Toshiyuki Nakata

List of Publications by Year
in descending order

42 papers	989 citations	516710 16 h-index	526287 27 g-index
42 all docs	42 docs citations	42 times ranked	854 citing authors

#	Article	IF	Citations
1	Smart wing rotation and trailing-edge vortices enable high frequency mosquito flight. Nature, 2017, 544, 92-95.	27.8	181
2	Aerodynamic performance of a hovering hawkmoth with flexible wings: a computational approach. Proceedings of the Royal Society B: Biological Sciences, 2012, 279, 722-731.	2.6	156
3	Flight of the dragonflies and damselflies. Philosophical Transactions of the Royal Society B: Biological Sciences, 2016, 371, 20150389.	4.0	97
4	A CFD-informed quasi-steady model of flapping-wing aerodynamics. Journal of Fluid Mechanics, 2015, 783, 323-343.	3.4	70
5	Enhanced flight performance by genetic manipulation of wing shape in Drosophila. Nature Communications, 2016, 7, 10851.	12.8	63
6	Owl-inspired leading-edge serrations play a crucial role in aerodynamic force production and sound suppression. Bioinspiration and Biomimetics, 2017, 12, 046008.	2.9	59
7	Aerodynamic imaging by mosquitoes inspires a surface detector for autonomous flying vehicles. Science, 2020, 368, 634-637.	12.6	46
8	Micro air vehicle-motivated computational biomechanics in bio-flights: aerodynamics, flight dynamics and maneuvering stability. Acta Mechanica Sinica/Lixue Xuebao, 2010, 26, 863-879.	3.4	41
9	Unsteady bio-fluid dynamics in flying and swimming. Acta Mechanica Sinica/Lixue Xuebao, 2017, 33, 663-684.	3.4	39
10	The dynamics of passive feathering rotation in hovering flight of bumblebees. Journal of Fluids and Structures, 2019, 91, 102628.	3.4	31
11	Quantifying the dynamic wing morphing of hovering hummingbird. Royal Society Open Science, 2017, 4, 170307.	2.4	28
12	Morphology Effects of Leading-edge Serrations on Aerodynamic Force Production: An Integrated Study Using PIV and Force Measurements. Journal of Bionic Engineering, 2018, 15, 661-672.	5.0	24
13	Forewings match the formation of leading-edge vortices and dominate aerodynamic force production in revolving insect wings. Bioinspiration and Biomimetics, 2018, 13, 016009.	2.9	20
14	Development of Bio-Inspired Low-Noise Propeller for a Drone. Journal of Robotics and Mechatronics, 2018, 30, 337-343.	1.0	20
15	A CFD data-driven aerodynamic model for fast and precise prediction of flapping aerodynamics in various flight velocities. Journal of Fluid Mechanics, 2021, 915, .	3.4	19
16	A simulation-based study on longitudinal gust response of flexible flapping wings. Acta Mechanica Sinica/Lixue Xuebao, 2018, 34, 1048-1060.	3.4	17
17	Flexible Flaps Inspired by Avian Feathers Can Enhance Aerodynamic Robustness in low Reynolds Number Airfoils. Frontiers in Bioengineering and Biotechnology, 2021, 9, 612182.	4.1	10
18	Development of Mixed Flow Fans with Bio-Inspired Grooves. Biomimetics, 2019, 4, 72.	3.3	9

#	Article	IF	Citations
19	Morphological effects of leading-edge serrations on the acoustic signatures of mixed flow fan. Physics of Fluids, 2022, 34, .	4.0	9
20	Recent progress on the flight of dragonflies and damselflies. International Journal of Odonatology, 2020, 23, 41-49.	0.5	7
21	Flexibility Effects of a Flapping Mechanism Inspired by Insect Musculoskeletal System on Flight Performance. Frontiers in Bioengineering and Biotechnology, 2021, 9, 612183.	4.1	7
22	Fluid-structure interaction enhances the aerodynamic performance of flapping wings: a computational study. Journal of Biomechanical Science and Engineering, 2018, 13, 17-00666-17-00666.	0.3	6
23	Effect of twist, camber and spanwise bending on the aerodynamic performance of flapping wings. Journal of Biomechanical Science and Engineering, 2018, 13, 17-00618-17-00618.	0.3	6
24	Aeroacoustic characteristics of owl-inspired blade designs in a mixed flow fan: effects of leading- and trailing-edge serrations. Bioinspiration and Biomimetics, 2021, 16, 066003.	2.9	6
25	Compact Sphere-Shaped Airflow Vector Sensor Based on MEMS Differential Pressure Sensors. Sensors, 2022, 22, 1087.	3.8	6
26	Aerodynamics and flight stability of a prototype flapping micro air vehicle. , 2012, , .		5
27	Development of Microstructured Low Noise Propeller for Aerial Acoustic Surveillance. , 2021, , .		3
28	Intermittent control strategy can enhance stabilization robustness in bumblebee hovering. Bioinspiration and Biomimetics, 2021, 16, 016013.	2.9	3
29	Flight behavior of four species of Holotrichia chafer (Coleoptera: Scarabaeidae) with different habitat use. Applied Entomology and Zoology, 2021, 56, 259-267.	1.2	1
30	Development of active CFRP/aluminum laminates and their demonstrations. Journal of Advanced Science, 2006, 18, 6-9.	0.1	0
31	611 Evaluation of Aerodynamic Characteristics of Insect Flapping Wings by Fluid-Structure Interaction Analysis. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2009, 2008.21, 253-254.	0.0	0
32	J0205-1-7 Study on insect-inspired wings and their mechanical properties. The Proceedings of the JSME Annual Meeting, 2010, 2010.6, 39-40.	0.0	0
33	J0205-1-3 Analysis of flow fields around mechanical flapping wings by using PIV measurements. The Proceedings of the JSME Annual Meeting, 2010, 2010.6, 31-32.	0.0	0
34	8I-03 Directly measuring surface pressures on a flapping wing of an insect-inspired robot. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2011, 2010.23, 167-168.	0.0	0
35	Robustness strategies in bio-inspired flight systems: morphology, dynamics, and flight control. , 2018, , .		0
36	Effects of tail fin kinematics on propulsive performance in dolphin swimming. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2019, 2019.31, 1D23.	0.0	0

#	Article	IF	Citations
37	10.1063/5.0088851.1. , 2022, , .		0
38	10.1063/5.0088851.2. , 2022, , .		0
39	10.1063/5.0088851.4. , 2022, , .		0
40	10.1063/5.0088851.6. , 2022, , .		0
41	10.1063/5.0088851.3. , 2022, , .		0
42	10.1063/5.0088851.5. , 2022, , .		0