

# Helder Araujo

## List of Publications by Year in descending order

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Version: 2024-02-01

113  
papers

1,923  
citations

411340

20  
h-index

355658

38  
g-index

116  
all docs

116  
docs citations

116  
times ranked

2049  
citing authors

#	ARTICLE	IF	CITATIONS
1	Gripper positioning for object deformation tasks. , 2022, , .		1
2	3D Reconstruction of Deformable Objects from RGB-D Cameras: An Omnidirectional Inward-facing Multi-camera System. , 2021, , .		1
3	FAWOS: Fairness-Aware Oversampling Algorithm Based on Distributions of Sensitive Attributes. IEEE Access, 2021, 9, 81370-81379.	2.6	8
4	Intel RealSense SR305, D415 and L515: Experimental Evaluation and Comparison of Depth Estimation. , 2021, , .		11
5	Registration of Consecutive Frames From Wireless Capsule Endoscopy for 3D Motion Estimation. IEEE Access, 2021, 9, 119533-119545.	2.6	4
6	EndoSLAM dataset and an unsupervised monocular visual odometry and depth estimation approach for endoscopic videos. Medical Image Analysis, 2021, 71, 102058.	7.0	84
7	SL3D - Single Look 3D Object Detection based on RGB-D Images. , 2020, , .		0
8	Learning to Navigate Endoscopic Capsule Robots. IEEE Robotics and Automation Letters, 2019, 4, 3075-3082.	3.3	16
9	Dynamic Obstacle Detection in Traffic Environments. , 2019, , .		1
10	A robust and efficient framework for fast cylinder detection. Robotics and Autonomous Systems, 2019, 117, 17-28.	3.0	15
11	Denial of Service Attacks: Detecting the Frailties of Machine Learning Algorithms in the Classification Process. Lecture Notes in Computer Science, 2019, , 230-235.	1.0	16
12	Sparse-then-dense alignment-based 3D map reconstruction method for endoscopic capsule robots. Machine Vision and Applications, 2018, 29, 345-359.	1.7	20
13	Robustified Structure from Motion with rolling-shutter camera using straightness constraint. Pattern Recognition Letters, 2018, 111, 1-8.	2.6	8
14	On the advantages of foveal mechanisms for active stereo systems in visual search tasks. Autonomous Robots, 2018, 42, 459-476.	3.2	7
15	Deep EndoVO: A recurrent convolutional neural network (RCNN) based visual odometry approach for endoscopic capsule robots. Neurocomputing, 2018, 275, 1861-1870.	3.5	88
16	Magnetic- Visual Sensor Fusion-based Dense 3D Reconstruction and Localization for Endoscopic Capsule Robots. , 2018, , .		9
17	Biologically inspired computational modeling of motion based on middle temporal area. Paladyn, 2018, 9, 60-71.	1.9	1
18	Cross-Validation for Imbalanced Datasets: Avoiding Overoptimistic and Overfitting Approaches [Research Frontier]. IEEE Computational Intelligence Magazine, 2018, 13, 59-76.	3.4	246

#	ARTICLE	IF	CITATIONS
19	EndoSensorFusion: Particle Filtering-Based Multi-Sensory Data Fusion with Switching State-Space Model for Endoscopic Capsule Robots. , 2018, , .		8
20	Exploring the Effects of Data Distribution in Missing Data Imputation. Lecture Notes in Computer Science, 2018, , 251-263.	1.0	5
21	Crack propagation monitoring using an image deformation approach. Structural Control and Health Monitoring, 2017, 24, e1973.	1.9	22
22	3D Estimation of Extensible Surfaces Through a Local Monocular Reconstruction Technique. Lecture Notes in Computer Science, 2017, , 114-123.	1.0	0
23	Patch-based reconstruction of surfaces undergoing different types of deformations. Signal, Image and Video Processing, 2017, 11, 1229-1236.	1.7	0
24	A non-rigid map fusion-based direct SLAM method for endoscopic capsule robots. International Journal of Intelligent Robotics and Applications, 2017, 1, 399-409.	1.6	54
25	A deep learning based fusion of RGB camera information and magnetic localization information for endoscopic capsule robots. International Journal of Intelligent Robotics and Applications, 2017, 1, 442-450.	1.6	25
26	Shape-based attention for identification and localization of cylindrical objects. , 2017, , .		3
27	Influence of Data Distribution in Missing Data Imputation. Lecture Notes in Computer Science, 2017, , 285-294.	1.0	19
28	Efficient Resource Allocation for Sparse Multiple Object Tracking. , 2017, , .		2
29	SDP-based approach to monocular reconstruction of inextensible surfaces. IET Computer Vision, 2017, 11, 43-49.	1.3	1
30	From D-RGB-based reconstruction toward a mesh deformation model for monocular reconstruction of isometric surfaces. Eurasip Journal on Image and Video Processing, 2016, 2016, .	1.7	1
31	Estimation of mirror shape and extrinsic parameters in axial non-central catadioptric systems. Image and Vision Computing, 2016, 54, 45-59.	2.7	3
32	3D Reconstruction with Low Resolution, Small Baseline and High Radial Distortion Stereo Images. , 2016, , .		1
33	Plücker correction problem: Analysis and improvements in efficiency. , 2016, , .		0
34	Multi-modal Sensors Path Merging. Advances in Intelligent Systems and Computing, 2016, , 191-201.	0.5	1
35	Neural correlates of different self domains. Brain and Behavior, 2015, 5, e00409.	1.0	48
36	Pose Estimation for General Cameras Using Lines. IEEE Transactions on Cybernetics, 2015, 45, 2156-2164.	6.2	24

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37	Direct Solution to the Minimal Generalized Pose. IEEE Transactions on Cybernetics, 2015, 45, 404-415.	6.2	7
38	Generalized essential matrix: Properties of the singular value decomposition. Image and Vision Computing, 2015, 34, 45-50.	2.7	8
39	Pose Estimation for Non-Central Cameras Using Planes. Journal of Intelligent and Robotic Systems: Theory and Applications, 2015, 80, 595-608.	2.0	2
40	Investigating new calibration methods without feature detection for TOF cameras. Image and Vision Computing, 2015, 43, 50-62.	2.7	8
41	A simple and robust solution to the minimal general pose estimation. , 2014, , .		7
42	Automatic concrete health monitoring: assessment and monitoring of concrete surfaces. Structure and Infrastructure Engineering, 2014, 10, 1547-1554.	2.0	31
43	Planar pose estimation for general cameras using known 3D lines. , 2014, , .		10
44	Pose estimation for non-central cameras using planes. , 2014, , .		4
45	Visual servoing of mobile robots using non-central catadioptric cameras. Robotics and Autonomous Systems, 2014, 62, 1613-1622.	3.0	18
46	Efficient Iterative Pose Estimation Using an Invariant to Rotations. IEEE Transactions on Cybernetics, 2014, 44, 199-207.	6.2	15
47	Involvement of cortical midline structures in the processing of autobiographical information. PeerJ, 2014, 2, e481.	0.9	13
48	3D Estimation of Isometric Surfaces Using a ToF-Based Approach. Lecture Notes in Computer Science, 2014, , 129-140.	1.0	1
49	Robust image-based visual servoing using invariant visual information. Robotics and Autonomous Systems, 2013, 61, 1588-1600.	3.0	25
50	Calibration of mirror position and extrinsic parameters in axial non-central catadioptric systems. Computer Vision and Image Understanding, 2013, 117, 909-921.	3.0	19
51	Automatic crack monitoring using photogrammetry and image processing. Measurement: Journal of the International Measurement Confederation, 2013, 46, 433-441.	2.5	83
52	Image-based servoing of non-holonomic vehicles using non-central catadioptric cameras. , 2013, , .		2
53	Calibration of Smooth Camera Models. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2013, 35, 2091-2103.	9.7	38
54	Efficient decoupled pose estimation from a set of points. , 2013, , .		1

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55	Stereoscopic Depth Perception Using a Model Based on the Primary Visual Cortex. PLoS ONE, 2013, 8, e80745.	1.1	10
56	Cortical Midline Structures and Autobiographical-Self Processes: An Activation-Likelihood Estimation Meta-Analysis. Frontiers in Human Neuroscience, 2013, 7, 548.	1.0	84
57	Non-central catadioptric cameras visual servoing for mobile robots using a radial camera model. , 2012, , .		4
58	Link quality estimation in wireless multi-hop networks using Kernel based methods. Computer Networks, 2012, 56, 3629-3638.	3.2	9
59	Applications of Photogrammetry to Structural Assessment. Experimental Techniques, 2012, 36, 71-81.	0.9	51
60	Point-based calibration using a parametric representation of the general imaging model. , 2011, , .		11
61	Active Stereo Tracking of $N \times 3$ Targets Using Line Scan Cameras. IEEE Transactions on Robotics, 2010, 26, 442-457.	7.3	15
62	Visual Servoing and Pose Estimation with Cameras Obeying the Unified Model. Lecture Notes in Control and Information Sciences, 2010, , 231-250.	0.6	10
63	Bio-inspired Binocular Disparity with Position-Shift Receptive Field. IFIP Advances in Information and Communication Technology, 2010, , 351-358.	0.5	1
64	Estimating parameters of noncentral catadioptric systems using bundle adjustment. Computer Vision and Image Understanding, 2009, 113, 11-28.	3.0	14
65	Active stereo tracking of multiple free-moving targets. , 2009, , .		3
66	Active stereo tracking of multiple free-moving targets. , 2009, , .		0
67	Computer Vision and Computer Graphics. Theory and Applications. Communications in Computer and Information Science, 2008, , .	0.4	1
68	The Experimental Robotics Framework. Lecture Notes in Computer Science, 2008, , 207-221.	1.0	0
69	Calibration and Pose Estimation of a Pox-slits Camera from a Single Image. Lecture Notes in Computer Science, 2008, , 460-469.	1.0	0
70	Linear solution for the pose estimation of noncentral catadioptric systems. , 2007, , .		2
71	Low-cost method for the estimation of the shape of quadric mirrors and calibration of catadioptric cameras. Optical Engineering, 2007, 46, 073001.	0.5	7
72	Fitting conics to paracatadioptric projections of lines. Computer Vision and Image Understanding, 2006, 101, 151-165.	3.0	30

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73	A Stereovision Method for Obstacle Detection and Tracking in Non-Flat Urban Environments. Autonomous Robots, 2005, 19, 141-157.	3.2	31
74	Geometric properties of central catadioptric line images and their application in calibration. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2005, 27, 1327-1333.	9.7	139
75	A Calibration Algorithm for POX-Slits Camera. Lecture Notes in Computer Science, 2005, , 168-175.	1.0	0
76	A General Framework for the Selection of World Coordinate Systems in Perspective and Catadioptric Imaging Applications. International Journal of Computer Vision, 2004, 57, 23-47.	10.9	8
77	Rigid motion estimation from non-central catadioptric images. , 2004, , .		0
78	A review on egomotion by means of differential epipolar geometry applied to the movement of a mobile robot. Pattern Recognition, 2003, 36, 2927-2944.	5.1	30
79	Analysis and comparison of two methods for the estimation of 3D motion parameters. Robotics and Autonomous Systems, 2003, 45, 23-49.	3.0	1
80	Mirror shape recovery from image curves and intrinsic parameters: Rotationally symmetric and conic mirrors. , 2003, , .		1
81	Direct Least Square Fitting of Paracatadioptric Line Images. , 2003, , .		21
82	Paracatadioptric camera calibration using lines. , 2003, , .		28
83	Geometric Properties of Central Catadioptric Line Images. Lecture Notes in Computer Science, 2002, , 237-251.	1.0	47
84	Maintaining the relative positions and orientations of multiple robots using vision. Pattern Recognition Letters, 2001, 22, 1331-1335.	2.6	7
85	Real-time human activity monitoring exploring multiple vision sensors. Robotics and Autonomous Systems, 2001, 35, 221-228.	3.0	5
86	Intelligent Robotic Systems " SIRS"™99. Robotics and Autonomous Systems, 2001, 35, 127-130.	3.0	0
87	Combination of several vision sensors for interpretation of human actions. Lecture Notes in Control and Information Sciences, 2000, , 519-528.	0.6	2
88	Integration of information from several vision systems for a common task of surveillance. Robotics and Autonomous Systems, 2000, 31, 99-108.	3.0	6
89	An automatic system for dirt in pulp inspection using hierarchical image segmentation. Computers and Industrial Engineering, 1999, 37, 343-346.	3.4	7
90	An automatic optical sensor for vessels and fibbers quality inspection in pulp production. Computers and Industrial Engineering, 1999, 37, 355-358.	3.4	4

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91	Iterative multistep explicit camera calibration. IEEE Transactions on Automation Science and Engineering, 1999, 15, 897-917.	2.4	21
92	A Fully Projective Formulation to Improve the Accuracy of Lowe's Pose-Estimation Algorithm. Computer Vision and Image Understanding, 1998, 70, 227-238.	3.0	64
93	Simulating pursuit with machine experiments with robots and artificial vision. IEEE Transactions on Automation Science and Engineering, 1998, 14, 1-18.	2.4	44
94	<title>Grid-based framework for sensorial data integration in mobile robots</title>. , 1997, 3209, 169.		1
95	Visual Behaviors for Real-Time Control of a Binocular Active Vision System. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 167-172.	0.4	0
96	Visual behaviors for real-time control of a binocular active vision system. Control Engineering Practice, 1997, 5, 1451-1461.	3.2	6
97	Optical Normal Flow Estimation on Log-polar Images. A Solution for Real-Time Binocular Vision. Real Time Imaging, 1997, 3, 213-228.	1.6	14
98	<title>Study of transparency and coherence of motion in image sequences</title>. , 1994, 2179, 28.		0
99	The interaction of luminance, velocity, and shape information in the perception of motion transparency, coherence, and non-rigid motion. Spatial Vision, 1993, 7, 149-182.	1.4	5
100	<title>Depth perception by controlling focus</title>. , 1992, , .		2
101	Real-time visual behaviors with a binocular active vision system. , 0, , .		1
102	Iterative multi-step explicit camera calibration. , 0, , .		15
103	A surveillance system combining peripheral and foveated motion tracking. , 0, , .		5
104	Control performance issues in a binocular active vision system. , 0, , .		6
105	Tracking multiple objects in 3D. , 0, , .		2
106	A surveillance system integrating visual telepresence. , 0, , .		0
107	Model predictive control to improve visual control of motion: applications in active tracking of moving targets. , 0, , .		11
108	Issues on the geometry of central catadioptric image formation. , 0, , .		78

#	ARTICLE	IF	CITATIONS
109	Differential epipolar constraint in mobile robot egomotion estimation. , 0, , .		4
110	Pose estimation for central catadioptric systems: an analytical approach. , 0, , .		5
111	Estimation of 3d motion from stereo images - differential and discrete formulations. , 0, , .		1
112	Projection model, 3D reconstruction and rigid motion estimation from non-central catadioptric images. , 0, , .		2
113	Binocular tracking and accommodation controlled by retinal motion flow. , 0, , .		1