongimbaled optic-flow sensors. IEEE Transactions on Aerospace and Electronic Systems, 2015, 51, 2525-2545.	4.7	3
24	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
25	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
26	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
27	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
28	A biomimetic vision-based hovercraft accounts for beesâ€™ complex behaviour in various corridors. Bioinspiration and Biomimetics, 2014, 9, 036003.	2.9	28
29	INSECT INSPIRED VISUAL MOTION SENSING AND FLYING ROBOTS. World Scientific Series in Nanoscience and Nanotechnology, 2014, , 565-611.	0.1	1
30	Hardware Architecture and Cutting-Edge Assembly Process of a Tiny Curved Compound Eye. Sensors, 2014, 14, 21702-21721.	3.8	24
31	Optic flow-based nonlinear control and sub-optimal guidance for lunar landing. , 2014, , .		1
32	Event-based speed control on a sensor-less miniature thruster. , 2014, , .		0
33	Backup state observer based on Optic Flow applied to lunar landing. , 2014, , .		2
34	Two-Directional 1-g Visual Motion Sensor Inspired by the Fly's Eye. IEEE Sensors Journal, 2013, 13, 1025-1035.	4.7	19
35	Low-speed optic-flow sensor onboard an unmanned helicopter flying outside over fields. , 2013, , .		16
36	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

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37	Toward an Autonomous Lunar Landing Based on Low-Speed Optic Flow Sensors. , 2013, , 681-699.		3
38	Bio-inspired Landing Approaches and Their Potential Use on Extraterrestrial Bodies. , 2013, , 221-246.		1
39	Interpolation based “time of travel” scheme in a Visual Motion Sensor using a small 2D retina. , 2012, , .		4
40	Controlling docking, altitude and speed in a circular high-roofed tunnel thanks to the optic flow. , 2012, , .		5
41	A fully-autonomous hovercraft inspired by bees: Wall following and speed control in straight and tapered corridors. , 2012, , .		11
42	Visual motion sensing onboard a 50-g helicopter flying freely under complex VICON-lighting conditions. , 2012, , .		7
43	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
44	A novel 1-gram insect based device measuring visual motion along 5 optical directions. , 2011, , .		14
45	A mouse sensor and a 2-pixel motion sensor exposed to continuous illuminance changes. , 2011, , .		7
46	A tiny directional sound sensor inspired by crickets designed for micro-air vehicles. , 2011, , .		5
47	Honeybees' Speed Depends on Dorsal as Well as Lateral, Ventral and Frontal Optic Flows. PLoS ONE, 2011, 6, e19486.	2.5	62
48	CURVACE â€" CURVed Artificial Compound Eyes. Procedia Computer Science, 2011, 7, 308-309.	2.0	2
49	Outdoor field performances of insectâ€based visual motion sensors. Journal of Field Robotics, 2011, 28, 529-541.	6.0	34
50	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
51	Modelling honeybee visual guidance in a 3-D environment. Journal of Physiology (Paris), 2010, 104, 27-39.	2.1	34
52	Biomimetic optic flow sensing applied to a lunar landing scenario. , 2010, , .		28
53	Characteristics of Three Miniature Bio-inspired Optic Flow Sensors in Natural Environments. , 2010, , .		12
54	Insect Inspired Autopilots. Journal of Aero Aqua Bio-mechanisms, 2010, 1, 2-10.	1.0	3

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55	Field Programmable Gate Array (FPGA) for Bio-Inspired Visuo-Motor Control Systems Applied to Micro-Air Vehicles. , 2009, , .		0
56	Guest editorial: Visual guidance systems forÂsmallÂUnmannedÂAerialÂVehicles. Autonomous Robots, 2009, 27, 145-146.	4.8	0
57	Optic Flow Based Autopilots: Speed Control and Obstacle Avoidance. , 2009, , 29-50.		3
58	A bee in the corridor: centering and wall-following. Die Naturwissenschaften, 2008, 95, 1181-1187.	1.6	68
59	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
60	A 3D insect-inspired visual autopilot for corridor-following. , 2008, , .		4
61	Neuromimetic Robots Inspired by Insect Vision. Advances in Science and Technology, 2008, 58, 127-136.	0.2	8
62	Aerial robot piloted in steep relief by optic flow sensors. , 2008, , .		26
63	Combining sound and optic fow cues to reach a sound source despite lateral obstacles. , 2008, , .		4
64	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
65	A Bio-Inspired Flying Robot Sheds Light on Insect Piloting Abilities. Current Biology, 2007, 17, 329-335.	3.9	157
66	Toward Optic Flow Regulation for Wall-Following and Centring Behaviours. International Journal of Advanced Robotic Systems, 2006, 3, 23.	2.1	39
67	Optic flow regulation: the key to aircraft automatic guidance. Robotics and Autonomous Systems, 2005, 50, 177-194.	5.1	177
68	Visual control of two aerial micro-robots by insect-based autopilots. Advanced Robotics, 2004, 18, 771-786.	1.8	14
69	Visually guided micro-aerial vehicle: automatic take off, terrain following, landing and wind reaction. , 2004, , .		85
70	OCTAVE: a bioinspired visuo-motor control system for the guidance of micro-air-vehicles. , 2003, , .		31
71	Optic Flow Based Visual Guidance: From Flying Insects to Miniature Aerial Vehicles. , 0, , .		15