

Aude G Billard

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

154
papers

7,018
citations

43
h-index

81
g-index

162
ext. papers

8,635
ext. citations

4.2
avg, IF

6.5
L-index

#	Paper	IF	Citations
154	Dual-Arm Control for Coordinated Fast Grabbing and Tossing of an Object: Proposing a New Approach. <i>IEEE Robotics and Automation Magazine</i> , 2022 , 2-13	3.4	0
153	Learning From Demonstration and Interactive Control of Variable-Impedance to Cut Soft Tissues. <i>IEEE/ASME Transactions on Mechatronics</i> , 2021 , 1-12	5.5	0
152	Real-Time Self-Collision Avoidance in Joint Space for Humanoid Robots. <i>IEEE Robotics and Automation Letters</i> , 2021 , 6, 1240-1247	4.2	3
151	Contact-initiated shared control strategies for four-arm supernumerary manipulation with foot interfaces. <i>International Journal of Robotics Research</i> , 2021 , 40, 986-1014	5.7	3
150	Hand pose selection in a bimanual fine-manipulation task. <i>Journal of Neurophysiology</i> , 2021 , 126, 195-213	3.2	0
149	Reactive Navigation in Crowds for Non-Holonomic Robots With Convex Bounding Shape. <i>IEEE Robotics and Automation Letters</i> , 2021 , 6, 4728-4735	4.2	4
148	On the Safety of Mobile Robots Serving in Public Spaces. <i>ACM Transactions on Human-Robot Interaction</i> , 2021 , 10, 1-27	3.2	6
147	Learning dynamical systems with bifurcations. <i>Robotics and Autonomous Systems</i> , 2021 , 136, 103700	3.5	0
146	Design of Hesitation Gestures for Nonverbal Human-Robot Negotiation of Conflicts. <i>ACM Transactions on Human-Robot Interaction</i> , 2021 , 10, 1-25	3.2	0
145	Hand-Object Interaction: From Human Demonstrations to Robot Manipulation. <i>Frontiers in Robotics and AI</i> , 2021 , 8, 714023	2.8	1
144	Customizing skills for assistive robotic manipulators, an inverse reinforcement learning approach with error-related potentials.. <i>Communications Biology</i> , 2021 , 4, 1406	6.7	1
143	Intent Prediction Based on Biomechanical Coordination of EMG and Vision-Filtered Gaze for End-Point Control of an Arm Prosthesis. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2020 , 28, 1471-1480	4.8	12
142	An inverse optimization approach to understand human acquisition of kinematic coordination in bimanual fine manipulation tasks. <i>Biological Cybernetics</i> , 2020 , 114, 63-82	2.8	3
141	Benchmark for Bimanual Robotic Manipulation of Semi-Deformable Objects. <i>IEEE Robotics and Automation Letters</i> , 2020 , 5, 2443-2450	4.2	12
140	From human action understanding to robot action execution: how the physical properties of handled objects modulate non-verbal cues 2020 ,		2
139	Recent Advances in Robot Learning from Demonstration. <i>Annual Review of Control, Robotics, and Autonomous Systems</i> , 2020 , 3, 297-330	11.8	89
138	Inferring subjective preferences on robot trajectories using EEG signals 2019 ,		7

137	Shared human-robot proportional control of a dexterous myoelectric prosthesis. <i>Nature Machine Intelligence</i> , 2019 , 1, 400-411	22.5	49
136	Avoidance of Convex and Concave Obstacles With Convergence Ensured Through Contraction. <i>IEEE Robotics and Automation Letters</i> , 2019 , 4, 1462-1469	4.2	27
135	Trends and challenges in robot manipulation. <i>Science</i> , 2019 , 364,	33.3	136
134	An ensemble inverse optimal control approach for robotic task learning and adaptation. <i>Autonomous Robots</i> , 2019 , 43, 875-896	3	3
133	A dynamical system approach to task-adaptation in physical human-robot interaction. <i>Autonomous Robots</i> , 2019 , 43, 927-946	3	39
132	Constraints extraction from asymmetrical bimanual tasks and their use in coordinated behavior. <i>Robotics and Autonomous Systems</i> , 2018 , 103, 222-235	3.5	10
131	A unified framework for coordinated multi-arm motion planning. <i>International Journal of Robotics Research</i> , 2018 , 37, 1205-1232	5.7	21
130	Learning motions from demonstrations and rewards with time-invariant dynamical systems based policies. <i>Autonomous Robots</i> , 2018 , 42, 45-64	3	7
129	Learning task manifolds for constrained object manipulation. <i>Autonomous Robots</i> , 2018 , 42, 159-174	3	3
128	Action Anticipation: Reading the Intentions of Humans and Robots. <i>IEEE Robotics and Automation Letters</i> , 2018 , 3, 4132-4139	4.2	23
127	Social babbling: The emergence of symbolic gestures and words. <i>Neural Networks</i> , 2018 , 106, 194-204	9.1	2
126	Decoding the grasping intention from electromyography during reaching motions. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2018 , 15, 57	5.3	26
125	Learning Augmented Joint-Space Task-Oriented Dynamical Systems: A Linear Parameter Varying and Synergetic Control Approach. <i>IEEE Robotics and Automation Letters</i> , 2018 , 3, 2718-2725	4.2	3
124	. <i>IEEE Robotics and Automation Letters</i> , 2018 , 3, 2894-2901	4.2	27
123	Does this robot have a mind? Schizophrenia patients' mind perception toward humanoid robots. <i>Schizophrenia Research</i> , 2018 , 197, 585-586	3.6	4
122	From Human Physical Interaction To Online Motion Adaptation Using Parameterized Dynamical Systems 2018 ,		12
121	A Dynamical-System-Based Approach for Controlling Robotic Manipulators During Noncontact/Contact Transitions. <i>IEEE Robotics and Automation Letters</i> , 2018 , 3, 2738-2745	4.2	12
120	EMG-based decoding of grasp gestures in reaching-to-grasping motions. <i>Robotics and Autonomous Systems</i> , 2017 , 91, 59-70	3.5	42

119	Unravelling socio-motor biomarkers in schizophrenia. <i>NPJ Schizophrenia</i> , 2017 , 3, 8	5.5	22
118	Capture-point based balance and reactive omnidirectional walking controller 2017 ,		5
117	Influence of facial feedback during a cooperative human-robot task in schizophrenia. <i>Scientific Reports</i> , 2017 , 7, 15023	4.9	11
116	On the mechanical, cognitive and sociable facets of human compliance and their robotic counterparts. <i>Robotics and Autonomous Systems</i> , 2017 , 88, 157-164	3.5	7
115	Learning externally modulated dynamical systems 2017 ,		3
114	Hierarchical Fingertip Space: A Unified Framework for Grasp Planning and In-Hand Grasp Adaptation. <i>IEEE Transactions on Robotics</i> , 2016 , 32, 960-972	6.5	59
113	Humanoid robots versus humans: How is emotional valence of facial expressions recognized by individuals with schizophrenia? An exploratory study. <i>Schizophrenia Research</i> , 2016 , 176, 506-513	3.6	19
112	A modular approach to learning manipulation strategies from human demonstration. <i>Autonomous Robots</i> , 2016 , 40, 903-927	3	16
111	Passive Interaction Control With Dynamical Systems. <i>IEEE Robotics and Automation Letters</i> , 2016 , 1, 106-113	4.3	28
110	Dexterous grasping under shape uncertainty. <i>Robotics and Autonomous Systems</i> , 2016 , 75, 352-364	3.5	53
109	Role of Gaze Cues in Interpersonal Motor Coordination: Towards Higher Affiliation in Human-Robot Interaction. <i>PLoS ONE</i> , 2016 , 11, e0156874	3.7	13
108	A Dynamical System Approach for Softly Catching a Flying Object: Theory and Experiment. <i>IEEE Transactions on Robotics</i> , 2016 , 32, 462-471	6.5	40
107	Learning complex sequential tasks from demonstration: A pizza dough rolling case study 2016 ,		18
106	Multi-contact haptic exploration and grasping with tactile sensors. <i>Robotics and Autonomous Systems</i> , 2016 , 85, 48-61	3.5	30
105	Stability Considerations for Variable Impedance Control. <i>IEEE Transactions on Robotics</i> , 2016 , 32, 1298-1305	4.5	89
104	Learning from Humans 2016 , 1995-2014		75
103	Recognizing the grasp intention from human demonstration. <i>Robotics and Autonomous Systems</i> , 2015 , 74, 108-121	3.5	22
102	Combined kinesthetic and simulated interface for teaching robot motion models 2015 ,		2

101	. <i>IEEE Transactions on Robotics</i> , 2015 , 31, 168-179	6.5	40
100	On computing task-oriented grasps. <i>Robotics and Autonomous Systems</i> , 2015 , 66, 145-158	3.5	5
99	. <i>IEEE Transactions on Robotics</i> , 2015 , 31, 1458-1471	6.5	39
98	Learning robotic eye-arm-hand coordination from human demonstration: a coupled dynamical systems approach. <i>Biological Cybernetics</i> , 2014 , 108, 223-48	2.8	12
97	A Wearable Camera Detects Gaze Peculiarities during Social Interactions in Young Children with Pervasive Developmental Disorders. <i>IEEE Transactions on Autonomous Mental Development</i> , 2014 , 6, 274-285		5
96	Triggering social interactions: chimpanzees respond to imitation by a humanoid robot and request responses from it. <i>Animal Cognition</i> , 2014 , 17, 589-95	3.1	10
95	Catching Objects in Flight. <i>IEEE Transactions on Robotics</i> , 2014 , 30, 1049-1065	6.5	101
94	Stretchable capacitive tactile skin on humanoid robot fingers [First experiments and results 2014 ,		15
93	Learning cost function and trajectory for robotic writing motion 2014 ,		3
92	Cognitive mechanism in synchronized motion: An internal predictive model for manual tracking control (special session) 2014 ,		5
91	Encoding bi-manual coordination patterns from human demonstrations 2014 ,		3
90	Learning object-level impedance control for robust grasping and dexterous manipulation 2014 ,		46
89	Learning of grasp adaptation through experience and tactile sensing 2014 ,		46
88	Bimanual compliant tactile exploration for grasping unknown objects 2014 ,		26
87	Learning control Lyapunov function to ensure stability of dynamical system-based robot reaching motions. <i>Robotics and Autonomous Systems</i> , 2014 , 62, 752-765	3.5	76
86	Assessing Interaction Dynamics in the Context of Robot Programming by Demonstration. <i>International Journal of Social Robotics</i> , 2013 , 5, 477-490	4	8
85	On the generation of a variety of grasps. <i>Robotics and Autonomous Systems</i> , 2013 , 61, 1335-1349	3.5	16
84	Learning search behaviour from humans 2013 ,		1

83	Safety issues in human-robot interactions 2013 ,		94
82	Learning a real time grasping strategy 2013 ,		8
81	On the Influence of Emotional Feedback on Emotion Awareness and Gaze Behavior 2013 ,		9
80	Social orienting of children with autism to facial expressions and speech: a study with a wearable eye-tracker in naturalistic settings. <i>Frontiers in Psychology</i> , 2013 , 4, 840	3-4	34
79	The ROBOSKIN Project: Challenges and Results. <i>CISM International Centre for Mechanical Sciences, Courses and Lectures</i> , 2013 , 351-358	0.6	14
78	Coupled dynamical system based armBand grasping model for learning fast adaptation strategies. <i>Robotics and Autonomous Systems</i> , 2012 , 60, 424-440	3-5	38
77	Iterative learning of grasp adaptation through human corrections. <i>Robotics and Autonomous Systems</i> , 2012 , 60, 55-71	3-5	46
76	Learning Coupled Dynamical Systems from human demonstration for robotic eye-arm-hand coordination 2012 ,		3
75	Face classification using touch with a humanoid robot hand 2012 ,		4
74	Learning to Play Minigolf: A Dynamical System-Based Approach. <i>Advanced Robotics</i> , 2012 , 26, 1967-1993	1.7	14
73	Estimating the non-linear dynamics of free-flying objects. <i>Robotics and Autonomous Systems</i> , 2012 , 60, 1108-1122	3-5	51
72	Robot Learning from Failed Demonstrations. <i>International Journal of Social Robotics</i> , 2012 , 4, 331-342	4	13
71	Iterative Estimation of Rigid-Body Transformations. <i>Journal of Mathematical Imaging and Vision</i> , 2012 , 43, 1-9	1.6	2
70	A dynamical system approach to realtime obstacle avoidance. <i>Autonomous Robots</i> , 2012 , 32, 433-454	3	125
69	Probabilistic depth image registration incorporating nonvisual information 2012 ,		1
68	Online learning of varying stiffness through physical human-robot interaction 2012 ,		39
67	Bridging the Gap: One shot grasp synthesis approach 2012 ,		17
66	Reaching and grasping kitchenware objects 2012 ,		4

65	Investigating gaze of children with ASD in naturalistic settings. <i>PLoS ONE</i> , 2012 , 7, e44144	3.7	74
64	Learning Stable Nonlinear Dynamical Systems With Gaussian Mixture Models. <i>IEEE Transactions on Robotics</i> , 2011 , 27, 943-957	6.5	340
63	The Ethical Landscape of Robotics. <i>IEEE Robotics and Automation Magazine</i> , 2011 , 18, 39-50	3.4	36
62	Learning to control planar hitting motions in a minigolf-like task 2011 ,		13
61	A tactile matrix for whole-body humanoid haptic sensing and safe interaction 2011 ,		2
60	A wearable gaze tracking system for children in unconstrained environments. <i>Computer Vision and Image Understanding</i> , 2011 , 115, 476-486	4.3	55
59	Motion learning and adaptive impedance for robot control during physical interaction with humans 2011 ,		97
58	Donut as I do: Learning from failed demonstrations 2011 ,		28
57	Tactile guidance for policy refinement and reuse 2010 ,		17
56	Learning motion dynamics to catch a moving object 2010 ,		22
55	Evaluation of a probabilistic approach to learn and reproduce gestures by imitation 2010 ,		16
54	BM: An iterative algorithm to learn stable non-linear dynamical systems with Gaussian mixture models 2010 ,		31
53	Imitation learning of globally stable non-linear point-to-point robot motions using nonlinear programming 2010 ,		34
52	A survey of Tactile HumanRobot Interactions. <i>Robotics and Autonomous Systems</i> , 2010 , 58, 1159-1176	3.5	231
51	Roombots: Reconfigurable Robots for Adaptive Furniture. <i>IEEE Computational Intelligence Magazine</i> , 2010 , 5, 20-32	5.6	152
50	Learning and Reproduction of Gestures by Imitation. <i>IEEE Robotics and Automation Magazine</i> , 2010 , 17, 44-54	3.4	282
49	HumanRobot Interaction. <i>IEEE Robotics and Automation Magazine</i> , 2010 , 17, 85-89	3.4	32
48	Roombots-mechanical design of self-reconfiguring modular robots for adaptive furniture 2009 ,		39

47	Statistical Learning by Imitation of Competing Constraints in Joint Space and Task Space. <i>Advanced Robotics</i> , 2009 , 23, 2059-2076	1.7	69
46	2009 ,		19
45	Handling of multiple constraints and motion alternatives in a robot programming by demonstration framework 2009 ,		35
44	2009 ,		61
43	Robot Programming by Demonstration 2008 , 1371-1394		544
42	A probabilistic Programming by Demonstration framework handling constraints in joint space and task space 2008 ,		49
41	On the influence of symbols and myths in the responsibility ascription problem in roboethics - A roboticist's perspective 2008 ,		2
40	Dynamical System Modulation for Robot Learning via Kinesthetic Demonstrations. <i>IEEE Transactions on Robotics</i> , 2008 , 24, 1463-1467	6.5	154
39	ONLINE LEARNING OF THE BODY SCHEMA. <i>International Journal of Humanoid Robotics</i> , 2008 , 05, 161-181.	1.2	58
38	Combining dynamical systems control and programming by demonstration for teaching discrete bimanual coordination tasks to a humanoid robot 2008 ,		14
37	Reaching with multi-referential dynamical systems. <i>Autonomous Robots</i> , 2008 , 25, 71-83	3	31
36	WearCam: A head mounted wireless camera for monitoring gaze attention and for the diagnosis of developmental disorders in young children 2007 ,		19
35	Using reinforcement learning to adapt an imitation task 2007 ,		8
34	Reinforcement learning for imitating constrained reaching movements. <i>Advanced Robotics</i> , 2007 , 21, 1521-1544	1.7	77
33	Incremental learning of gestures by imitation in a humanoid robot 2007 ,		163
32	Building Robota, a mini-humanoid robot for the rehabilitation of children with autism. <i>Assistive Technology</i> , 2007 , 19, 37-49	1.5	146
31	Active Teaching in Robot Programming by Demonstration 2007 ,		41
30	Apraxia: a review. <i>Progress in Brain Research</i> , 2007 , 164, 61-83	2.9	51

29	What is the teacher's role in robot programming by demonstration?. <i>Interaction Studies</i> , 2007 , 8, 441-464	1.3	59
28	Special Issue on Robot Learning by Observation, Demonstration, and Imitation. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2007 , 37, 254-255		9
27	On learning, representing, and generalizing a task in a humanoid robot. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2007 , 37, 286-98		610
26	Interferences in the Transformation of Reference Frames During a Posture Imitation Task. <i>Lecture Notes in Computer Science</i> , 2007 , 768-778	0.9	
25	Biologically Inspired Multimodal Integration: Interferences in a Human-Robot Interaction Game 2006 ,		8
24	Learning Dynamical System Modulation for Constrained Reaching Tasks 2006 ,		11
23	Teaching a Humanoid Robot to Recognize and Reproduce Social Cues 2006 ,		16
22	Special issue on the brain mechanisms of imitation learning. <i>Neural Networks</i> , 2006 , 19, 251-3	9.1	6
21	Parallel and distributed neural models of the ideomotor principle: an investigation of imitative cortical pathways. <i>Neural Networks</i> , 2006 , 19, 285-98	9.1	25
20	Discriminative and adaptive imitation in uni-manual and bi-manual tasks. <i>Robotics and Autonomous Systems</i> , 2006 , 54, 370-384	3.5	141
19	Dynamic updating of distributed neural representations using forward models. <i>Biological Cybernetics</i> , 2006 , 95, 567-88	2.8	5
18	Three-dimensional frames of references transformations using recurrent populations of neurons. <i>Neurocomputing</i> , 2005 , 64, 5-24	5.4	11
17	Discovering optimal imitation strategies. <i>Robotics and Autonomous Systems</i> , 2004 , 47, 69-77	3.5	116
16	Discovering optimal imitation strategies. <i>Robotics and Autonomous Systems</i> , 2004 , 47, 69-69	3.5	1
15	Computational approaches to motor learning by imitation. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2003 , 358, 537-47	5.8	338
14	Robota: Clever toy and educational tool. <i>Robotics and Autonomous Systems</i> , 2003 , 42, 259-269	3.5	84
13	Play, Dreams and Imitation in Robota 2002 , 165-172		10
12	Comparison between macaques' and humans' kinematics of prehension: the role of morphological differences and control mechanisms. <i>Behavioural Brain Research</i> , 2002 , 131, 169-84	3.4	54

11	Collaboration Through the Exploitation of Local Interactions in Autonomous Collective Robotics: The Stick Pulling Experiment. <i>Autonomous Robots</i> , 2001 , 11, 149-171	3	104
10	Learning human arm movements by imitation:: Evaluation of a biologically inspired connectionist architecture. <i>Robotics and Autonomous Systems</i> , 2001 , 37, 145-160	3.5	92
9	Experiments in Learning by Imitation - Grounding and Use of Communication in Robotic Agents. <i>Adaptive Behavior</i> , 1999 , 7, 415-438	1.1	44
8	DRAMA, a Connectionist Architecture for Control and Learning in Autonomous Robots. <i>Adaptive Behavior</i> , 1999 , 7, 35-63	1.1	56
7	DRAMA, a connectionist architecture for online learning and control of autonomous robots: experiments on learning of a synthetic proto-language with a doll robot. <i>Industrial Robot</i> , 1999 , 26, 59-66 ^{1.4}		10
6	Grounding communication in autonomous robots: An experimental study. <i>Robotics and Autonomous Systems</i> , 1998 , 24, 71-79	3.5	36
5	Learning of gestures by imitation in a humanoid robot153-178		33
4	Development of goal-directed imitation, object manipulation, and language in humans and robots424-468		2
3	Locally active globally stable dynamical systems: Theory, learning, and experiments. <i>International Journal of Robotics Research</i> ,027836492110309	5.7	1
2	Coordinated multi-arm motion planning: Reaching for moving objects in the face of uncertainty		7
1	Safety Concerns Emerging from Robots Navigating in Crowded Pedestrian Areas. <i>International Journal of Social Robotics</i> ,1	4	2