Vesna Novak

List of Publications by Year
in descending order

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85 papers	1,966 citations	331538 21 h-index	289141 40 g-index
92 all docs	92 docs citations	92 times ranked	1930 citing authors

#	Article	IF	Citations
1	A survey of sensor fusion methods in wearable robotics. Robotics and Autonomous Systems, 2015, 73, 155-170.	3.0	190
2	Increasing motivation in robot-aided arm rehabilitation with competitive and cooperative gameplay. Journal of NeuroEngineering and Rehabilitation, 2014, 11, 64.	2.4	165
3	A survey of methods for data fusion and system adaptation using autonomic nervous system responses in physiological computing. Interacting With Computers, 2012, 24, 154-172.	1.0	139
4	Competitive and cooperative arm rehabilitation games played by a patient and unimpaired person: effects on motivation and exercise intensity. Journal of NeuroEngineering and Rehabilitation, 2017, 14, 23.	2.4	112
5	Toward Real-Time Automated Detection of Turns during Gait Using Wearable Inertial Measurement Units. Sensors, 2014, 14, 18800-18822.	2.1	105
6	Automated detection of gait initiation and termination using wearable sensors. Medical Engineering and Physics, 2013, 35, 1713-1720.	0.8	92
7	Real-Time Closed-Loop Control of Cognitive Load in Neurological Patients During Robot-Assisted Gait Training. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2011, 19, 453-464.	2.7	84
8	Virtual Rehabilitation Environment Using Principles of Intrinsic Motivation and Game Design. Presence: Teleoperators and Virtual Environments, 2012, 21, 1-15.	0.3	79
9	Psychophysiological Measurements in a Biocooperative Feedback Loop for Upper Extremity Rehabilitation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2011, 19, 400-410.	2.7	78
10	Psychophysiological Responses to Robotic Rehabilitation Tasks in Stroke. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2010, 18, 351-361.	2.7	62
11	A multisession evaluation of an adaptive competitive arm rehabilitation game. Journal of NeuroEngineering and Rehabilitation, 2017, 14, 128.	2.4	57
12	Psychophysiological responses to different levels of cognitive and physical workload in haptic interaction. Robotica, 2011, 29, 367-374.	1.3	51
13	Predicting Targets of Human Reaching Motions Using Different Sensing Technologies. IEEE Transactions on Biomedical Engineering, 2013, 60, 2645-2654.	2.5	39
14	Workload Estimation in Physical Humanâ€“Robot Interaction Using Physiological Measurements. Interacting With Computers, 2015, 27, 616-629.	1.0	37
15	Metrological evaluation of skin conductance measurements. Measurement: Journal of the International Measurement Confederation, 2013, 46, 2993-3001.	2.5	35
16	Benchmarking Brain-Computer Interfaces Outside the Laboratory: The Cybathlon 2016. Frontiers in Neuroscience, 2017, 11, 756.	1.4	33
17	Design and pilot evaluation of competitive and cooperative exercise games for arm rehabilitation at home. , 2016, 2016, 4690-4694.		31
18	Evaluation of the HeroWear Apex back-assist exosuit during multiple brief tasks. Journal of Biomechanics, 2021, 126, 110620.	0.9	30

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19	Evaluation of upper extremity robot-assistances in subacute and chronic stroke subjects. Journal of NeuroEngineering and Rehabilitation, 2010, 7, 52.	2.4	29
20	The Use of Player-centered Positive Reinforcement to Schedule In-game Rewards Increases Enjoyment and Performance in a Serious Game. International Journal of Serious Games, 2014, 1, .	0.8	29
21	Development and validation of a wearable inertial measurement system for use with lower limb exoskeletons. , 2011, , .		25
22	Identifying the Causes of Driversâ€™ Hazardous States Using Driver Characteristics, Vehicle Kinematics, and Physiological Measurements. Frontiers in Neuroscience, 2018, 12, 568.	1.4	25
23	Enhancing patient freedom in rehabilitation robotics using gaze-based intention detection. , 2013, 2013, 6650507.		24
24	Comparison of two difficulty adaptation strategies for competitive arm rehabilitation exercises. , 2017, 2017, 640-645.		24
25	Challenges and solutions for application and wider adoption of wearable robots. Wearable Technologies, 2021, 2, .	1.6	23
26	Control Strategies and Artificial Intelligence in Rehabilitation Robotics. AI Magazine, 2015, 36, 23-33.	1.4	22
27	Emotion-aware system for upper extremity rehabilitation. , 2009, , .		21
28	Teleoperation of two six-degree-of-freedom arm rehabilitation exoskeletons. , 2015, , .		19
29	Linking Recognition Accuracy and User Experience in an Affective Feedback Loop. IEEE Transactions on Affective Computing, 2014, 5, 168-172.	5.7	18
30	A Pilot Study of Varying Thoracic and Abdominal Compression in a Reconfigurable Trunk Exoskeleton During Different Activities. IEEE Transactions on Biomedical Engineering, 2020, 67, 1585-1594.	2.5	16
31	Characterizing Human Box-Lifting Behavior Using Wearable Inertial Motion Sensors. Sensors, 2020, 20, 2323.	2.1	15
32	Dual-task performance in multimodal human-computer interaction: a psychophysiological perspective. Multimedia Tools and Applications, 2012, 56, 553-567.	2.6	14
33	The effect of different difficulty adaptation strategies on enjoyment and performance in a serious game for memory training. , 2014, , .		14
34	Automated affect classification and task difficulty adaptation in a competitive scenario based on physiological linkage: An exploratory study. International Journal of Human Computer Studies, 2021, 153, 102673.	3.7	14
35	Cooperative Cooking: A Novel Virtual Environment for Upper Limb Rehabilitation. , 2018, 2018, 3602-3605.		13
36	Effects of Different Opponent Types on Motivation and Exercise Intensity in a Competitive Arm Exercise Game. Games for Health Journal, 2020, 9, 31-36.	1.1	12

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37	Intention detection during gait initiation using supervised learning. , 2011, , .		11
38	Psychophysiological responses to robot training in different recovery phases after stroke. , 2011, 2011, 5975498.		10
39	User Experience With Dynamic Difficulty Adjustment Methods for an Affective Exergame: Comparative Laboratory-Based Study. JMIR Serious Games, 2021, 9, e25771.	1.7	10
40	Absolute and Relative User Perception of Classification Accuracy in an Affective Video Game. Interacting With Computers, 0, , .	1.0	9
41	Classification of Multiple Psychological Dimensions in Computer Game Players Using Physiology, Performance, and Personality Characteristics. Frontiers in Neuroscience, 2019, 13, 1278.	1.4	9
42	Haptic Coupling in Dyads Improves Motor Learning in a Simple Force Field. , 2020, 2020, 4795-4798.		9
43	A Brief Measure of Interpersonal Interaction for 2-Player Serious Games: Questionnaire Validation. JMIR Serious Games, 2019, 7, e12788.	1.7	9
44	A review on bio-cooperative control in gait rehabilitation. , 2011, 2011, 5975454.		8
45	Using Physiological Linkage for Patient State Assessment In a Competitive Rehabilitation Game. , 2019, 2019, 1031-1036.		8
46	Can two-player games increase motivation in rehabilitation robotics?. , 2014, , .		7
47	Measuring motor actions and psychophysiology for task difficulty estimation in human-robot interaction. , 2010, , .		6
48	Challenges in biocooperative rehabilitation robotics. , 2011, , .		6
49	Biomechatronic Applications of Brain-Computer Interfaces. , 2019, , 129-175.		6
50	A Multisession Evaluation of a Collaborative Virtual Environment for Arm Rehabilitation. Presence: Teleoperators and Virtual Environments, 2018, 27, 274-286.	0.3	6
51	Early recognition of gait initiation and termination using wearable sensors. , 2012, , .		5
52	Engineering Issues in Physiological Computing. Human-computer Interaction Series, 2014, , 17-38.	0.4	5
53	Cybathlon 2016: Showcasing Advances in Assistive Technologies Through Competition [From the Guest Editors]. IEEE Robotics and Automation Magazine, 2017, 24, 24-122.	2.2	5
54	Design and Pilot Evaluation of a Reconfigurable Spinal Exoskeleton. , 2018, 2018, 1731-1734.		5

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55	Introduction to Virtual Reality. Intelligent Systems, Control and Automation: Science and Engineering, 2014, , 1-16.	0.3	5
56	Movement Onset Detection and Target Estimation for Robot-Aided Arm Training. Automatisierungstechnik, 2015, 63, 286-298.	0.4	4
57	Promoting motivation during robot-assisted rehabilitation. , 2018, , 149-158.		4
58	Load Position and Weight Classification during Carrying Gait Using Wearable Inertial and Electromyographic Sensors. Sensors, 2020, 20, 4963.	2.1	4
59	Biomechanical comparisons of back and front squats with a straight bar and four squats with a transformer bar. Sports Biomechanics, 2024, 23, 166-181.	0.8	4
60	Task difficulty adjustment in biocooperative rehabilitation using psychophysiological responses. , 2011, 2011, 5975380.		3
61	Physiological noise cancellation in fNIRS using an adaptive filter based on mutual information. , 2014, , .		3
62	Pilot Long-term Evaluation of Competitive and Cooperative Exercise Games in Inpatient Stroke Rehabilitation. , 2019, 2019, 648-653.		3
63	Using Psychophysiological Measurements in Physically Demanding Virtual Environments. Lecture Notes in Computer Science, 2009, , 490-493.	1.0	3
64	Haptic Modality in Virtual Reality. Intelligent Systems, Control and Automation: Science and Engineering, 2014, , 161-194.	0.3	3
65	River multimodal scenario for rehabilitation robotics. , 2011, 2011, 5975416.		2
66	Toward real-world evaluations of trunk exoskeletons using inertial measurement units. , 2019, 2019, 483-487.		2
67	Classification of Different Cognitive and Affective States in Computer Game Players Using Physiology, Performance and Intrinsic Factors. Advances in Intelligent Systems and Computing, 2019, , 23-29.	0.5	2
68	Interaction with a Virtual Environment. Intelligent Systems, Control and Automation: Science and Engineering, 2014, , 205-211.	0.3	2
69	Automatic Estimation of Interpersonal Engagement During Naturalistic Conversation Using Dyadic Physiological Measurements. Frontiers in Neuroscience, 2021, 15, 757381.	1.4	2
70	Guest Editorial: Toward Commercial Applications of Affective Computing. IEEE Transactions on Affective Computing, 2017, 8, 145-147.	5.7	2
71	Haptic Assistance in Virtual Environments for Motor Rehabilitation. Lecture Notes in Computer Science, 2010, , 117-122.	1.0	1
72	GRASP COORDINATION IN VIRTUAL ENVIRONMENTS FOR ROBOT-AIDED UPPER EXTREMITY REHABILITATION. Biomedical Engineering - Applications, Basis and Communications, 2011, 23, 457-466.	0.3	1

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73	Detecting motion intention in stroke survivors using autonomic nervous system responses. , 2015, , .		1
74	Wearable Robots: Taking a Leap From the Lab to the Real World [From the Guest Editors]. IEEE Robotics and Automation Magazine, 2020, 27, 20-21.	2.2	1
75	Brain-Computer Interface Racing at the Cybathlon 2016. Frontiers for Young Minds, 0, 7, .	0.8	1
76	Simultaneously varying back stiffness and trunk compression in a passive trunk exoskeleton during different activities: A pilot study. , 2021, 2021, 4886-4890.		1
77	Effectiveness of different sensing modalities in predicting targets of reaching movements. , 2013, 2013, 4255-8.		0
78	Sensor Fusion in Assistive and Rehabilitation Robotics. Sensors, 2020, 20, 5235.	2.1	0
79	Acoustic Modality in Virtual Reality. Intelligent Systems, Control and Automation: Science and Engineering, 2014, , 131-159.	0.3	0
80	Tracking the User and Environment. Intelligent Systems, Control and Automation: Science and Engineering, 2014, , 53-95.	0.3	0
81	Passive Brain-Computer Interfaces for Robot-Assisted Rehabilitation. Springer Briefs in Electrical and Computer Engineering, 2014, , 73-95.	0.3	0
82	Measuring the Effect of Classification Accuracy on User Experience in a Physiological Game. , 2016, , .		0
83	A New Method for Classification of Hazardous Driver States Based on Vehicle Kinematics and Physiological Signals. Advances in Intelligent Systems and Computing, 2019, , 63-68.	0.5	0
84	Design and Pilot Evaluation of a Prototype Sensorized Trunk Exoskeleton. , 2021, 2021, 4537-4541.		0
85	Toward Real-Time Detection of Object Lifting Using Wearable Inertial Measurement Units. , 2021, 2021, 6831-6834.		0