Babak Taati

List of Publications by Year
in descending order

77 papers	1,763 citations	361413 20 h-index	377865 34 g-index
85 all docs	85 docs citations	85 times ranked	1941 citing authors

#	Article	IF	Citations
1	Difference of Normals as a Multi-scale Operator in Unorganized Point Clouds. , 2012, , .		99
2	Autonomous Unobtrusive Detection of Mild Cognitive Impairment in Older Adults. IEEE Transactions on Biomedical Engineering, 2015, 62, 1383-1394.	4.2	97
3	Local shape descriptor selection for object recognition in range data. Computer Vision and Image Understanding, 2011, 115, 681-694.	4.7	88
4	Concurrent validity of the Microsoft Kinect for Windows v2 for measuring spatiotemporal gait parameters. Medical Engineering and Physics, 2016, 38, 952-958.	1.7	75
5	Vision-based assessment of parkinsonism and levodopa-induced dyskinesia with pose estimation. Journal of NeuroEngineering and Rehabilitation, 2018, 15, 97.	4.6	71
6	Use of Accelerometer-Based Feedback of Walking Activity for Appraising Progress With Walking-Related Goals in Inpatient Stroke Rehabilitation. Neurorehabilitation and Neural Repair, 2015, 29, 847-857.	2.9	67
7	Detecting agitation and aggression in people with dementia using sensorsâ€"A systematic review. Alzheimer's and Dementia, 2018, 14, 824-832.	0.8	61
8	Toward an Automatic System for Computer-Aided Assessment in Facial Palsy. Facial Plastic Surgery and Aesthetic Medicine, 2020, 22, 42-49.	0.9	60
9	Detecting unseen falls from wearable devices using channel-wise ensemble of autoencoders. Expert Systems With Applications, 2017, 87, 280-290.	7.6	55
10	Noncontact Vision-Based Cardiopulmonary Monitoring in Different Sleeping Positions. IEEE Journal of Biomedical and Health Informatics, 2017, 21, 1367-1375.	6.3	50
11	An Automated Classification of Pathological Gait Using Unobtrusive Sensing Technology. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 2336-2346.	4.9	49
12	Measuring Gait Variables Using Computer Vision to Assess Mobility and Fall Risk in Older Adults With Dementia. IEEE Journal of Translational Engineering in Health and Medicine, 2020, 8, 1-9.	3.7	49
13	Towards a single sensor passive solution for automated fall detection. , 2011, 2011, 1773-6.		42
14	Algorithmic Bias in Clinical Populationsâ€"Evaluating and Improving Facial Analysis Technology in Older Adults With Dementia. IEEE Access, 2019, 7, 25527-25534.	4.2	41
15	Assessment of Parkinsonian gait in older adults with dementia via human pose tracking in video data. Journal of NeuroEngineering and Rehabilitation, 2020, 17, 97.	4.6	36
16	Sleep Apnea Severity Estimation From Tracheal Movements Using a Deep Learning Model. IEEE Access, 2020, 8, 22641-22649.	4.2	34
17	Automated Video Analysis of Handwashing Behavior as a Potential Marker of Cognitive Health in Older Adults. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 682-690.	6.3	33
18	Automatic Detection of Compensation During Robotic Stroke Rehabilitation Therapy. IEEE Journal of Translational Engineering in Health and Medicine, 2018, 6, 1-7.	3.7	32

#	Article	IF	Citations
19	Estimating Parkinsonism Severity in Natural Gait Videos of Older Adults With Dementia. IEEE Journal of Biomedical and Health Informatics, 2022, 26, 2288-2298.	6.3	32
20	Vision-based posture assessment to detect and categorize compensation during robotic rehabilitation therapy. , 2012, , .		28
21	3D Human Motion Analysis to Detect Abnormal Events on Stairs. , 2012, , .		27
22	A non-contact vision-based system for respiratory rate estimation. , 2014, 2014, 2119-22.		27
23	A New Dataset for Facial Motion Analysis in Individuals With Neurological Disorders. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 1111-1119.	6.3	26
24	The toronto rehab stroke pose dataset to detect compensation during stroke rehabilitation therapy. , 2017, , .		25
25	Variable Dimensional Local Shape Descriptors for Object Recognition in Range Data. , 2007, , .		24
26	Use of Free-Living Step Count Monitoring for Heart Failure Functional Classification: Validation Study. JMIR Cardio, 2019, 3, e12122.	1.7	23
27	Automated assessment of levodopa-induced dyskinesia: Evaluating the responsiveness of video-based features. Parkinsonism and Related Disorders, 2018, 53, 42-45.	2.2	22
28	Automated Non-Contact Detection of Head and Body Positions During Sleep. IEEE Access, 2019, 7, 72826-72834.	4.2	22
29	Vision-Based Assessment of Gait Features Associated With Falls in People With Dementia. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2020, 75, 1148-1153.	3.6	22
30	Experimental Identification and Analysis of the Dynamics of a PHANToM Premium 1.5A Haptic Device. Presence: Teleoperators and Virtual Environments, 2008, 17, 327-343.	0.6	21
31	Automatic Detection of Amyotrophic Lateral Sclerosis (ALS) from Video-Based Analysis of Facial Movements: Speech and Non-Speech Tasks. , 2018, , .		21
32	Vision-Based Heart and Respiratory Rate Monitoring During Sleep â€" A Validation Study for the Population at Risk of Sleep Apnea. IEEE Journal of Translational Engineering in Health and Medicine, 2019, 7, 1-8.	3.7	21
33	Detecting and predicting visually induced motion sickness with physiological measures in combination with machine learning techniques. International Journal of Psychophysiology, 2022, 176, 14-26.	1.0	21
34	The feasibility of a vision-based sensor for longitudinal monitoring of mobility in older adults with dementia. Archives of Gerontology and Geriatrics, 2019, 82, 200-206.	3.0	20
35	Concurrent validity of human pose tracking in video for measuring gait parameters in older adults: a preliminary analysis with multiple trackers, viewing angles, and walking directions. Journal of NeuroEngineering and Rehabilitation, 2021, 18, 139.	4.6	20
36	Vision-based approach for long-term mobility monitoring: Single case study following total hip replacement. Journal of Rehabilitation Research and Development, 2014, 51, 1165-1176.	1.6	19

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37	Investigating the feasibility and acceptability of real-time visual feedback in reducing compensatory motions during self-administered stroke rehabilitation exercises: A pilot study with chronic stroke survivors. Journal of Rehabilitation and Assistive Technologies Engineering, 2019, 6, 205566831983163.	0.9	19
38	Automated vision-based analysis of levodopa-induced dyskinesia with deep learning. , 2017, 2017, 3377-3380.		18
39	Mixture-Model Clustering of Pathological Gait Patterns. IEEE Journal of Biomedical and Health Informatics, 2017, 21, 1297-1305.	6.3	17
40	The Rubber Hand Illusion in Healthy Younger and Older Adults. Multisensory Research, 2018, 31, 537-555.	1.1	15
41	A systematic review of center of pressure measures to quantify gait changes in older adults. Experimental Gerontology, 2021, 143, 111170.	2.8	15
42	Distinguishing Obstructive Versus Central Apneas in Infrared Video of Sleep Using Deep Learning: Validation Study. Journal of Medical Internet Research, 2020, 22, e17252.	4.3	15
43	Video analysis for identifying human operation difficulties and faucet usability assessment. Neurocomputing, 2013, 100, 163-169.	5.9	14
44	Data Mining in Bone Marrow Transplant Records to Identify Patients With High Odds of Survival. IEEE Journal of Biomedical and Health Informatics, 2014, 18, 21-27.	6.3	13
45	Lower body motion analysis to detect falls and near falls on stairs. Biomedical Engineering Letters, 2015, 5, 98-108.	4.1	13
46	Predicting Short-Term Risk of Falls in a High-Risk Group With Dementia. Journal of the American Medical Directors Association, 2021, 22, 689-695.e1.	2.5	12
47	Unobtrusive Pain Monitoring in Older Adults With Dementia Using Pairwise and Contrastive Training. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 1450-1462.	6.3	12
48	Water Flow Detection in a Handwashing Task. , 2010, , .		10
49	Sleep Apnea Severity Estimation from Respiratory Related Movements Using Deep Learning. , 2019, 2019, 1601-1604.		10
50	Automated classification of pathological gait after stroke using ubiquitous sensing technology. , 2016, 2016, 6150-6153.		9
51	Pain Expressions in Dementia: Validity of Observers' Pain Judgments as a Function of Angle of Observation. Journal of Nonverbal Behavior, 2019, 43, 309-327.	1.0	9
52	Concurrent Validity of Zeno Instrumented Walkway and Video-Based Gait Features in Adults With Parkinson's Disease. IEEE Journal of Translational Engineering in Health and Medicine, 2022, 10, 1-11.	3.7	9
53	Automatic segmentation of video to aid the study of faucet usability for older adults. , 2010, , .		6
54	Interdisciplinary development of manual and automated product usability assessments for older adults with dementia: lessons learned. Disability and Rehabilitation: Assistive Technology, 2016, 11, 581-587.	2.2	6

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55	Pain Expression Recognition Using Occluded Faces. , 2019, , .		6
56	Quality Indicators as Predictors of Future Inspection Performance in Ontario Nursing Homes. Journal of the American Medical Directors Association, 2020, 21, 793-798.e1.	2.5	6
57	<p>Sleep/Wakefulness Detection Using Tracheal Sounds and Movements</p>. Nature and Science of Sleep, 2020, Volume 12, 1009-1021.	2.7	6
58	Automatic Respiratory Phase Identification Using Tracheal Sounds and Movements During Sleep. Annals of Biomedical Engineering, 2021, 49, 1521-1533.	2.5	6
59	Relative tidal volume and respiratory airflow estimation using tracheal sound and movement during sleep. Journal of Sleep Research, 2021, 30, e13279.	3.2	6
60	Noncontact Sleep Monitoring With Infrared Video Data to Estimate Sleep Apnea Severity and Distinguish Between Positional and Nonpositional Sleep Apnea: Model Development and Experimental Validation. Journal of Medical Internet Research, 2021, 23, e26524.	4.3	6
61	Gait changes over time in hospitalized older adults with advanced dementia: Predictors of mobility change. PLoS ONE, 2021, 16, e0259975.	2.5	6
62	A Dynamic Load-Balancing Parallel Search for Enumerative Robot Path Planning. Journal of Intelligent and Robotic Systems: Theory and Applications, 2006, 47, 55-85.	3.4	5
63	Non-contact Apnea-Hypopnea Index Estimation using Near Infrared Video. , 2019, 2019, 792-795.		5
64	Automatic Registration for Model Building using Variable Dimensional Local Shape Descriptors. International Conference on 3-D Digital Imaging and Modeling, Proceedings, 2007, , .	0.0	4
65	Estimation of Orofacial Kinematics in Parkinson's Disease: Comparison of 2D and 3D Markerless Systems for Motion Tracking. , 2020, , .		4
66	Towards Aging-in-Place: Automatic Assessment of Product Usability for Older Adults with Dementia. , 2011, , .		3
67	Video analysis of "YouTube funnies" to aid the study of human gait and falls - preliminary results and proof of concept. , 2017, 2017, 1178-1181.		3
68	Prediction of Parkinsonian Gait in Older Adults with Dementia using Joint Trajectories and Gait Features from 2D Video [*]. , 2021, 2021, 5700-5703.		3
69	Vision-based categorization of upper body motion impairments and post-stroke motion synergies. International Journal on Disability and Human Development, 2014, 13, .	0.2	2
70	Predicting Neck Fluid Accumulation While Supine. Journal of Healthcare Engineering, 2015, 6, 673-690.	1.9	2
71	Subspace selection to suppress confounding source domain information in AAM transfer learning. , 2017, , .		2
72	The Toronto older adults gait archive: video and 3D inertial motion capture data of older adults' walking. Scientific Data, 2022, 9, .	5.3	2

#	ARTICLE	IF	CITATIONS
73	Virtual Hand Illusion in younger and older adults. Journal of Rehabilitation and Assistive Technologies Engineering, 2021, 8, 205566832110593.	0.9	1
74	O3â€08â€01: Assessment of product use by older adults with dementia: Automated video analysis. Alzheimer's and Dementia, 2012, 8, P444.	0.8	0
75	P1â€554: LONGITUDINAL VISIONâ€BASED MONITORING OF CHANGES OF GAIT IN DEMENTIA: A PILOT STUDY. Alzheimer's and Dementia, 2018, 14, P545.	0.8	0
76	Interdisciplinary Development of Intelligent Rehabilitation Technologies. Biosystems and Biorobotics, 2013, , 353-358.	0.3	0
77	Ambient Pain Monitoring in Older Adults with Dementia to Improve Pain Management in Long-Term Care Facilities. , 2020, , .		0