

Olivier Stasse

List of Publications by Year in descending order

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Version: 2024-02-01

113
papers

4,892
citations

471061

17
h-index

288905

40
g-index

115
all docs

115
docs citations

115
times ranked

3421
citing authors

#	ARTICLE	IF	CITATIONS
1	MonoSLAM: Real-Time Single Camera SLAM. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2007, 29, 1052-1067.	9.7	2,893
2	The Pinocchio C++ library : A fast and flexible implementation of rigid body dynamics algorithms and their analytical derivatives. , 2019, , .		146
3	Whole-body model-predictive control applied to the HRP-2 humanoid. , 2015, , .		145
4	TALOS: A new humanoid research platform targeted for industrial applications. , 2017, , .		96
5	Fast Humanoid Robot Collision-Free Footstep Planning Using Swept Volume Approximations. IEEE Transactions on Robotics, 2012, 28, 427-439.	7.3	91
6	A versatile and efficient pattern generator for generalized legged locomotion. , 2016, , .		83
7	A Reactive Walking Pattern Generator Based on Nonlinear Model Predictive Control. IEEE Robotics and Automation Letters, 2017, 2, 10-17.	3.3	74
8	Real-time 3D SLAM for Humanoid Robot considering Pattern Generator Information. , 2006, , .		69
9	Faster and Smoother Walking of Humanoid HRP-2 with Passive Toe Joints. , 2006, , .		59
10	Real-time (self)-collision avoidance task on a hrp-2 humanoid robot. , 2008, , .		56
11	Visually-Guided Grasping while Walking on a Humanoid Robot. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	49
12	Time-Optimal Path Parameterization for Redundantly Actuated Robots: A Numerical Integration Approach. IEEE/ASME Transactions on Mechatronics, 2015, 20, 3257-3263.	3.7	49
13	Strategies for Humanoid Robots to Dynamically Walk Over Large Obstacles. IEEE Transactions on Robotics, 2009, 25, 960-967.	7.3	47
14	Implementing Torque Control with High-Ratio Gear Boxes and Without Joint-Torque Sensors. International Journal of Humanoid Robotics, 2016, 13, 1550044.	0.6	42
15	Dynamically Stepping Over Obstacles by the Humanoid Robot HRP-2. , 2006, , .		40
16	How do walkers avoid a mobile robot crossing their way?. Gait and Posture, 2017, 51, 97-103.	0.6	38
17	Using a Memory of Motion to Efficiently Warm-Start a Nonlinear Predictive Controller. , 2018, , .		37
18	Real-time replanning using 3D environment for humanoid robot. , 2011, , .		36

#	ARTICLE	IF	CITATIONS
19	Optimal control for whole-body motion generation using center-of-mass dynamics for predefined multi-contact configurations. , 2015, , .		32
20	COCoMoPL: A Novel Approach for Humanoid Walking Generation Combining Optimal Control, Movement Primitives and Learning and its Transfer to the Real Robot HRP-2. IEEE Robotics and Automation Letters, 2017, 2, 977-984.	3.3	28
21	Development of a Biologically Inspired Real-Time Visual Attention System. Lecture Notes in Computer Science, 2000, , 150-159.	1.0	25
22	Online object search with a humanoid robot. , 2007, , .		25
23	Experimental evaluation of simple estimators for humanoid robots. , 2017, , .		25
24	Whole Body Model Predictive Control with a Memory of Motion: Experiments on a Torque-Controlled Talos. , 2021, , .		25
25	INTEGRATING WALKING AND VISION TO INCREASE HUMANOID AUTONOMY. International Journal of Humanoid Robotics, 2008, 05, 287-310.	0.6	24
26	Real-time footstep planning for humanoid robots among 3D obstacles using a hybrid bounding box. , 2012, , .		23
27	C-CROC: Continuous and Convex Resolution of Centroidal Dynamic Trajectories for Legged Robots in Multicontact Scenarios. IEEE Transactions on Robotics, 2020, 36, 676-691.	7.3	23
28	Dancing Humanoid Robots: Systematic Use of OSID to Compute Dynamically Consistent Movements Following a Motion Capture Pattern. IEEE Robotics and Automation Magazine, 2015, 22, 16-26.	2.2	22
29	Adaptive synthesis of dynamically feasible full-body movements for the humanoid robot HRP-2 by flexible combination of learned dynamic movement primitives. Robotics and Autonomous Systems, 2017, 91, 270-283.	3.0	22
30	Mobility of Humanoid Robots: Stepping over Large Obstacles Dynamically. , 2006, , .		21
31	Toward Reactive Vision-Guided Walking on Rough Terrain: An Inverse-Dynamics Based Approach. International Journal of Humanoid Robotics, 2014, 11, 1441004.	0.6	20
32	How do walkers behave when crossing the way of a mobile robot that replicates human interaction rules?. Gait and Posture, 2018, 60, 188-193.	0.6	20
33	Fast foot prints re-planning and motion generation during walking in physical human-humanoid interaction. , 2009, , .		19
34	3D grid and particle based SLAM for a humanoid robot. , 2009, , .		19
35	A two-steps next-best-view algorithm for autonomous 3D object modeling by a humanoid robot. , 2009, , .		18
36	Reverse Control for Humanoid Robot Task Recognition. IEEE Transactions on Systems, Man, and Cybernetics, 2012, 42, 1524-1537.	5.5	18

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37	Vision-guided motion primitives for humanoid reactive walking: Decoupled versus coupled approaches. International Journal of Robotics Research, 2015, 34, 402-419.	5.8	17
38	Cancelling the sway motion of dynamic walking in visual servoing. , 2010, , .		16
39	How to localize humanoids with a single camera?. Autonomous Robots, 2013, 34, 47-71.	3.2	16
40	An optimized Linear Model Predictive Control solver for online walking motion generation. , 2009, , .		14
41	Human Trajectory Prediction Model and Its Coupling With a Walking Pattern Generator of a Humanoid Robot. IEEE Robotics and Automation Letters, 2021, 6, 6361-6369.	3.3	14
42	Intercontinental multimodal tele-cooperation using a humanoid robot. , 2008, , .		13
43	Comparison of Position and Torque Whole-Body Control Schemes on the Humanoid Robot TALOS. , 2021, , .		13
44	A Visual Attention Framework for Search Behavior by a Humanoid Robot. , 2006, , .		12
45	Towards autonomous object reconstruction for visual search by the humanoid robot HRP-2. , 2007, , .		12
46	Intercontinental, multimodal, wide-range tele-cooperation using a humanoid robot. , 2009, , .		12
47	Optimization based exploitation of the ankle elasticity of HRP-2 for overstepping large obstacles. , 2014, , .		12
48	Continuous Legged Locomotion Planning. IEEE Transactions on Robotics, 2017, 33, 234-239.	7.3	12
49	An Overview of Humanoid Robots Technologies. Springer Tracts in Advanced Robotics, 2019, , 281-310.	0.3	12
50	“Give me the purple ball” - he said to HRP-2 N.14. , 2007, , .		10
51	Weakly collision-free paths for continuous humanoid footstep planning. , 2011, , .		10
52	HUMANOID LOCOMOTION PLANNING FOR VISUALLY GUIDED TASKS. International Journal of Humanoid Robotics, 2012, 09, 1250009.	0.6	10
53	METAPOD “ Template META-programming applied to dynamics: CoP-CoM trajectories filtering. , 2014, , .		10
54	A next-best-view algorithm for autonomous 3D object modeling by a humanoid robot. , 2008, , .		9

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55	AUTONOMOUS 3D OBJECT MODELING BY A HUMANOID USING AN OPTIMIZATION-DRIVEN NEXT-BEST-VIEW FORMULATION. International Journal of Humanoid Robotics, 2010, 07, 407-428.	0.6	9
56	PredN: achieving efficiency and code re-usability in a programming system for complex robotic applications. , 0, , .		8
57	A biped walking pattern generator based on “half-steps” for dimensionality reduction. , 2011, , .		8
58	Towards reactive whole-body motion planning in cluttered environments by precomputing feasible motion spaces. , 2013, , .		8
59	Motion generation for pulling a fire hose by a humanoid robot. , 2016, , .		8
60	Benchmarking the HRP-2 Humanoid Robot During Locomotion. Frontiers in Robotics and AI, 2018, 5, 122.	2.0	8
61	Actuator Model, Identification and Differential Dynamic Programming for a TALOS Humanoid Robot. , 2020, , .		8
62	Integration of humanoid robots in collaborative working environment: a case study on motion generation. Intelligent Service Robotics, 2009, 2, 153-160.	1.6	7
63	Active Visual Search by a Humanoid Robot. , 2007, , 171-184.		7
64	Design, analysis and control of the series-parallel hybrid RH5 humanoid robot. , 2021, , .		7
65	Walking Human Trajectory Models and Their Application to Humanoid Robot Locomotion. , 2020, , .		7
66	Passive Inverse Dynamics Control Using a Global Energy Tank for Torque-Controlled Humanoid Robots in Multi-Contact. IEEE Robotics and Automation Letters, 2022, 7, 2787-2794.	3.3	7
67	Modular Architecture for Humanoid Walking Pattern Prototyping and Experiments. Advanced Robotics, 2008, 22, 589-611.	1.1	6
68	Approximation of feasibility tests for reactive walk on HRP-2. , 2010, , .		6
69	Walking on non-planar surfaces using an inverse dynamic stack of tasks. , 2012, , .		6
70	Motion planning in Irreducible Path Spaces. Robotics and Autonomous Systems, 2018, 109, 97-108.	3.0	6
71	An Optimized Linear Model Predictive Control Solver. , 2010, , 309-318.		6
72	Intercontinental cooperative telemanipulation between Germany and Japan. , 2008, , .		5

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73	Odometry Based on Auto-Calibrating Inertial Measurement Unit Attached to the Feet. , 2018, , .		5
74	3D object recognition using spin-images for a humanoid stereoscopic vision system. , 2006, , .		4
75	Humanoid robot task recognition from movement analysis. , 2010, , .		4
76	Weakly collision-free paths for continuous humanoid footstep planning. , 2011, , .		4
77	Humanoid motion generation and swept volumes: theoretical bounds for safe steps. Advanced Robotics, 2013, 27, 1045-1058.	1.1	4
78	Vision-driven walking pattern generation for humanoid reactive walking. , 2014, , .		4
79	Robust human-inspired power law trajectories for humanoid HRP-2 robot. , 2016, , .		4
80	Motion Planning with Multi-Contact and Visual Servoing on Humanoid Robots. , 2020, , .		4
81	Benchmarking Whole-Body Controllers on the TALOS Humanoid Robot. Frontiers in Robotics and AI, 2022, 9, 826491.	2.0	4
82	An advanced robotics motion generation framework for inferring the organisation of human movements. Computer Methods in Biomechanics and Biomedical Engineering, 2013, 16, 177-178.	0.9	3
83	Controlling a multi-joint arm actuated by pneumatic muscles with quasi-DDP optimal control. , 2016, , .		3
84	Humanoid walking pattern generation based on model predictive control approximated with basis functions. Advanced Robotics, 2019, 33, 454-468.	1.1	3
85	Inverse optimal control to model human trajectories during locomotion. Computer Methods in Biomechanics and Biomedical Engineering, 2022, 25, 499-511.	0.9	3
86	Three Characterizations of 3D Reconstruction Uncertainty with Bounded Error. , 0, , .		2
87	Whole body posture controller based on inertial forces. , 2006, , .		2
88	Integrating Walking and Vision to Increase Humanoid Robot Autonomy. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	2
89	A two-stage suboptimal approximation for variable compliance and torque control. , 2014, , .		2
90	Motion planning and irreducible trajectories. , 2015, , .		2

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91	Modeling of Coordinated Human Body Motion by Learning of Structured Dynamic Representations. Springer Tracts in Advanced Robotics, 2017, , 237-267.	0.3	2
92	SLAM and Vision-based Humanoid Navigation. , 2019, , 1739-1761.		2
93	Agimus: a new framework for mapping manipulation motion plans to sequences of hierarchical task-based controllers. , 2020, , .		2
94	A Humanoid Vision System for Versatile Interaction. Lecture Notes in Computer Science, 2000, , 512-526.	1.0	2
95	Implementation, Identification and Control of an Efficient Electric Actuator for Humanoid Robots. , 2018, , .		2
96	Humanoid Robot HRP-2 with Human Supervision. , 2008, , 513-522.		2
97	ICP Localization and Walking Experiments on a TALOS Humanoid Robot. , 2021, , .		2
98	Towards a method to compare and to evaluate fast pixel gathering mechanisms for real time robotic vision systems. , 2003, , .		1
99	Using NEWUOA to drive the autonomous visual modeling of an object by a humanoid robot. , 2009, , .		1
100	Trajectory following for legged robots. , 2012, , .		1
101	Airbus/future of aircraft factory HRP-2 as universal worker proof of concept. , 2014, , .		1
102	Trot Gait Design Details for Quadrupeds. Lecture Notes in Computer Science, 2004, , 495-502.	1.0	1
103	French LRP Team's Description. Lecture Notes in Computer Science, 2002, , 701-704.	1.0	1
104	Value learning from trajectory optimization and Sobolev descent: A step toward reinforcement learning with superlinear convergence properties. , 2022, , .		1
105	Frame rate distributed computing for log-polar images with a novel real-time operating system on a general purpose platform. , 0, , .		0
106	How to extract and to exploit vision data for autonomous mobile robots to operate in known environments. , 0, , .		0
107	Robot trajectories generation: using a chaotic oscillator as computational resource. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 135-140.	0.4	0
108	3D segmentation using interval analysis and pre-attentive behaviour for a humanoid robot. , 2005, , .		0

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109	The Visibility Map, a Constraint for an Active Visual Search by a Humanoid Robot. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 523-528.	0.4	0
110	Humanoid feet trajectory generation for the reduction of the dynamical effects. , 2009, , .		0
111	Capture, recognition and imitation of anthropomorphic motion. , 2012, , .		0
112	Vision-based motion primitives for reactive walking. , 2013, , .		0
113	SLAM and Vision-based Humanoid Navigation. , 2017, , 1-23.		0