## Alin Albu-Schäffer

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Passive Decoupled Multitask Controller for Redundant Robots. IEEE Transactions on Control Systems Technology, 2023, 31, 1-16.	5.2	7
2	Learning to teleoperate an upper-limb assistive humanoid robot for bimanual daily-living tasks. Biomedical Physics and Engineering Express, 2022, 8, 015022.	1.2	2
3	Strict Modes Everywhere – Bringing Order Into Dynamics of Mechanical Systems by a Potential Compatible With the Geodesic Flow. IEEE Robotics and Automation Letters, 2022, 7, 2337-2344.	5.1	2
4	Experimental Closed-Loop Excitation of Nonlinear Normal Modes on an Elastic Industrial Robot. IEEE Robotics and Automation Letters, 2022, 7, 1689-1696.	5.1	7
5	SRT3D: A Sparse Region-Based 3D Object Tracking Approach for the Real World. International Journal of Computer Vision, 2022, 130, 1008-1030.	15.6	19
6	From underactuation to quasiâ€full actuation: Aiming at a unifying control framework for articulated soft robots. International Journal of Robust and Nonlinear Control, 2022, 32, 5453-5484.	3.7	5
7	Unsupervised symbol emergence for supervised autonomy using multi-modal latent Dirichlet allocations. Advanced Robotics, 2022, 36, 71-84.	1.8	2
8	Exploring planet geology through force-feedback telemanipulation from orbit. Science Robotics, 2022, 7, eabl6307.	17.6	15
9	Impedance Control on Arbitrary Surfaces for Ultrasound Scanning Using Discrete Differential Geometry. IEEE Robotics and Automation Letters, 2022, 7, 7738-7746.	5.1	9
10	Kinematic Transfer Learning of Sampling Distributions for Manipulator Motion Planning. , 2022, , .		2
11	Planning Natural Locomotion for Articulated Soft Quadrupeds. , 2022, , .		2
12	Exponential Convergence Rates of Nonlinear Mechanical Systems: The 1-DoF Case With Configuration-Dependent Inertia. , 2021, 5, 445-450.		4
13	A Sparse Gaussian Approach to Region-Based 6DoF Object Tracking. Lecture Notes in Computer Science, 2021, , 666-682.	1.3	10
14	Towards Autonomous Robotic Assembly: Using Combined Visual and Tactile Sensing for Adaptive Task Execution. Journal of Intelligent and Robotic Systems: Theory and Applications, 2021, 101, 1.	3.4	8
15	Efficient and Goal-Directed Oscillations in Articulated Soft Robots: The Point-To-Point Case. IEEE Robotics and Automation Letters, 2021, 6, 2555-2562.	5.1	5
16	Actuating Eigenmanifolds of Conservative Mechanical Systems via Bounded or Impulsive Control Actions. IEEE Robotics and Automation Letters, 2021, 6, 2783-2790.	5.1	7
17	Strict Nonlinear Normal Modes of Systems Characterized by Scalar Functions on Riemannian Manifolds. IEEE Robotics and Automation Letters, 2021, 6, 1910-1917.	5.1	7
18	Stabilization of User-Defined Feedback Controllers in Teleoperation With Passive Coupling Reference. IEEE Robotics and Automation Letters, 2021, 6, 3513-3520.	5.1	5

#	Article	IF	CITATIONS
19	Exciting efficient oscillations in nonlinear mechanical systems through Eigenmanifold stabilization. , 2021, , .		0
20	PD-like Regulation of Mechanical Systems with Prescribed Bounds of Exponential Stability: the Point-to-Point Case. , 2021, , .		0
21	Model-Augmented Haptic Telemanipulation: Concept, Retrospective Overview, and Current Use Cases. Frontiers in Robotics and Al, 2021, 8, 611251.	3.2	5
22	An Introduction to Robotically Assisted Surgical Systems: Current Developments and Focus Areas of Research. Current Robotics Reports, 2021, 2, 321-332.	7.9	18
23	An Ecosystem for Heterogeneous Robotic Assistants in Caregiving: Core Functionalities and Use Cases. IEEE Robotics and Automation Magazine, 2021, 28, 12-28.	2.0	16
24	Practical consequences of inertia shaping for interaction and tracking in robot control. Control Engineering Practice, 2021, 114, 104875.	5.5	13
25	Compliant Floating-Base Control of Space Robots. IEEE Robotics and Automation Letters, 2021, 6, 7485-7492.	5.1	6
26	PD-Like Regulation of Mechanical Systems With Prescribed Bounds of Exponential Stability: The Point-to-Point Case. , 2021, 5, 2102-2107.		3
27	Exciting Efficient Oscillations in Nonlinear Mechanical Systems Through Eigenmanifold Stabilization. , 2021, 5, 1916-1921.		14
28	Using Nonlinear Normal Modes for Execution of Efficient Cyclic Motions in Articulated Soft Robots. Springer Proceedings in Advanced Robotics, 2021, , 566-575.	1.3	4
29	Collision Detection, Identification, and Localization on the DLR SARA Robot with Sensing Redundancy. , 2021, , .		13
30	Embedding a Nonlinear Strict Oscillatory Mode into a Segmented Leg. , 2021, , .		2
31	Exodex Adam—A Reconfigurable Dexterous Haptic User Interface for the Whole Hand. Frontiers in Robotics and AI, 2021, 8, 716598.	3.2	1
32	Adapting Highly-Dynamic Compliant Movements to Changing Environments: A Benchmark Comparison of Reflex- vs. CPG-Based Control Strategies. Frontiers in Neurorobotics, 2021, 15, 762431.	2.8	3
33	Exciting Nonlinear Modes of Conservative Mechanical Systems by Operating a Master Variable Decoupling. , 2021, , .		0
34	Closing the Force Loop to Enhance Transparency in Time-delayed Teleoperation. , 2020, , .		11
35	The ARCHES Space-Analogue Demonstration Mission: Towards Heterogeneous Teams of Autonomous Robots for Collaborative Scientific Sampling in Planetary Exploration. IEEE Robotics and Automation Letters, 2020, 5, 5315-5322.	5.1	46
36	Using Elastically Actuated Legged Robots in Rough Terrain: Experiments with DLR Quadruped bert. , 2020, , .		5

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37	Safe Interactions and Kinesthetic Feedback in High Performance Earth-To-Moon Teleoperation. , 2020, , .		18
38	Robust, Locally Guided Peg-in-Hole using Impedance-Controlled Robots. , 2020, , .		4
39	A review on nonlinear modes in conservative mechanical systems. Annual Reviews in Control, 2020, 50, 49-71.	7.9	32
40	Object-Level Impedance Control for Dexterous In-Hand Manipulation. IEEE Robotics and Automation Letters, 2020, 5, 2987-2994.	5.1	26
41	Pattern Recognition for Knowledge Transfer in Robotic Assembly Sequence Planning. IEEE Robotics and Automation Letters, 2020, 5, 3666-3673.	5.1	28
42	Error Bounds for PD-Controlled Mechanical Systems Under Bounded Disturbances Using Interval Arithmetic. IEEE Robotics and Automation Letters, 2020, 5, 1231-1238.	5.1	2
43	Adaptive Air Density Estimation for Precise Tracking Control and Accurate External Wrench Observation for Flying Robots. IEEE Robotics and Automation Letters, 2020, 5, 1445-1452.	5.1	0
44	Coordination of thrusters, reaction wheels, and arm in orbital robots. Robotics and Autonomous Systems, 2020, 131, 103564.	5.1	4
45	Joint-Level Control of the DLR Lightweight Robot SARA. , 2020, , .		11
46	Biological data questions the support of the self inhibition required for pattern generation in the half center model. PLoS ONE, 2020, 15, e0238586.	2.5	6
47	EDAN: An EMG-controlled Daily Assistant to Help People With Physical Disabilities. , 2020, , .		16
48	Title is missing!. , 2020, 15, e0238586.		0
49	Title is missing!. , 2020, 15, e0238586.		0
50	Title is missing!. , 2020, 15, e0238586.		0
51	Title is missing!. , 2020, 15, e0238586.		0
52	Title is missing!. , 2020, 15, e0238586.		0
53	A Coordinate-based Approach for Static Balancing and Walking Control of Compliantly Actuated Legged Robots. , 2019, , .		3
54	Model-Free Friction Observers for Flexible Joint Robots With Torque Measurements. IEEE Transactions on Robotics, 2019, 35, 1508-1515.	10.3	39

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55	A dataset of continuous affect annotations and physiological signals for emotion analysis. Scientific Data, 2019, 6, 196.	5.3	79
56	Exact Modal Characterization of the Non Conservative Non Linear Radial Mass Spring System. , 2019, , .		0
57	Design of a robotic instrument for minimally invasive waterjet surgery. , 2019, , .		2
58	Iteratively Refined Feasibility Checks in Robotic Assembly Sequence Planning. IEEE Robotics and Automation Letters, 2019, 4, 1416-1423.	5.1	33
59	Coordinated Control of Spacecraft's Attitude and End-Effector for Space Robots. IEEE Robotics and Automation Letters, 2019, 4, 2108-2115.	5.1	29
60	Dynamic Walking on Compliant and Uneven Terrain using DCM and Passivity-based Whole-body Control. , 2019, , .		32
61	Cognition-enabled robotic wiping: Representation, planning, execution, and interpretation. Robotics and Autonomous Systems, 2019, 114, 199-216.	5.1	7
62	Mechanism Design of DLR Humanoid Robots. , 2019, , 637-662.		2
63	Exploiting Elastic Energy Storage for "Blind―Cyclic Manipulation: Modeling, Stability Analysis, Control, and Experiments for Dribbling. IEEE Transactions on Robotics, 2018, 34, 91-112.	10.3	8
64	Robust Adaptive Tracking Control Based on State Feedback Controller With Integrator Terms for Elastic Joint Robots With Uncertain Parameters. IEEE Transactions on Control Systems Technology, 2018, 26, 2259-2267.	5.2	45
65	Elastic Structure Preserving (ESP) Control for Compliantly Actuated Robots. IEEE Transactions on Robotics, 2018, 34, 317-335.	10.3	59
66	Progress and prospects of the human–robot collaboration. Autonomous Robots, 2018, 42, 957-975.	4.8	415
67	An Overview on Principles for Energy Efficient Robot Locomotion. Frontiers in Robotics and Al, 2018, 5, 129.	3.2	60
68	DCM-Based Gait Generation for Walking on Moving Support Surfaces. , 2018, , .		6
69	Inferring Semantic State Transitions During Telerobotic Manipulation. , 2018, , .		8
70	Non-Linear Local Force Feedback Control for Haptic Interfaces. IFAC-PapersOnLine, 2018, 51, 486-492.	0.9	8
71	Scaling Our World View: How Monoamines Can Put Context Into Brain Circuitry. Frontiers in Cellular Neuroscience, 2018, 12, 506.	3.7	9
72	Elastic Structure Preserving Impedance (ESÏ€)Control for Compliantly Actuated Robots. , 2018, , .		10

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#	Article	IF	CITATIONS
73	Data-Driven Discrete Planning for Targeted Hopping of Compliantly Actuated Robotic Legs. , 2018, , .		2
74	Visco-Elastic Structure Preserving Impedance (VESÏ€) Control for Compliantly Actuated Robots. , 2018, , .		4
75	Workspace Fixation for Free-Floating Space Robot Operations. , 2018, , .		12
76	Design and Operational Elements of the Robotic Subsystem for the e.deorbit Debris Removal Mission. Frontiers in Robotics and Al, 2018, 5, 100.	3.2	16
77	The Repetition Roadmap for Repetitive Constrained Motion Planning. IEEE Robotics and Automation Letters, 2018, 3, 3884-3891.	5.1	20
78	Force, Impedance, and Trajectory Learning for Contact Tooling and Haptic Identification. IEEE Transactions on Robotics, 2018, 34, 1170-1182.	10.3	102
79	Passivity Analysis and Control of Humanoid Robots on Movable Ground. IEEE Robotics and Automation Letters, 2018, 3, 3457-3464.	5.1	14
80	Dynamic Locomotion Gaits of a Compliantly Actuated Quadruped With SLIP-Like Articulated Legs Embodied in the Mechanical Design. IEEE Robotics and Automation Letters, 2018, 3, 3908-3915.	5.1	29
81	Tracking Control for the Grasping of a Tumbling Satellite With a Free-Floating Robot. IEEE Robotics and Automation Letters, 2018, 3, 3638-3645.	5.1	35
82	Fusing Joint Measurements and Visual Features for In-Hand Object Pose Estimation. IEEE Robotics and Automation Letters, 2018, 3, 3497-3504.	5.1	26
83	Convex Properties of Center-of-Mass Trajectories for Locomotion Based on Divergent Component of Motion. IEEE Robotics and Automation Letters, 2018, 3, 3449-3456.	5.1	17
84	Extending the Capability of Using a Waterjet in Surgical Interventions by the Use of Robotics. IEEE Transactions on Biomedical Engineering, 2017, 64, 284-294.	4.2	22
85	Eigenmodes of Nonlinear Dynamics: Definition, Existence, and Embodiment into Legged Robots with Elastic Elements. IEEE Robotics and Automation Letters, 2017, , 1-1.	5.1	14
86	Legged Elastic Multibody Systems: Adjusting Limit Cycles to Close-to-Optimal Energy Efficiency. IEEE Robotics and Automation Letters, 2017, 2, 436-443.	5.1	5
87	Passive Hierarchical Impedance Control Via Energy Tanks. IEEE Robotics and Automation Letters, 2017, 2, 522-529.	5.1	32
88	Decoupling and tracking control for elastic joint robots with coupled joint structure. Advanced Robotics, 2017, 31, 184-203.	1.8	4
89	Robot Collisions: A Survey on Detection, Isolation, and Identification. IEEE Transactions on Robotics, 2017, 33, 1292-1312.	10.3	469

90 Haptic intention augmentation for cooperative teleoperation. , 2017, , .

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91	Repetition sampling for efficiently planning similar constrained manipulation tasks. , 2017, , .		15
92	Momentum dumping for space robots. , 2017, , .		9
93	Mechanisms and Design of DLR Humanoid Robots. , 2017, , 1-26.		9
94	Neuromodulation and Synaptic Plasticity for the Control of Fast Periodic Movement: Energy Efficiency in Coupled Compliant Joints via PCA. Frontiers in Neurorobotics, 2016, 10, 2.	2.8	17
95	A passivity-based approach for trajectory tracking and link-side damping of compliantly actuated robots. , 2016, , .		19
96	Dynamics and control of a free-floating space robot in presence of nonzero linear and angular momenta. , 2016, , .		21
97	The DLR C-runner: Concept, design and experiments. , 2016, , .		18
98	Dynamic bipedal walking by controlling only the equilibrium of intrinsic elasticities. , 2016, , .		4
99	Robotic simulation of on orbit servicing including hard impacts. , 2016, , .		0
100	A graphical method to configure SpaceWire networks: SpaceWire networks and protocols, long paper. , 2016, , .		2
101	A passivity-based controller for motion tracking and damping assignment for compliantly actuated robots. , 2016, , .		16
102	Visual Focus of Attention Recognition from Fixed Chair Sitting Postures Using RGB-D Data. , 2016, , .		2
103	Modal Matching: An Approach to Natural Compliant Jumping Control. IEEE Robotics and Automation Letters, 2016, 1, 274-281.	5.1	2
104	Knowledge-enabled parameterization of whole-body control strategies for compliant service robots. Autonomous Robots, 2016, 40, 519-536.	4.8	37
105	Teleoperation for on-orbit servicing missions through the ASTRA geostationary satellite. , 2016, , .		14
106	Actuators for Soft Robotics. Springer Handbooks, 2016, , 499-530.	0.6	22
107	Biologically Inspired Deadbeat Control for Running: From Human Analysis to Humanoid Control and Back. IEEE Transactions on Robotics, 2016, 32, 854-867.	10.3	17
108	Weight and Weightlessness Effects on Sensorimotor Performance During Manual Tracking. Lecture Notes in Computer Science, 2016, , 111-121.	1.3	8

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109	Iterative path-accurate trajectory generation for fast sensor-based motion of robot arms. Advanced Robotics, 2016, 30, 1380-1394.	1.8	4
110	KONTUR-2: Force-feedback teleoperation from the international space station. , 2016, , .		72
111	Optical-inertial tracking of an input device for real-time robot control. , 2016, , .		4
112	Variable Stiffness Actuators: Review on Design and Components. IEEE/ASME Transactions on Mechatronics, 2016, 21, 2418-2430.	5.8	293
113	Hand synergies: Integration of robotics and neuroscience for understanding the control of biological and artificial hands. Physics of Life Reviews, 2016, 17, 1-23.	2.8	191
114	Path-Accurate Online Trajectory Generation for Jerk-Limited Industrial Robots. IEEE Robotics and Automation Letters, 2016, 1, 82-89.	5.1	17
115	Whole-body impedance control of wheeled mobile manipulators. Autonomous Robots, 2016, 40, 505-517.	4.8	68
116	Optimal Control for Viscoelastic Robots and Its Generalization in Real-Time. Springer Tracts in Advanced Robotics, 2016, , 131-148.	0.4	4
117	Targeted jumping of compliantly actuated hoppers based on discrete planning and switching control. , 2015, , .		6
118	Classifying compliant manipulation tasks for automated planning in robotics. , 2015, , .		22
119	From Torque-Controlled to Intrinsically Compliant Humanoid Robots. Mechanical Engineering, 2015, 137, S7-S11.	0.1	1
120	Robotic agents capable of natural and safe physical interaction with human co-workers. , 2015, , .		25
121	The OOS-SIM: An on-ground simulation facility for on-orbit servicing robotic operations. , 2015, , .		52
122	Generalizing Torque Control Concepts: Using Well-Established Torque Control Methods on Variable Stiffness Robots. IEEE Robotics and Automation Magazine, 2015, 22, 37-51.	2.0	54
123	Variable stiffness actuators: The user's point of view. International Journal of Robotics Research, 2015, 34, 727-743.	8.5	160
124	An overview of null space projections for redundant, torque-controlled robots. International Journal of Robotics Research, 2015, 34, 1385-1400.	8.5	139
125	Three-Dimensional Bipedal Walking Control Based on Divergent Component of Motion. IEEE Transactions on Robotics, 2015, 31, 355-368.	10.3	258
126	Prioritized multi-task compliance control of redundant manipulators. Automatica, 2015, 53, 416-423.	5.0	114

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127	Passivity of virtual free-floating dynamics rendered on robotic facilities. , 2015, , .		14
128	Backstepping Control of Variable Stiffness Robots. IEEE Transactions on Control Systems Technology, 2015, 23, 2195-2202.	5.2	77
129	Unmanned Aerial Systems Physically Interacting with the Environment: Load Transportation, Deployment, and Aerial Manipulation. , 2015, , 2755-2785.		23
130	Soft Robotics with Variable Stiffness Actuators: Tough Robots for Soft Human Robot Interaction. , 2015, , 231-254.		21
131	Workspace analysis for a kinematically coupled torso of a torque controlled humanoid robot. , 2014, , , $\cdot$		5
132	Object-centered hybrid reasoning for whole-body mobile manipulation. , 2014, , .		35
133	The Hardware Abstraction Layer — Supporting control design by tackling the complexity of humanoid robot hardware. , 2014, , .		6
134	Overview of the torque-controlled humanoid robot TORO. , 2014, , .		199
135	Design and control of compliantly actuated bipedal running robots: Concepts to exploit natural system dynamics. , 2014, , .		17
136	Improving tracking accuracy of a MIMO state feedback controller for elastic joint robots. , 2014, , .		7
137	Biomechanisch sichere Geschwindigkeitsregelung für die Mensch-Roboter Interaktion. Automatisierungstechnik, 2014, 62, 175-187.	0.8	6
138	Optimal control strategies for maximizing the performance of Variable Stiffness Joints with nonlinear springs. , 2014, , .		4
139	Trajectory generation for continuous leg forces during double support and heel-to-toe shift based on divergent component of motion. , 2014, , .		43
140	Jumping control for compliantly actuated multilegged robots. , 2014, , .		10
141	A model-free approach to vibration suppression for intrinsically elastic robots. , 2014, , .		16
142	Passivity and Stability Boundaries for Haptic Systems With Time Delay. IEEE Transactions on Control Systems Technology, 2014, 22, 1297-1309.	5.2	57
143	Neuron model interpretation of a cyclic motion control concept. , 2014, , .		2
144	Nonlinear Oscillations for Cyclic Movements in Human and Robotic Arms. IEEE Transactions on Robotics, 2014, 30, 865-879.	10.3	29

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145	Optimal Control of Variable Stiffness Actuators with Nonlinear Springs. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 8487-8495.	0.4	5
146	Switching based limit cycle control for compliantly actuated second-order systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 6392-6399.	0.4	6
147	Interaction Force, Impedance and Trajectory Adaptation: By Humans, for Robots. Springer Tracts in Advanced Robotics, 2014, , 331-345.	0.4	37
148	EXPERIMENTAL ANALYSIS ON SPATIAL AND CARTESIAN IMPEDANCE CONTROL FOR THE DEXTEROUS DLR/HIT II HAND. International Journal of Robotics and Automation, 2014, 29, .	0.1	13
149	Variable impedance actuators: A review. Robotics and Autonomous Systems, 2013, 61, 1601-1614.	5.1	822
150	Robots Driven by Compliant Actuators: Optimal Control Under Actuation Constraints. IEEE Transactions on Robotics, 2013, 29, 1085-1101.	10.3	176
151	Evaluation of human safety in the DLR Robotic Motion Simulator using a crash test dummy. , 2013, , .		2
152	Nonlinear oscillations for cyclic movements in variable impedance actuated robotic arms. , 2013, , .		10
153	Orbital stabilization of mechanical systems through semidefinite Lyapunov functions. , 2013, , .		15
154	Multi-objective compliance control of redundant manipulators: Hierarchy, control, and stability. , 2013, , .		41
155	Towards a robust variable stiffness actuator. , 2013, , .		4
156	Optimal control for haptic rendering: Fast energy dissipation and minimum overshoot. , 2013, , .		13
157	A modally adaptive control for multi-contact cyclic motions in compliantly actuated robotic systems. , 2013, , .		19
158	On the closed form computation of the dynamic matrices and their differentiations. , 2013, , .		38
159	A robust sagittal plane hexapedal running model with serial elastic actuation and simple periodic feedforward control. , 2013, , .		2
160	Three-dimensional bipedal walking control using Divergent Component of Motion. , 2013, , .		100
161	First analysis and experiments in aerial manipulation using fully actuated redundant robot arm. , 2013, , .		107
162	Modal limit cycle control for variable stiffness actuated robots. , 2013, , .		14

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163	Closed-Loop Behavior of an Autonomous Helicopter Equipped with a Robotic Arm for Aerial Manipulation Tasks. International Journal of Advanced Robotic Systems, 2013, 10, 145.	2.1	78
164	It Is (Almost) All about Human Safety: A Novel Paradigm for Robot Design, Control, and Planning. Lecture Notes in Computer Science, 2013, , 202-215.	1.3	8
165	On making robots understand safety: Embedding injury knowledge into control. International Journal of Robotics Research, 2012, 31, 1578-1602.	8.5	143
166	Adaptive friction compensation in trajectory tracking control of DLR medical robots with elastic joints. , 2012, , .		4
167	On continuous null space projections for torque-based, hierarchical, multi-objective manipulation. , 2012, , .		30
168	On impact decoupling properties of elastic robots and time optimal velocity maximization on joint level. , 2012, , .		17
169	Optimal control for exploiting the natural dynamics of Variable Stiffness robots. , 2012, , .		57
170	Optimal control for maximizing potential energy in a variable stiffness joint. , 2012, , .		9
171	Direct force reflecting teleoperation with a flexible joint robot. , 2012, , .		18
172	A versatile biomimetic controller for contact tooling and haptic exploration. , 2012, , .		41
173	A truly safely moving robot has to know what injury it may cause. , 2012, , .		38
174	Variable impedance actuators: Moving the robots of tomorrow. , 2012, , .		36
175	Energy Shaping Control for a Class of Underactuated Euler-Lagrange Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 567-575.	0.4	21
176	Dynamic Trajectory Generation for Serial Elastic Actuated Robots. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 636-643.	0.4	7
177	Integration of Reactive, Torque-Based Self-Collision Avoidance Into a Task Hierarchy. IEEE Transactions on Robotics, 2012, 28, 1278-1293.	10.3	72
178	Walking control of fully actuated robots based on the Bipedal SLIP model. , 2012, , .		64
179	Intrinsically elastic robots: The key to human like performance. , 2012, , .		4
180	Comparison of object-level grasp controllers for dynamic dexterous manipulation. International Journal of Robotics Research, 2012, 31, 3-23.	8.5	84

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181	Optimal torque and stiffness control in compliantly actuated robots. , 2012, , .		14
182	Rigid vs. elastic actuation: Requirements & amp; performance. , 2012, , .		9
183	Hardware and Control Concept for an Experimental Bipedal Robot with Joint Torque Sensors. Journal of the Robotics Society of Japan, 2012, 30, 378-382.	0.1	14
184	Reactive Whole-Body Control: Dynamic Mobile Manipulation Using a Large Number of Actuated Degrees of Freedom. IEEE Robotics and Automation Magazine, 2012, 19, 20-33.	2.0	120
185	A Peer-to-Peer Trilateral Passivity Control for Delayed Collaborative Teleoperation. Lecture Notes in Computer Science, 2012, , 395-406.	1.3	9
186	The sigma.7 haptic interface for MiroSurge: A new bi-manual surgical console. , 2011, , .		73
187	Safe acting and manipulation in human environments: A key concept for robots in our society. , 2011, , .		4
188	Bipedal walking control based on Capture Point dynamics. , 2011, , .		110
189	Exploiting potential energy storage for cyclic manipulation: An analysis for elastic dribbling with an anthropomorphic robot. , 2011, , .		9
190	The DLR hand arm system. , 2011, , .		330
191	Anthropomorphic Soft Robotics – From Torque Control to Variable Intrinsic Compliance. Springer Tracts in Advanced Robotics, 2011, , 185-207.	0.4	34
192	Human-Like Adaptation of Force and Impedance in Stable and Unstable Interactions. IEEE Transactions on Robotics, 2011, 27, 918-930.	10.3	360
193	The sigma.7 haptic interface for MiroSurge: A new bi-manual surgical console. , 2011, , .		8
194	Static calibration of the DLR medical robot MIRO, a flexible lightweight robot with integrated torque sensors. , 2011, , .		1
195	Bipedal walking control based on Capture Point dynamics. , 2011, , .		133
196	Impedance control of a non-linearly coupled tendon driven thumb. , 2011, , .		3
197	Dynamic whole-body mobile manipulation with a torque controlled humanoid robot via impedance control laws. , 2011, , .		5
198	Dynamic Motion Planning for Robots in Partially Unknown Environments*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 6842-6850.	0.4	35

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199	Cartesian impedance control for a variable stiffness robot arm. , 2011, , .		8
200	Exploiting potential energy storage for cyclic manipulation: An analysis for elastic dribbling with an anthropomorphic robot. , 2011, , .		0
201	A human-centered approach to robot gesture based communication within collaborative working processes. , 2011, , .		2
202	Optimal Control for Maximizing Link Velocity of Robotic Variable Stiffness Joints. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 6863-6871.	0.4	41
203	Robot Companions for Citizens. Procedia Computer Science, 2011, 7, 47-51.	2.0	24
204	Study on Soft-Tissue Injury in Robotics. IEEE Robotics and Automation Magazine, 2011, 18, 20-34.	2.0	31
205	Exploiting elastic energy storage for cyclic manipulation: Modeling, stability, and observations for dribbling. , 2011, , .		5
206	A human-centered approach to robot gesture based communication within collaborative working processes. , 2011, , .		52
207	Dynamic whole-body mobile manipulation with a torque controlled humanoid robot via impedance control laws. , 2011, , .		48
208	Extensions to reactive self-collision avoidance for torque and position controlled humanoids. , 2011, , .		33
209	Cartesian impedance control for a variable stiffness robot arm. , 2011, , .		29
210	Static calibration of the DLR medical robot MIRO, a flexible lightweight robot with integrated torque sensors. , 2011, , .		6
211	Designing optimally safe robot surface properties for minimizing the stress characteristics of human-robot collisions. , 2011, , .		37
212	State feedback damping control for a multi DOF variable stiffness robot arm. , 2011, , .		59
213	Singularity avoidance for nonholonomic, omnidirectional wheeled mobile platforms with variable footprint. , 2011, , .		21
214	Impedance control of a non-linearly coupled tendon driven thumb. , 2011, , .		19
215	Modular state-based behavior control for safe human-robot interaction: A lightweight control architecture for a lightweight robot. , 2011, , .		27
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