

Antonis A Argyros

List of Publications by Year in descending order

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169
papers

4,715
citations

279487

23
h-index

223531

46
g-index

171
all docs

171
docs citations

171
times ranked

3389
citing authors

#	ARTICLE	IF	CITATIONS
1	SBA. ACM Transactions on Mathematical Software, 2009, 36, 1-30.	1.6	588
2	Efficient model-based 3D tracking of hand articulations using Kinect. , 2011, , .		588
3	Hobbit, a care robot supporting independent living at home: First prototype and lessons learned. Robotics and Autonomous Systems, 2016, 75, 60-78.	3.0	239
4	Full DOF tracking of a hand interacting with an object by modeling occlusions and physical constraints. , 2011, , .		199
5	Tracking the articulated motion of two strongly interacting hands. , 2012, , .		163
6	Depth-Based 3D Hand Pose Estimation: From Current Achievements to Future Goals. , 2018, , .		144
7	Is Levenberg-Marquardt the most efficient optimization algorithm for implementing bundle adjustment?. , 2005, , .		143
8	Using a Single RGB Frame for Real Time 3D Hand Pose Estimation in the Wild. , 2018, , .		137
9	Real-Time Tracking of Multiple Skin-Colored Objects with a Possibly Moving Camera. Lecture Notes in Computer Science, 2004, , 368-379.	1.0	131
10	Robot Homing by Exploiting Panoramic Vision. Autonomous Robots, 2005, 19, 7-25.	3.2	89
11	Vision-Based Interpretation of Hand Gestures for Remote Control of a Computer Mouse. Lecture Notes in Computer Science, 2006, , 40-51.	1.0	89
12	A Review on Deep Learning Techniques for Video Prediction. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 2806-2826.	9.7	88
13	Vision-Based Hand Gesture Recognition for Human-Computer Interaction. Human Factors and Ergonomics, 2009, , 1-30.	0.0	74
14	Scalable 3D Tracking of Multiple Interacting Objects. , 2014, , .		68
15	Head pose estimation on depth data based on Particle Swarm Optimization. , 2012, , .		62
16	Markerless and Efficient 26-DOF Hand Pose Recovery. Lecture Notes in Computer Science, 2011, , 744-757.	1.0	60
17	Fusion of laser and visual data for robot motion planning and collision avoidance. Machine Vision and Applications, 2003, 15, 92-100.	1.7	59
18	Navigation assistance and guidance of older adults across complex public spaces: the DALi Approach. Intelligent Service Robotics, 2015, 8, 77-92.	1.6	58

#	ARTICLE	IF	CITATIONS
19	Multiple objects tracking in the presence of long-term occlusions. Computer Vision and Image Understanding, 2010, 114, 835-846.	3.0	52
20	Tourbot and webfair web-operated mobile robots for tele-presence in populated exhibitions. IEEE Robotics and Automation Magazine, 2005, 12, 77-89.	2.2	50
21	Hand-Object Contact Force Estimation from Markerless Visual Tracking. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2018, 40, 2883-2896.	9.7	45
22	Physically Plausible 3D Scene Tracking: The Single Actor Hypothesis. , 2013, , .		44
23	Biomimetic centering behavior. IEEE Robotics and Automation Magazine, 2004, 11, 21-68.	2.2	42
24	Back to RGB: 3D Tracking of Hands and Hand-Object Interactions Based on Short-Baseline Stereo. , 2017, , .		39
25	ChaLearn multi-modal gesture recognition 2013. , 2013, , .		38
26	Semi-autonomous Navigation of a Robotic Wheelchair. Journal of Intelligent and Robotic Systems: Theory and Applications, 2002, 34, 315-329.	2.0	37
27	Angle-based methods for mobile robot navigation: reaching the entire plane. , 2004, , .		35
28	Evolutionary Quasi-Random Search for Hand Articulations Tracking. , 2014, , .		35
29	Predicting human intention in visual observations of hand/object interactions. , 2013, , .		34
30	Parameter-free modelling of 2D shapes with ellipses. Pattern Recognition, 2016, 53, 259-275.	5.1	34
31	Hobbit: Providing Fall Detection and Prevention for the Elderly in the Real World. Journal of Robotics, 2018, 2018, 1-20.	0.6	33
32	Region-based Fitting of Overlapping Ellipses and its application to cells segmentation. Image and Vision Computing, 2020, 93, 103810.	2.7	31
33	Scale invariant and deformation tolerant partial shape matching. Image and Vision Computing, 2011, 29, 459-469.	2.7	30
34	Retinal image registration under the assumption of a spherical eye. Computerized Medical Imaging and Graphics, 2017, 55, 95-105.	3.5	30
35	Results of Field Trials with a Mobile Service Robot for Older Adults in 16 Private Households. ACM Transactions on Human-Robot Interaction, 2020, 9, 1-27.	3.2	30
36	Detecting Planes In An Uncalibrated Image Pair. , 2002, , .		30

#	ARTICLE	IF	CITATIONS
37	Robot homing based on corner tracking in a sequence of panoramic images. , 0, , .		27
38	3D Tracking of Human Hands in Interaction with Unknown Objects. , 2015, , .		27
39	Efficient, causal camera tracking in unprepared environments. Computer Vision and Image Understanding, 2005, 99, 259-290.	3.0	26
40	Joint 3D Tracking of a Deformable Object in Interaction with a Hand. Lecture Notes in Computer Science, 2018, , 504-520.	1.0	26
41	Fast positioning of limited-visibility guards for the inspection of 2D workspaces. , 0, , .		24
42	Binocular Hand Tracking and Reconstruction Based on 2D Shape Matching. , 2006, , .		24
43	Hierarchical particle filtering for 3D hand tracking. , 2015, , .		22
44	A graph-based approach for detecting common actions in motion capture data and videos. Pattern Recognition, 2018, 79, 1-11.	5.1	22
45	Tracking the articulated motion of the human body with two RGBD cameras. Machine Vision and Applications, 2015, 26, 41-54.	1.7	21
46	Lumen detection for capsule endoscopy. , 2008, , .		20
47	Integrating tracking with fine object segmentation. Image and Vision Computing, 2013, 31, 771-785.	2.7	20
48	Markerless 3D Human Pose Estimation and Tracking based on RGBD Cameras. , 2017, , .		20
49	FaceGuard: A Wearable System To Avoid Face Touching. Frontiers in Robotics and AI, 2021, 8, 612392.	2.0	20
50	Tracking of Human Hands and Faces through Probabilistic Fusion of Multiple Visual Cues. , 2008, , 33-42.		20
51	Multicamera human detection and tracking supporting natural interaction with large-scale displays. Machine Vision and Applications, 2013, 24, 319-336.	1.7	19
52	Retinal image registration through simultaneous camera pose and eye shape estimation. , 2016, 2016, 3247-3251.		19
53	Retinal image registration based on keypoint correspondences, spherical eye modeling and camera pose estimation. , 2015, 2015, 5650-4.		18
54	REMPE: Registration of Retinal Images Through Eye Modelling and Pose Estimation. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 3362-3373.	3.9	18

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55	Unsupervised Detection of Periodic Segments in Videos. , 2018, , .		17
56	Model-based 3D Hand Tracking with on-line Shape Adaptation. , 2015, , .		17
57	Independent 3D motion detection using residual parallax normal flow fields. , 0, , .		16
58	An experimental evaluation of the accuracy of keypoints-based retinal image registration. , 2017, 2017, 377-381.		16
59	Temporal Action Co-Segmentation in 3D Motion Capture Data and Videos. , 2017, , .		16
60	Qualitative detection of 3D motion discontinuities. , 0, , .		15
61	Feature transfer and matching in disparate stereo views through the use of plane homographies. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2003, 25, 271-276.	9.7	15
62	3D head pose estimation from multiple distant views. , 2009, , .		15
63	Hybrid One-Shot 3D Hand Pose Estimation by Exploiting Uncertainties. , 2015, , .		15
64	Independent 3D motion detection based on depth elimination in normal flow fields. , 0, , .		14
65	Combining central and peripheral vision for reactive robot navigation. , 0, , .		14
66	Tele-Presence in Populated Exhibitions Through Web-Operated Mobile Robots. Autonomous Robots, 2003, 15, 299-316.	3.2	13
67	Cell Segmentation Via Region-Based Ellipse Fitting. , 2018, , .		13
68	Accurate Hand Keypoint Localization on Mobile Devices. , 2019, , .		13
69	PaperView. , 2010, , .		12
70	Using geometric constraints for matching disparate stereo views of 3D scenes containing planes. , 0, , .		11
71	Three-dimensional tracking of multiple skin-colored regions by a moving stereoscopic system. Applied Optics, 2004, 43, 366.	2.1	11
72	Towards force sensing from vision: Observing hand-object interactions to infer manipulation forces. , 2015, , .		11

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73	3D Hand Tracking in the Presence of Excessive Motion Blur. IEEE Transactions on Visualization and Computer Graphics, 2020, 26, 1891-1901.	2.9	11
74	Propagation of Pixel Hypotheses for Multiple Objects Tracking. Lecture Notes in Computer Science, 2009, , 140-149.	1.0	11
75	Design and Development of Four Prototype Interactive Edutainment Exhibits for Museums. Lecture Notes in Computer Science, 2011, , 173-182.	1.0	11
76	Navigational support for robotic wheelchair platforms: an approach that combines vision and range sensors. , 0, , .		10
77	Experiences from the use of a robotic avatar in a museum setting. , 2001, , .		10
78	Tracking Deformable Surfaces That Undergo Topological Changes Using an RGB-D Camera. , 2016, , .		10
79	Occlusion-tolerant and personalized 3D human pose estimation in RGB images. , 2021, , .		10
80	Gesture Recognition Supporting the Interaction of Humans with Socially Assistive Robots. Lecture Notes in Computer Science, 2014, , 793-804.	1.0	10
81	Independent 3D Motion Detection through Robust Regression in Depth Layers. , 1996, , .		10
82	Generative 3D Hand Tracking with Spatially Constrained Pose Sampling. , 2017, , .		10
83	Fusion of range and visual data for the extraction of scene structure information. , 0, , .		9
84	Efficient Scale and Rotation Invariant Object Detection Based on HOGs and Evolutionary Optimization Techniques. Lecture Notes in Computer Science, 2012, , 220-229.	1.0	9
85	Multimodal Narratives for the Presentation of Silk Heritage in the Museum. Heritage, 2022, 5, 461-488.	0.9	9
86	Dynamic time warping for binocular hand tracking and reconstruction. , 2008, , .		8
87	Language for learning complex human-object interactions. , 2013, , .		8
88	Exploiting Panoramic Vision for Bearing-Only Robot Homing. , 2006, , 229-251.		8
89	The MuseLearn Platform: Personalized Content for Museum Visitors Assisted by Vision-Based Recognition and 3D Pose Estimation of Exhibits. IFIP Advances in Information and Communication Technology, 2020, , 439-451.	0.5	8
90	Vision-Based SLAM and Moving Objects Tracking for the Perceptual Support of a Smart Walker Platform. Lecture Notes in Computer Science, 2015, , 407-423.	1.0	8

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91	Object Tracking and Segmentation in a Closed Loop. Lecture Notes in Computer Science, 2010, , 405-416.	1.0	8
92	Fast trifocal tensor estimation using virtual parallax. , 2005, , .		7
93	Integrated vision system for the semantic interpretation of activities where a person handles objects. Computer Vision and Image Understanding, 2009, 113, 682-692.	3.0	7
94	Unsupervised learning of background modeling parameters in multicamera systems. Computer Vision and Image Understanding, 2011, 115, 105-116.	3.0	7
95	A Prototypical Interactive Exhibition for the Archaeological Museum of Thessaloniki. International Journal of Heritage in the Digital Era, 2013, 2, 75-99.	0.5	7
96	Retinal image preprocessing, enhancement, and registration. , 2019, , 59-77.		7
97	Improving Deep Learning Approaches for Human Activity Recognition based on Natural Language Processing of Action Labels. , 2020, , .		7
98	Binding Computer Vision to Physics Based Simulation: The Case Study of a Bouncing Ball. , 2011, , .		7
99	Macedonia from Fragments to Pixels: A Permanent Exhibition of Interactive Systems at the Archaeological Museum of Thessaloniki. Lecture Notes in Computer Science, 2012, , 602-609.	1.0	7
100	Vision-based camera motion recovery for augmented reality. , 0, , .		6
101	A graph-based approach to corner matching using mutual information as a local similarity measure. , 2004, , .		6
102	Tracking Multiple Colored Blobs with a Moving Camera. , 0, , .		6
103	Horizon matching for localizing unordered panoramic images. Computer Vision and Image Understanding, 2010, 114, 274-285.	3.0	6
104	Developing visual competencies for socially assistive robots. , 2013, , .		6
105	Shape from interaction. Machine Vision and Applications, 2014, 25, 1077-1087.	1.7	6
106	Patch-Based Reconstruction of a Textureless Deformable 3D Surface from a Single RGB Image. , 2019, , .		6
107	Beat Synchronous Dance Animation Based on Visual Analysis of Human Motion and Audio Analysis of Music Tempo. Lecture Notes in Computer Science, 2013, , 118-127.	1.0	6
108	Museum Guidance in Sign Language: the SignGuide project. , 2022, , .		6

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109	Robust Regression for the Detection of Independent 3D Motion by a Binocular Observer. Real Time Imaging, 1998, 4, 125-141.	1.6	5
110	Tracking Hand Articulations: Relying on 3D Visual Hulls Versus Relying on Multiple 2D Cues. , 2013, , .		5
111	Multicamera tracking of multiple humans based on colored visual hulls. , 2013, , .		5
112	Single-shot 3D hand pose estimation using radial basis function networks trained on synthetic data. Pattern Analysis and Applications, 2020, 23, 415-428.	3.1	5
113	Faster and Simpler SNN Simulation with Work Queues. , 2020, , .		5
114	Towards Improved and Interpretable Action Quality Assessment with Self-Supervised Alignment. , 2021, , .		5
115	Adaptive heterogeneous multi-robot collaboration from formal task specifications. Robotics and Autonomous Systems, 2021, 145, 103866.	3.0	5
116	A Generative Approach to Tracking Hands and Their Interaction with Objects. Advances in Intelligent Systems and Computing, 2016, , 19-28.	0.5	5
117	Shading models for illumination and reflectance invariant shape detectors. , 2008, , .		4
118	Efficient 3D Hand Tracking in Articulation Subspaces for the Manipulation of Virtual Objects. , 2016, , .		4
119	Efficient Cooperation of Heterogeneous Robotic Agents: A Decentralized Framework. IEEE Robotics and Automation Magazine, 2021, 28, 74-87.	2.2	4
120	A Platform for Monitoring Aspects of Human Presence in Real-Time. Lecture Notes in Computer Science, 2010, , 584-595.	1.0	4
121	Dimensionality Reduction for Efficient Single Frame Hand Pose Estimation. Lecture Notes in Computer Science, 2013, , 143-152.	1.0	4
122	From Multiple Views to Textured 3D Meshes: A GPU-Powered Approach. Lecture Notes in Computer Science, 2012, , 384-397.	1.0	4
123	Segregational Soft Dynamic Time Warping and Its Application to Action Prediction. , 2022, , .		4
124	Improved Design for Vision-Based Incident Detection in Transportation Systems Using Real-Time View Transformations. Journal of Transportation Engineering, 2006, 132, 837-844.	0.9	3
125	A Hybrid Method for 3D Pose Estimation of Personalized Human Body Models. , 2018, , .		3
126	Robust 3D Human Pose Estimation Guided by Filtered Subsets of Body Keypoints. , 2019, , .		3

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127	Retinal image registration as a tool for supporting clinical applications. Computer Methods and Programs in Biomedicine, 2021, 199, 105900.	2.6	3
128	Toward Augmented Reality in Museums: Evaluation of Design Choices for 3D Object Pose Estimation. Frontiers in Virtual Reality, 2021, 2, .	2.5	3
129	Deformable 2D Shape Matching Based on Shape Contexts and Dynamic Programming. Lecture Notes in Computer Science, 2009, , 460-469.	1.0	3
130	A Robot-based Application for Physical Exercise Training. , 2016, , .		3
131	Image-based personal communication using an innovative space-variant CMOS sensor. , 0, , .		2
132	Camera Matchmoving in Unprepared, Unknown Environments. , 0, , .		2
133	Learning temporal structure for task based control. Image and Vision Computing, 2008, 26, 39-52.	2.7	2
134	Filling the Joints: Completion and Recovery of Incomplete 3D Human Poses. Technologies, 2018, 6, 97.	3.0	2
135	A Comparative Study of Matrix Completion and Recovery Techniques for Human Pose Estimation. , 2018, , .		2
136	Multi-GPU SNN Simulation with Static Load Balancing. , 2021, , .		2
137	Action Prediction During Human-Object Interaction Based on DTW and Early Fusion of Human and Object Representations. Lecture Notes in Computer Science, 2021, , 169-179.	1.0	2
138	Foreground Detection with a Moving RGBD Camera. Lecture Notes in Computer Science, 2013, , 216-227.	1.0	2
139	A HIMI model for collaborative multi-touch multimedia education. , 2009, , .		2
140	Evaluating Method Design Options for Action Classification based on Bags of Visual Words. , 2018, , .		2
141	Localizing Periodicity in Time Series and Videos. , 2016, , .		2
142	Vision Based Horizon Detection for UAV Navigation. Mechanisms and Machine Science, 2019, , 181-189.	0.3	2
143	Chaining Planar Homographies for Fast and Reliable 3D Plane Tracking. , 2006, , .		1
144	Localizing Unordered Panoramic Images Using the Levenshtein Distance. , 2007, , .		1

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145	Visual homing for undulatory robotic locomotion. , 2009, , .		1
146	A Framework for Online Segmentation and Classification of Modeled Actions Performed in the Context of Unmodeled Ones. IEEE Transactions on Circuits and Systems for Video Technology, 2017, 27, 2578-2590.	5.6	1
147	Distributed Real-Time Generative 3D Hand Tracking using Edge GPGPU Acceleration. , 2018, , .		1
148	The HealthSign Project. , 2018, , .		1
149	Extracting Action Hierarchies from Action Labels and their Use in Deep Action Recognition. , 2021, , .		1
150	H-GAN: the power of GANs in your Hands. , 2021, , .		1
151	Robust and efficient event detection for the monitoring of automated processes. , 2006, , .		1
152	Boosting the Performance of Model-based 3D Tracking by Employing Low Level Motion Cues. , 2015, , .		1
153	Towards the Automatic Definition of the Objective Function for Model-Based 3D Hand Tracking. Advances in Intelligent Systems and Computing, 2016, , 353-363.	0.5	1
154	Even Faster SNN Simulation with Lazy+Event-driven Plasticity and Shared Atomics. , 2021, , .		1
155	Towards a visual Sign Language dataset for home care services. , 2020, , .		1
156	Exploiting the Nature of Repetitive Actions for Their Effective and Efficient Recognition. Frontiers in Computer Science, 2022, 4, .	1.7	1
157	Temporal Segmentation and Seamless Stitching of Motion Patterns for Synthesizing Novel Animations of Periodic Dances. , 2014, , .		0
158	HANDS18: Methods, Techniques and Applications for Hand Observation. Lecture Notes in Computer Science, 2019, , 302-312.	1.0	0
159	Learning to Infer the Depth Map of a Hand from its Color Image. , 2020, , .		0
160	INTRODUCTION TO THE SPECIAL THEME. Information Technology and Tourism, 2005, 7, 181-182.	3.4	0
161	Segmentation and classification of modeled actions in the context of unmodeled ones. , 2014, , .		0
162	Scalable and Efficient Big Data Analytics - The LeanBigData Approach. , 2016, , .		0

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163	Synergy-Driven Performance Enhancement of Vision-Based 3D Hand Pose Reconstruction. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2017, , 328-336.	0.2	0
164	3D Hand Tracking by Employing Probabilistic Principal Component Analysis to Model Action Priors. Lecture Notes in Computer Science, 2019, , 531-541.	1.0	0
165	A Two-Stage Approach for Commonality-Based Temporal Localization of Periodic Motions. Lecture Notes in Computer Science, 2019, , 366-375.	1.0	0
166	Novelty Detection for Person Re-identification in an Open World. , 2019, , .		0
167	Unsupervised Domain Adaptation for Person Re-Identification with Few and Unlabeled Target Data. Lecture Notes in Computer Science, 2020, , 357-373.	1.0	0
168	Detecting Object States vs Detecting Objects: A New Dataset and a Quantitative Experimental Study. , 2022, , .		0
169	Exploitation of Noisy Automatic Data Annotation and Its Application to Hand Posture Classification. , 2022, , .		0