

Juan P Wachs

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5470838/publications.pdf>

Version: 2024-02-01

140
papers

2,371
citations

304368

22
h-index

264894

42
g-index

142
all docs

142
docs citations

142
times ranked

1938
citing authors

#	ARTICLE	IF	CITATIONS
1	Touchless Interfaces in the Operating Room: A Study in Gesture Preferences. International Journal of Human-Computer Interaction, 2023, 39, 438-448.	3.3	2
2	Fast and Robust UAV to UAV Detection and Tracking From Video. IEEE Transactions on Emerging Topics in Computing, 2022, 10, 1519-1531.	3.2	16
3	JSE: Joint Semantic Encoder for zero-shot gesture learning. Pattern Analysis and Applications, 2022, 25, 679-692.	3.1	2
4	Nonmyopic Informative Path Planning Based on Global Kriging Variance Minimization. IEEE Robotics and Automation Letters, 2022, 7, 1768-1775.	3.3	8
5	To Watch Before or Listen While Doing? A Randomized Pilot of Video-Modelling versus Telementored Tube Thoracostomy. Prehospital and Disaster Medicine, 2022, 37, 71-77.	0.7	4
6	A neurotechnological aid for semi-autonomous suction in robotic-assisted surgery. Scientific Reports, 2022, 12, 4504.	1.6	1
7	Active Multiobject Exploration and Recognition via Tactile Whiskers. IEEE Transactions on Robotics, 2022, 38, 3479-3497.	7.3	2
8	SARTRES: a semi-autonomous robot teleoperation environment for surgery. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2021, 9, 376-383.	1.3	6
9	The AI-Medic: an artificial intelligent mentor for trauma surgery. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2021, 9, 313-321.	1.3	4
10	From the Dexterous Surgical Skill to the Battlefield—A Robotics Exploratory Study. Military Medicine, 2021, 186, 288-294.	0.4	10
11	Procedural Telementoring in Rural, Underdeveloped, and Austere Settings: Origins, Present Challenges, and Future Perspectives. Annual Review of Biomedical Engineering, 2021, 23, 115-139.	5.7	8
12	Assessing Collaborative Physical Tasks Via Gestural Analysis. IEEE Transactions on Human-Machine Systems, 2021, 51, 152-161.	2.5	0
13	Fingers See Things Differently (FIST-D): An Object Aware Visualization and Manipulation Framework Based on Tactile Observations. IEEE Robotics and Automation Letters, 2021, 6, 4249-4256.	3.3	1
14	ICONS: Imitation CONStraints for Robot Collaboration. , 2021, , .		1
15	SACHETS: Semi-Autonomous Cognitive Hybrid Emergency Teleoperated Suction. , 2021, , .		3
16	Dexterous Skill Transfer between Surgical Procedures for Teleoperated Robotic Surgery. , 2021, , .		1
17	Assessing task understanding in remote ultrasound diagnosis via gesture analysis. Pattern Analysis and Applications, 2021, 24, 1489-1500.	3.1	1
18	Learning Multimodal Contact-Rich Skills from Demonstrations Without Reward Engineering. , 2021, , .		3

#	ARTICLE	IF	CITATIONS
19	DESERTS: DELay-tolerant SEMi-autonomous Robot Teleoperation for Surgery. , 2021, , .		9
20	ZF-SSE: A Unified Sequential Semantic Encoder for Zero-Few-Shot Learning. , 2021, , .		2
21	Eye-Tracking Metrics Predict Perceived Workload in Robotic Surgical Skills Training. Human Factors, 2020, 62, 1365-1386.	2.1	64
22	The System for Telementoring with Augmented Reality (STAR): A head-mounted display to improve surgical coaching and confidence in remote areas. Surgery, 2020, 167, 724-731.	1.0	44
23	Evaluation of an augmented reality platform for austere surgical telementoring: a randomized controlled crossover study in cricothyroidotomies. Npj Digital Medicine, 2020, 3, 75.	5.7	30
24	How About the Mentor? Effective Workspace Visualization in AR Telementoring. , 2020, , .		8
25	How About the Mentor? Effective Workspace Visualization in AR Telementoring. , 2020, , .		1
26	Agreement Study Using Gesture Description Analysis. IEEE Transactions on Human-Machine Systems, 2020, 50, 434-443.	2.5	4
27	A Randomized Trial of Mentored vs Nonmentored Military Medics Compared in the Application of a Wound Clamp Without Prior Training: When to Shut Up and Just Watch!. Military Medicine, 2020, 185, 67-72.	0.4	9
28	Telementoring in Leg Fasciotomies via Mixed-Reality: Clinical Evaluation of the STAR Platform. Military Medicine, 2020, 185, 513-520.	0.4	17
29	Classification of Blind Usersâ€™ Image Exploratory Behaviors Using Spiking Neural Networks. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 1032-1041.	2.7	1
30	Electrophysiological indicators of gesture perception. Experimental Brain Research, 2020, 238, 537-550.	0.7	1
31	Beyond MAGIC: Matching Collaborative Gestures using an optimization-based Approach. , 2020, , .		1
32	Feature Selection for Zero-Shot Gesture Recognition. , 2020, , .		4
33	The MAGIC of E-Health: A Gesture-Based Approach to Estimate Understanding and Performance in Remote Ultrasound Tasks. , 2020, , .		1
34	Multimodal Physiological Signals for Workload Prediction in Robot-assisted Surgery. ACM Transactions on Human-Robot Interaction, 2020, 9, 1-26.	3.2	29
35	The AI-Medic: A Multimodal Artificial Intelligent Mentor for Trauma Surgery. , 2020, , .		0
36	Gesture Agreement Assessment Using Description Vectors. , 2020, , .		2

#	ARTICLE	IF	CITATIONS
37	MAGIC: A Fundamental Framework for Gesture Representation, Comparison and Assessment. , 2019, , .		5
38	Preference elicitation: Obtaining gestural guidelines for PACS in neurosurgery. International Journal of Medical Informatics, 2019, 130, 103934.	1.6	4
39	Database of Gesture Attributes: Zero Shot Learning for Gesture Recognition. , 2019, , .		8
40	Robust High-Level Video Stabilization for Effective AR Telementoring. , 2019, , .		0
41	Spiking Neural Networks for early prediction in human-robot collaboration. International Journal of Robotics Research, 2019, 38, 1619-1643.	5.8	11
42	Augmented Reality as a Medium for Improved Telementoring. Military Medicine, 2019, 184, 57-64.	0.4	12
43	DESK: A Robotic Activity Dataset for Dexterous Surgical Skills Transfer to Medical Robots. , 2019, , .		17
44	Extending Policy from One-Shot Learning through Coaching. , 2019, , .		4
45	JISAP: Joint Inference for Surgeon Attributes Prediction during Robot-Assisted Surgery. , 2019, , .		0
46	Transferring Dexterous Surgical Skill Knowledge between Robots for Semi-autonomous Teleoperation. , 2019, , .		12
47	Augmented Reality Future Step Visualization for Robust Surgical Telementoring. Simulation in Healthcare, 2019, 14, 59-66.	0.7	20
48	Surgical Telementoring Without Encumbrance. Annals of Surgery, 2019, 270, 384-389.	2.1	45
49	Early prediction for physical human robot collaboration in the operating room. Autonomous Robots, 2018, 42, 977-995.	3.2	24
50	Coherence in One-Shot Gesture Recognition for Human-Robot Interaction. , 2018, , .		0
51	Collaborative Robots in Surgical Research. , 2018, , .		9
52	Variability Analysis on Gestures for People With Quadriplegia. IEEE Transactions on Cybernetics, 2018, 48, 346-356.	6.2	8
53	A First-Person Mentee Second-Person Mentor AR Interface for Surgical Telementoring. , 2018, , .		16
54	Hard Zero Shot Learning for Gesture Recognition. , 2018, , .		6

#	ARTICLE	IF	CITATIONS
55	Image Exploration Procedure Classification with Spike-timing Neural Network for the Blind. , 2018, , .		4
56	Augmented Visual Instruction for Surgical Practice and Training. , 2018, , .		5
57	Early Turn-Taking Prediction with Spiking Neural Networks for Human Robot Collaboration. , 2018, , .		6
58	Looking Beyond the Gesture: Vocabulary Acceptability Criteria for Gesture Elicitation Studies. Proceedings of the Human Factors and Ergonomics Society, 2018, 62, 997-1001.	0.2	2
59	Joint Surgeon Attributes Estimation in Robot-Assisted Surgery. , 2018, , .		4
60	Deep Learning for Moving Object Detection and Tracking from a Single Camera in Unmanned Aerial Vehicles (UAVs). IS&T International Symposium on Electronic Imaging, 2018, 30, 466-1-466-6.	0.3	34
61	Gestures for Picture Archiving and Communication Systems (PACS) operation in the operating room: Is there any standard?. PLoS ONE, 2018, 13, e0198092.	1.1	18
62	Biomechanical-Based Approach to Data Augmentation for One-Shot Gesture Recognition. , 2018, , .		4
63	Taxonomy of Communications in the Operating Room. Advances in Intelligent Systems and Computing, 2018, , 251-262.	0.5	3
64	Multimodal Perception of Histological Images for Persons Who Are Blind or Visually Impaired. ACM Transactions on Accessible Computing, 2017, 9, 1-27.	1.9	6
65	The Effect of Embodied Interaction in Visual-Spatial Navigation. ACM Transactions on Interactive Intelligent Systems, 2017, 7, 1-36.	2.6	12
66	Needle in a haystack: Interactive surgical instrument recognition through perception and manipulation. Robotics and Autonomous Systems, 2017, 97, 182-192.	3.0	14
67	A Semantical & Analytical Approach for Zero Shot Gesture Learning. , 2017, , .		8
68	What Makes a Gesture a Gesture? Neural Signatures Involved in Gesture Recognition. , 2017, , .		7
69	One-Shot Gesture Recognition: One Step Towards Adaptive Learning. , 2017, , .		6
70	A Human-Centered Approach to One-Shot Gesture Learning. Frontiers in Robotics and AI, 2017, 4, .	2.0	13
71	An Augmented Reality-Based Approach for Surgical Telementoring in Austere Environments. Military Medicine, 2017, 182, 310-315.	0.4	35
72	ZSGL: zero shot gestural learning. , 2017, , .		13

#	ARTICLE	IF	CITATIONS
73	An optimized real-time hands gesture recognition based interface for individuals with upper-level spinal cord injuries. <i>Journal of Real-Time Image Processing</i> , 2016, 11, 301-314.	2.2	3
74	A Hand-Held, Self-Contained Simulated Transparent Display. , 2016, , .		5
75	Embodied gesture learning from one-shot. , 2016, , .		5
76	Multi-target detection and tracking from a single camera in Unmanned Aerial Vehicles (UAVs). , 2016, , .		58
77	Introduction to Special Issue on Body Tracking and Healthcare. <i>Human-Computer Interaction</i> , 2016, 31, 173-190.	3.1	3
78	Enhanced control of a wheelchair-mounted robotic manipulator using 3-D vision and multimodal interaction. <i>Computer Vision and Image Understanding</i> , 2016, 149, 21-31.	3.0	28
79	Virtual annotations of the surgical field through an augmented reality transparent display. <i>Visual Computer</i> , 2016, 32, 1481-1498.	2.5	29
80	Medical telementoring using an augmented reality transparent display. <i>Surgery</i> , 2016, 159, 1646-1653.	1.0	68
81	Optimal Modality Selection for Cooperative Human-Robot Task Completion. <i>IEEE Transactions on Cybernetics</i> , 2016, 46, 3388-3400.	6.2	5
82	User-Centered and Analytic-Based Approaches to Generate Usable Gestures for Individuals With Quadriplegia. <i>IEEE Transactions on Human-Machine Systems</i> , 2016, 46, 460-466.	2.5	7
83	Special issue on real-time image and video processing for pattern recognition systems and applications. <i>Journal of Real-Time Image Processing</i> , 2016, 11, 247-249.	2.2	1
84	A Comparative Study for Telerobotic Surgery Using Free Hand Gestures. <i>Journal of Human-robot Interaction</i> , 2016, 5, 1.	2.0	14
85	A Comparative Study for Touchless Telerobotic Surgery. , 2016, , 235-255.		0
86	A User-Developed 3-D Hand Gesture Set for Human-Computer Interaction. <i>Human Factors</i> , 2015, 57, 607-621.	2.1	47
87	Determining natural and accessible gestures using uncontrolled manifolds and cybernetics. , 2015, , .		1
88	Model-Based System Specification With Tesperanto: Readable Text From Formal Graphics. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , 2015, 45, 1448-1458.	5.9	12
89	An augmented reality approach to surgical telementoring. , 2014, , .		2
90	Linking attention to physical action in complex decision making problems. , 2014, , .		2

#	ARTICLE	IF	CITATIONS
91	Operation room tool handling and miscommunication scenarios: An object-process methodology conceptual model. <i>Artificial Intelligence in Medicine</i> , 2014, 62, 153-163.	3.8	7
92	Telerobot-enabled HUB-CI model for collaborative lifecycle management of design and prototyping. <i>Computers in Industry</i> , 2014, 65, 550-562.	5.7	17
93	HEGM: A hierarchical elastic graph matching for hand gesture recognition. <i>Pattern Recognition</i> , 2014, 47, 80-88.	5.1	30
94	Context-based hand gesture recognition for the operating room. <i>Pattern Recognition Letters</i> , 2014, 36, 196-203.	2.6	66
95	Integrated vision-based system for efficient, semi-automated control of a robotic manipulator. <i>International Journal of Intelligent Computing and Cybernetics</i> , 2014, 7, 253-266.	1.6	6
96	A Machine Vision-Based Gestural Interface for People With Upper Extremity Physical Impairments. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , 2014, 44, 630-641.	5.9	29
97	Multimodal approach to image perception of histology for the blind or visually impaired. , 2014, , .		1
98	Optimal modality selection for multimodal human-machine systems using RIMAG. , 2014, , .		2
99	An analytic approach to decipher usable gestures for quadriplegic users. , 2014, , .		5
100	Gaze, Posture and Gesture Recognition to Minimize Focus Shifts for Intelligent Operating Rooms in a Collaborative Support System. <i>International Journal of Computers, Communications and Control</i> , 2014, 5, 106.	1.2	12
101	Recognizing hand gestures using the weighted elastic graph matching (WEGM) method. <i>Image and Vision Computing</i> , 2013, 31, 649-657.	2.7	11
102	Collaboration with a robotic scrub nurse. <i>Communications of the ACM</i> , 2013, 56, 68-75.	3.3	23
103	A Cyber-Physical Management System for Delivering and Monitoring Surgical Instruments in the OR. <i>Surgical Innovation</i> , 2013, 20, 377-384.	0.4	18
104	Integrated vision-based robotic arm interface for operators with upper limb mobility impairments. , 2013, 2013, 6650447.		16
105	A collaborative telerobotics network framework with hand gesture interface and conflict prevention. <i>International Journal of Production Research</i> , 2013, 51, 4443-4463.	4.9	20
106	Hand-gesture-based sterile interface for the operating room using contextual cues for the navigation of radiological images. <i>Journal of the American Medical Informatics Association: JAMIA</i> , 2013, 20, e183-e186.	2.2	55
107	Smart instrumented training ranges: bringing automated system solutions to support critical domain needs. <i>Journal of Defense Modeling and Simulation</i> , 2013, 10, 327-342.	1.2	6
108	Laser and Photonic Systems Integration: Emerging Innovations and Framework for Research and Education. <i>Human Factors and Ergonomics in Manufacturing</i> , 2013, 23, 483-516.	1.4	7

#	ARTICLE	IF	CITATIONS
109	Surgical instrument handling and retrieval in the operating room with a multimodal robotic assistant. , 2013, , .		5
110	3D joystick for robotic arm control by individuals with high level spinal cord injuries. , 2013, 2013, 6650432.		9
111	HUB-CI Model for Collaborative Telerobotics in Manufacturing. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 63-68.	0.4	8
112	The Improvement and Application of Intelligence Tracking Algorithm for Moving Logistics Objects Based on Machine Vision Sensor. Sensor Letters, 2013, 11, 862-869.	0.4	1
113	Telementoring systems in the operating room: a new approach in medical training. Medicina, 2013, 73, 539-42.	0.6	3
114	Gestonurse. , 2012, , .		18
115	Does a robotic scrub nurse improve economy of movements?. , 2012, , .		5
116	Hierarchical Elastic Graph Matching for Hand Gesture Recognition. Lecture Notes in Computer Science, 2012, , 308-315.	1.0	4
117	Intention, Context and Gesture Recognition for Sterile MRI Navigation in the Operating Room. Lecture Notes in Computer Science, 2012, , 220-227.	1.0	12
118	Gestonurse: a robotic surgical nurse for handling surgical instruments in the operating room. Journal of Robotic Surgery, 2012, 6, 53-63.	1.0	40
119	Facilitated Gesture Recognition Based Interfaces for People with Upper Extremity Physical Impairments. Lecture Notes in Computer Science, 2012, , 228-235.	1.0	7
120	Robot, Pass Me the Scissors! How Robots Can Assist Us in the Operating Room. Lecture Notes in Computer Science, 2012, , 46-57.	1.0	0
121	Vision-based hand-gesture applications. Communications of the ACM, 2011, 54, 60-71.	3.3	529
122	A gesture driven robotic scrub nurse. , 2011, , .		19
123	Using autonomous robots to enable self-organizing broadband networks. , 2010, , .		1
124	Human posture recognition for intelligent vehicles. Journal of Real-Time Image Processing, 2010, 5, 231-244.	2.2	10
125	Low and high-level visual feature-based apple detection from multi-modal images. Precision Agriculture, 2010, 11, 717-735.	3.1	91
126	“A window on tissue” - Using facial orientation to control endoscopic views of tissue depth. , 2010, 2010, 935-8.		2

#	ARTICLE	IF	CITATIONS
127	AWARE: Autonomous Wireless Agent Robotic Exchange. Lecture Notes in Computer Science, 2010, , 276-287.	1.0	3
128	Multi-modal Registration Using a Combined Similarity Measure. Advances in Soft Computing, 2009, , 159-168.	0.4	4
129	A Method for Selection of Optimal Hand Gesture Vocabularies. Lecture Notes in Computer Science, 2009, , 57-68.	1.0	8
130	The Multi-level Learning and Classification of Multi-class Parts-Based Representations of U.S. Marine Postures. Lecture Notes in Computer Science, 2009, , 505-512.	1.0	0
131	Optimal Consensus Intuitive Hand Gesture Vocabulary Design. , 2008, , .		37
132	A Gesture-based Tool for Sterile Browsing of Radiology Images. Journal of the American Medical Informatics Association: JAMIA, 2008, 15, 321-323.	2.2	83
133	DESIGNING HAND GESTURE VOCABULARIES FOR NATURAL INTERACTION BY COMBINING PSYCHO-PHYSIOLOGICAL AND RECOGNITION FACTORS. International Journal of Semantic Computing, 2008, 02, 137-160.	0.4	25
134	Real-Time Hand Gesture Interface for Browsing Medical Images. International Journal of Intelligent Computing in Medical Sciences and Image Processing, 2008, 2, 15-25.	0.5	7
135	Gestix: A Doctor-Computer Sterile Gesture Interface for Dynamic Environments. , 2007, , 30-39.		16
136	Human Factors for Design of Hand Gesture Human - Machine Interaction. , 2006, , .		13
137	A Method to Enhance the "Possibilistic C-Means with Repulsion"™ Algorithm based on Cluster Validity Index. , 2006, , 77-87.		4
138	A Real-Time Hand Gesture Interface for Medical Visualization Applications. Advances in Intelligent and Soft Computing, 2006, , 153-162.	0.2	44
139	Cluster Labeling and Parameter Estimation for the Automated Setup of a Hand-Gesture Recognition System. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2005, 35, 932-944.	3.4	45
140	COLOR FACE SEGMENTATION USING A FUZZY MIN-MAX NEURAL NETWORK. International Journal of Image and Graphics, 2002, 02, 587-601.	1.2	1