Herman Bruyninckx

List of Publications by Year
in descending order

75 papers	2,230 citations	361413 20 h-index	265206 42 g-index
79 all docs	79 docs citations	79 times ranked	1884 citing authors

#	Article	IF	Citations
1	Kalman filters for non-linear systems: a comparison of performance. International Journal of Control, 2004, 77, 639-653.	1.9	264
2	Constraint-based Task Specification and Estimation for Sensor-Based Robot Systems in the Presence of Geometric Uncertainty. International Journal of Robotics Research, 2007, 26, 433-455.	8.5	218
3	Body of evidence supporting the clinical use of 3D multisegment foot models: A systematic review. Gait and Posture, 2011, 33, 338-349.	1.4	133
4	Upper limb kinematics: Development and reliability of a clinical protocol for children. Gait and Posture, 2011, 33, 279-285.	1.4	92
5	Review of quantitative measurements of upper limb movements in hemiplegic cerebral palsy. Gait and Posture, 2009, 30, 395-404.	1.4	89
6	Three-dimensional upper limb movement characteristics in children with hemiplegic cerebral palsy and typically developing children. Research in Developmental Disabilities, 2011, 32, 2283-2294.	2.2	86
7	The reliability of upper limb kinematics in children with hemiplegic cerebral palsy. Gait and Posture, 2011, 33, 568-575.	1.4	79
8	Active compliant motion: a survey. Advanced Robotics, 2005, 19, 479-499.	1.8	71
9	Contact-State Segmentation Using Particle Filters for Programming by Human Demonstration in Compliant-Motion Tasks. , 2007, 23, 218-231.		59
10	The Arm Profile Score: A new summary index to assess upper limb movement pathology. Gait and Posture, 2011, 34, 227-233.	1.4	56
11	Integrated Vision/Force Robotic Servoing in the Task Frame Formalism. International Journal of Robotics Research, 2003, 22, 941-954.	8.5	55
12	The reliability and validity of a clinical 3D freehand ultrasound system. Computer Methods and Programs in Biomedicine, 2016, 136, 179-187.	4.7	54
13	Extending iTaSC to support inequality constraints and non-instantaneous task specification. , 2009, , .		50
14	A hybrid pose / wrench control framework for quadrotor helicopters. , 2012, , .		47
15	Kinematic Models for Model-Based Compliant Motion in the Presence of Uncertainty. International Journal of Robotics Research, 1995, 14, 465-482.	8.5	44
16	Repeatability in the assessment of multi-segment foot kinematics. Gait and Posture, 2012, 35, 255-260.	1.4	44
17	Repeatability of a 3D multi-segment foot model protocol in presence of foot deformities. Gait and Posture, 2012, 36, 635-638.	1.4	36
18	Classification of Forefoot Plantar Pressure Distribution in Persons with Diabetes: A Novel Perspective for the Mechanical Management of Diabetic Foot?. PLoS ONE, 2013, 8, e79924.	2.5	36

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19	Probabilistic gait classification in children with cerebral palsy: A Bayesian approach. Research in Developmental Disabilities, 2011, 32, 2542-2552.	2.2	35
20	Reliability of a clinical 3D freehand ultrasound technique: Analyses on healthy and pathological muscles. Computer Methods and Programs in Biomedicine, 2018, 156, 97-103.	4.7	35
21	On the integration of skilled robot motions for productivity in manufacturing. , 2011, , .		32
22	iTASC: a tool for multi-sensor integration in robot manipulation. , 2008, , .		30
23	Identification of Contact Dynamics Parameters for Stiff Robotic Payloads. IEEE Transactions on Robotics, 2009, 25, 240-252.	10.3	29
24	Invariant Hybrid Force/Position Control of a Velocity Controlled Robot with Compliant End Effector Using Modal Decoupling. International Journal of Robotics Research, 1997, 16, 340-356.	8.5	28
25	Towards safe human-robot interaction in robotic cells: An approach based on visual tracking and intention estimation. , 2011, , .		27
26	Geometric Relations Between Rigid Bodies (Part 1): Semantics for Standardization. IEEE Robotics and Automation Magazine, 2013, 20, 84-93.	2.0	23
27	Forward kinematics for Hunt–Primrose parallel manipulators. Mechanism and Machine Theory, 1999, 34, 657-664.	4.5	22
28	Predicting the unexpected. Computers in Industry, 2011, 62, 623-637.	9.9	20
29	A scene graph based shared 3D world model for robotic applications. , 2013, , .		20
30	Towards safe human-robot interaction in robotic cells: An approach based on visual tracking and intention estimation. , 2011, , .		18
31	Integration of planning and execution in force controlled compliant motion. Robotics and Autonomous Systems, 2008, 56, 437-450.	5.1	17
32	Reusable hybrid force-velocity controlled motion specifications with executable Domain Specific Languages. , 2011, , .		17
33	Identification of Contact Parameters from Stiff Multi-point Contact Robotic Operations. International Journal of Robotics Research, 2010, 29, 367-385.	8.5	15
34	Children with Spastic Cerebral Palsy Experience Difficulties Adjusting Their Gait Pattern to Weight Added to the Waist, While Typically Developing Children Do Not. Frontiers in Human Neuroscience, 2016, 10, 657.	2.0	15
35	Model-Based Planar Contour Following in the Presence of Pose and Model Errors. International Journal of Robotics Research, 1997, 16, 840-858.	8.5	14
36	Extending the iTaSC Constraint-based Robot Task Specification Framework to Time-Independent Trajectories and User-Configurable Task Horizons. , 2013, , .		14

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37	Efficacy measures associated to a plantar pressure based classification system in diabetic foot medicine. Gait and Posture, 2016, 49, 168-175.	1.4	14
38	Rigorously Bayesian range finder sensor model for dynamic environments. , 2008, , .		13
39	Cloud based centralized task control for human domain multi-robot operations. Intelligent Service Robotics, 2016, 9, 63-77.	2.6	13
40	Can in Vivo Medial Gastrocnemius Muscle–Tendon Unit Lengths be Reliably Estimated by Two Ultrasonography Methods? A Within-Session Analysis. Ultrasound in Medicine and Biology, 2018, 44, 110-118.	1.5	13
41	Medial Gastrocnemius Muscle–Tendon Junction and Fascicle Lengthening across the Range of Motion Analyzed in 2-D and 3-D Ultrasound Images. Ultrasound in Medicine and Biology, 2018, 44, 2505-2518.	1.5	12
42	An innovative solution to reduce muscle deformation during ultrasonography data collection. Journal of Biomechanics, 2018, 77, 194-200.	2.1	12
43	Augmented Switching Linear Dynamical System Model for Gas Concentration Estimation with MOX Sensors in an Open Sampling System. Sensors, 2014, 14, 12533-12559.	3.8	11
44	Model Based Position-Force-Vision Sensor Fusion for Robot Compliant Motion Control. , 2006, , .		10
45	Composition of complex robot applications via data flow integration. , 2011, , .		10
46	A Novel Device for Standardizing Marker Placement at the Calcaneus. Journal of the American Podiatric Medical Association, 2014, 104, 43-49.	0.3	9
47	Action selection for touch-based localisation trading off information gain and execution time. , 2014, , .		8
48	Semi‐automatic methods for tracking the medial gastrocnemius muscle–tendon junction using ultrasound: a validation study. Experimental Physiology, 2020, 105, 120-131.	2.0	8
49	A color-code based method for the interpretation of plantar pressure measurements in clinical gait analysis. Gait and Posture, 2015, 41, 852-856.	1.4	7
50	Robot force control with an actively damped flexible end effector. Robotics and Autonomous Systems, 1996, 19, 205-214.	5.1	6
51	Efficient kinematics of a spherical 4R wrist by means of an equivalent 3R wrist. Mechanism and Machine Theory, 1998, 33, 649-659.	4.5	6
52	An open embedded hardware and software architecture applied to industrial robot control. , 2012, , .		6
53	Geometric Relations Between Rigid Bodies (Part 2): From Semantics to Software. IEEE Robotics and Automation Magazine, 2013, 20, 91-102.	2.0	6
54	Efficient image based method using water-filled balloons for improving probe spatial calibration in 3D freehand ultrasonography. Ultrasonics, 2019, 94, 124-130.	3.9	6

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55	Fabrication grammars: bridging design and robotics to control emergent material expressions. Construction Robotics, 2021, 5, 35-48.	2.2	6
56	Representing actions with Kernels. , 2011, , .		6
57	Particle Filters for Hybrid Event Sensor Fusion with 3D Vision and Force. , 2006, , .		5
58	Pattern description and reliability parameters of six force–time related indices measured with plantar pressure measurements. Gait and Posture, 2013, 38, 824-829.	1.4	5
59	Material Sketching. , 2019, , .		5
60	Query-based integration of heterogeneous knowledge bases for search and rescue tasks. Robotics and Autonomous Systems, 2019, 117, 80-91.	5.1	3
61	Application of a Generic Constraint-Based Programming Approach to an Industrially Relevant Robot Task with Geometric Uncertainties. , 2007, , .		2
62	Haptic coupling with augmented feedback between two KUKA Light-Weight Robots and the PR2 robot arms. , 2011, , .		2
63	Collision-Free Trajectory Planning With Deadlock Prevention: An Adaptive Virtual Target Approach. IEEE Access, 2020, 8, 115240-115250.	4.2	2
64	Behavior-based Task Learning by Demonstration on Mobile Manipulation. International Journal of Automation and Smart Technology, 2013, 3, 19-28.	0.4	2
65	Dynamic Semantic World Models and Increased Situational Awareness for Highly Automated Inland Waterway Transport. Frontiers in Robotics and AI, 2021, 8, 739062.	3.2	2
66	DOF-Decoupled Active Force Sensing (D-DAFS): A human-inspired approach to touch-based localisation tasks. , 2013, , .		1
67	Preview coordination: An enhanced execution model for online scheduling of mobile manipulation tasks. , 2013, , .		1
68	An open embedded industrial robot hardware and software architecture applied to position control and visual servoing application. International Journal of Mechatronics and Automation, 2014, 4, 63.	0.2	1
69	DOF Decoupling Task Graph Model: Reducing the Complexity of Touch-Based Active Sensing. Robotics, 2015, 4, 141-168.	3.5	1
70	A Novel Method of Quantifying Gait Deviations Using Plantar Pressure Patterns. Journal of the American Podiatric Medical Association, 2016, 106, 299-304.	0.3	1
71	Invariant-Based World Models for Robust Robotic Systems Demonstrated on an Autonomous Football Table. IEEE Robotics and Automation Letters, 2022, 7, 8542-8549.	5.1	1
72	An application of constraint-based task specification and estimation for sensor-based robot systems. , 2007, , .		0

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73	Constraint-Based Task Specification and Control for Visual Servoing Application Scenarios. Automatisierungstechnik, 2012, 60, 260-269.	0.8	0
74	Rigid body pose and twist scene graph founded on geometric relations semantics for robotic applications. , 2013, , .		0
75	Exploiting plant dynamics in robotic fruit localization. Computers and Electronics in Agriculture, 2022, 196, 106860.	7.7	0