Gregory F Welch

List of Publications by Year
in descending order

131 papers	3,657 citations	361413 20 h-index
136 all docs	136 docs citations	136 times ranked

243625
44
g-index

2170
citing authors

#	Article	IF	Citations
1	The office of the future. , 1998, , .		581
2	A Systematic Review of Social Presence: Definition, Antecedents, and Implications. Frontiers in Robotics and AI, 2018, 5, 114.	3.2	388
3	Revisiting Trends in Augmented Reality Research: A Review of the 2nd Decade of ISMAR (2008â€"2017). IEEE Transactions on Visualization and Computer Graphics, 2018, 24, 2947-2962.	4.4	232
4	Dynamic State Estimation of a Synchronous Machine Using PMU Data: A Comparative Study. IEEE Transactions on Smart Grid, 2015, 6, 450-460.	9.0	191
5	SCAAT. , 1997, , .		176
6	Shader Lamps: Animating Real Objects With Image-Based Illumination. Eurographics, 2001, , 89-102.	0.4	127
7	High-Performance Wide-Area Optical Tracking: The HiBall Tracking System. Presence: Teleoperators and Virtual Environments, 2001, 10, 1-21.	0.6	117
8	Social interaction in augmented reality. PLoS ONE, 2019, 14, e0216290.	2.5	116
9	A Two-Stage Kalman Filter Approach for Robust and Real-Time Power System State Estimation. IEEE Transactions on Sustainable Energy, 2014, 5, 629-636.	8.8	105
10	In the blink of an eye. ACM Transactions on Graphics, 2018, 37, 1-11.	7.2	86
11	Does a Digital Assistant Need a Body? The Influence of Visual Embodiment and Social Behavior on the Perception of Intelligent Virtual Agents in AR. , 2018, , .		77
12	Life-sized projector-based dioramas. , 2001, , .		55
13	The effects of virtual human's spatial and behavioral coherence with physical objects on social presence in AR. Computer Animation and Virtual Worlds, 2017, 28, e1771.	1.2	51
14	Fast Image Segmentation and Smoothing Using Commodity Graphics Hardware. Journal of Graphics Tools, 2002, 7, 91-100.	0.5	43
15	HISTORY: The Use of the Kalman Filter for Human Motion Tracking in Virtual Reality. Presence: Teleoperators and Virtual Environments, 2009, 18, 72-91.	0.6	40
16	Situated Analytics. Lecture Notes in Computer Science, 2018, , 185-220.	1.3	40
17	Animatronic Shader Lamps Avatars. , 2009, , .		39
18	The impact of avatar-owner visual similarity on body ownership in immersive virtual reality. , 2017, , .		38

#	Article	IF	Citations
19	A Systematic Survey of 15 Years of User Studies Published in the Intelligent Virtual Agents Conference. , 2018, , .		36
20	The wobbly table: Increased social presence via subtle incidental movement of a real-virtual table. , 2016, , .		35
21	A Systematic Review of the Convergence of Augmented Reality, Intelligent Virtual Agents, and the Internet of Things. Transactions on Computational Science and Computational Intelligence, 2019, , 1-24.	0.3	35
22	A Systematic Review of Ten Years of Research on Human Interaction with Social Robots. International Journal of Human-Computer Interaction, 2020, 36, 1804-1817.	4.8	34
23	Effects of Unaugmented Periphery and Vibrotactile Feedback on Proxemics with Virtual Humans in AR. IEEE Transactions on Visualization and Computer Graphics, 2018, 24, 1525-1534.	4.4	33
24	Walking Your Virtual Dog: Analysis of Awareness and Proxemics with Simulated Support Animals in Augmented Reality. , 2019, , .		33
25	A survey of power management techniques in mobile computing operating systems. Operating Systems Review (ACM), 1995, 29, 47-56.	1.9	30
26	A Unified Framework for Individualized Avatar-Based Interactions. Presence: Teleoperators and Virtual Environments, 2014, 23, 109-132.	0.6	29
27	Assessing vignetting as a means to reduce VR sickness during amplified head rotations. , 2018, , .		27
28	Exploring the effects of observed physicality conflicts on real-virtual human interaction in augmented reality. , 2017, , .		26
29	Real-time view synthesis using commodity graphics hardware. , 2002, , .		25
30	A UNIFIED APPROACH TO REAL-TIME, MULTI-RESOLUTION, MULTI-BASELINE 2D VIEW SYNTHESIS AND 3D DEPTH ESTIMATION USING COMMODITY GRAPHICS HARDWARE. International Journal of Image and Graphics, 2004, 04, 627-651.	1.5	25
31	Observability and estimation uncertainty analysis for PMU placement alternatives. , 2010, , .		24
32	Virtual Learning Environments for Students with Disabilities: A Review and Analysis of the Empirical Literature and Two Case Studies. Rural Special Education Quarterly, 2015, 34, 26-32.	0.9	24
33	Blowing in the wind: Increasing social presence with a virtual human via environmental airflow interaction in mixed reality. Computers and Graphics, 2019, 83, 23-32.	2.5	24
34	Real-Time Consensus-Based Scene Reconstruction Using Commodity Graphics Hardware+. Computer Graphics Forum, 2003, 22, 207-216.	3.0	22
35	Exploring the Limitations of Environment Lighting on Optical See-Through Head-Mounted Displays. , 2020, , .		22
36	The physical-virtual table. , 2018, , .		21

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37	Effects of Patient Care Assistant Embodiment and Computer Mediation on User Experience. , 2019, , .		20
38	Effects of Dark Mode on Visual Fatigue and Acuity in Optical See-Through Head-Mounted Displays. , 2019, , .		20
39	Animatronic shader lamps avatars. Virtual Reality, 2011, 15, 225-238.	6.1	19
40	Exploring the effect of vibrotactile feedback through the floor on social presence in an immersive virtual environment. , 2017, , .		19
41	Sharing gaze rays for visual target identification tasks in collaborative augmented reality. Journal on Multimodal User Interfaces, 2020, 14, 353-371.	2.9	18
42	Diegetic Representations for Seamless Cross-Reality Interruptions. , 2021, , .		18
43	Optimal PMU placement evaluation for power system dynamic state estimation. , 2010, , .		17
44	A Distributed Cooperative Framework for Continuous Multi-Projector Pose Estimation. , 2009, , .		16
45	The Physical-Virtual Patient Simulator. Simulation in Healthcare, 2020, 15, 115-121.	1.2	16
46	A general method for comparing the expected performance of tracking and motion capture systems. , 2005, , .		15
47	Mixed Reality Tabletop Gameplay: Social Interaction With a Virtual Human Capable of Physical Influence. IEEE Transactions on Visualization and Computer Graphics, 2021, 27, 3534-3545.	4.4	15
48	The potential impact of 3d telepresence technology on task performance in emergency trauma care. , 2007, , .		14
49	Assessing Fall Risk Appraisal Through Combined Physiological and Perceived Fall Risk Measures Using Innovative Technology. Journal of Gerontological Nursing, 2020, 46, 41-47.	0.6	14
50	Three-dimensional evaluation of changes in lip position from before to after orthodontic appliance removal. American Journal of Orthodontics and Dentofacial Orthopedics, 2012, 142, 410-418.	1.7	13
51	Combining Head-Mounted and Projector-Based Displays for Surgical Training. Presence: Teleoperators and Virtual Environments, 2004, 13, 128-145.	0.6	12
52	Reducing Task Load with an Embodied Intelligent Virtual Assistant for Improved Performance in Collaborative Decision Making. , 2020, , .		12
53	Effects of Shared Gaze Parameters on Visual Target Identification Task Performance in Augmented Reality. , 2019, , .		12
54	Optical Touch Sensing on Nonparametric Rear-Projection Surfaces for Interactive Physical-Virtual Experiences. Presence: Teleoperators and Virtual Environments, 2016, 25, 33-46.	0.6	11

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55	Cognitive and Touch Performance Effects of Mismatched 3D Physical and Visual Perceptions. , 2018, , .		11
56	Is It Cold in Here or Is It Just Me? Analysis of Augmented Reality Temperature Visualization for Computer-Mediated Thermoception. , 2019, , .		11
57	Effects of Depth Information on Visual Target Identification Task Performance in Shared Gaze Environments. IEEE Transactions on Visualization and Computer Graphics, 2020, 26, 1934-1944.	4.4	11
58	An Extended Analysis on the Benefits of Dark Mode User Interfaces in Optical See-Through Head-Mounted Displays. ACM Transactions on Applied Perception, 2021, 18, 1-22.	1.9	11
59	A Large-Scale Study of Surrogate Physicality and Gesturing on Human–Surrogate Interactions in a Public Space. Frontiers in Robotics and AI, 2017, 4, .	3.2	10
60	Seeing is Believing: Improving the Perceived Trust in Visually Embodied Alexa in Augmented Reality. , 2018, , .		10
61	Physical-Virtual Agents for Healthcare Simulation. , 2018, , .		10
62	Reduced Measurement-space Dynamic State Estimation (ReMeDySE) for power systems. , 2011, , .		9
63	Local sequential ensemble Kalman filter for simultaneously tracking states and parameters. , 2012, , .		9
64	AMITIES. , 2013, , .		9
65	Applications of Avatar Mediated Interaction to Teaching, Training, Job Skills and Wellness. Lecture Notes in Computer Science, 2015, , 133-146.	1.3	9
66	Kalman Filters for Dynamic and Secure Smart Grid State Estimation. Intelligent Industrial Systems, 2015, 1, 29-36.	1.0	9
67	Maintaining and Enhancing Human-Surrogate Presence in Augmented Reality. , 2015, , .		9
68	Effects of Social Priming on Social Presence with Intelligent Virtual Agents. Lecture Notes in Computer Science, 2017, , 87-100.	1.3	9
69	Continual surface-based multi-projector blending for moving objects. , 2011, , .		8
70	Testing and evaluation of a wearable augmented reality system for natural outdoor environments. , 2013, , .		8
71	Development of vision-aided navigation for a wearable outdoor augmented reality system. , 2014, , .		8
72	Touch sensing on non-parametric rear-projection surfaces: A physical-virtual head for hands-on healthcare training. , 2015, , .		8

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73	Reducing Cognitive Load and Improving Warfighter Problem Solving With Intelligent Virtual Assistants. Frontiers in Psychology, 2020, 11, 554706.	2.1	8
74	Reducing Task Load with an Embodied Intelligent Virtual Assistant for Improved Performance in Collaborative Decision Making. , 2020, , .		8
75	LoDiM: A novel power system state estimation method with dynamic measurement selection. , 2011, , .		7
76	Online control of active camera networks for computer vision tasks. ACM Transactions on Sensor Networks, 2014, 10, 1-40.	3.6	7
77	The advantages of virtual dogs over virtual people: Using augmented reality to provide social support in stressful situations. International Journal of Human Computer Studies, 2022, 165, 102838.	5.6	7
78	Differential Camera Tracking through Linearizing the Local Appearance Manifold. , 2007, , .		6
79	Exploring the potential of video technologies for collaboration in emergency medical care: Part I. Information sharing. Journal of the Association for Information Science and Technology, 2008, 59, 2320-2334.	2.6	6
80	Exploring the potential of video technologies for collaboration in emergency medical care: Part II. Task performance. Journal of the Association for Information Science and Technology, 2008, 59, 2335-2349.	2.6	6
81	Smart instrumented training ranges: bringing automated system solutions to support critical domain needs. Journal of Defense Modeling and Simulation, 2013, 10, 327-342.	1.7	6
82	Can social presence be contagious? Effects of social presence priming on interaction with Virtual Humans. , 2017, , .		6
83	Implementation and Evaluation of a 50 kHz, <inline-formula> <tex-math notation="LaTeX">$28\mathrm{s}$</tex-math> </inline-formula> Motion-to-Pose Latency Head Tracking Instrument. IEEE Transactions on Visualization and Computer Graphics, 2019, 25, 1970-1980.	4.4	6
84	Neurological Assessment Using a Physical-Virtual Patient (PVP). Simulation and Gaming, 2020, 51, 802-818.	1.9	6
85	Autonomous Vehicle Visual Embodiment for Pedestrian Interactions in Crossing Scenarios. , 2021, , .		6
86	Multi-view lenticular display for group teleconferencing. , 2009, , .		6
87	Continuum of virtual-human space. , 2012, , .		5
88	Augmented rotations in virtual reality for users with a reduced range of head movement. Journal of Rehabilitation and Assistive Technologies Engineering, 2019, 6, 205566831984130.	0.9	5
89	Investigating Augmented Reality Animals as Companions. , 2019, , .		5
90	Effects of Dark Mode Graphics on Visual Acuity and Fatigue with Virtual Reality Head-Mounted Displays. , 2020, , .		5

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91	A Scoping Review of Assistance and Therapy with Head-Mounted Displays for People Who Are Visually Impaired. ACM Transactions on Accessible Computing, 2022, 15, 1-28.	2.4	5
92	An interactive camera placement and visibility simulator for image-based VR applications. , 2006, , .		4
93	Power system state estimation with dynamic optimal measurement selection. , 2011, , .		4
94	A general approach for closed-loop registration in AR. , 2012, , .		4
95	Exploring social presence transfer in real-virtual human interaction. , 2016, , .		4
96	Applying Stress Management Techniques in Augmented Reality: Stress Induction and Reduction in Healthcare Providers During Virtual Triage Simulation. , 2020, , .		4
97	Virtual Animals as Diegetic Attention Guidance Mechanisms in 360-Degree Experiences. IEEE Transactions on Visualization and Computer Graphics, 2021, 27, 4321-4331.	4.4	4
98	Exploring the Impact of Environmental Effects on Social Presence with a Virtual Human. Lecture Notes in Computer Science, 2016, , 470-474.	1.3	4
99	3D medical collaboration technology to enhance emergency healthcare. Journal of Biomedical Discovery and Collaboration, 2009, 4, 4.	2.0	4
100	Illumination Insensitive Model-Based 3D Object Tracking and Texture Refinement. , 2006, , .		3
101	Advances in Shader Lamps Avatars for telepresence. , 2012, , .		3
102	Pixel-wise closed-loop registration in video-based augmented reality. , 2014, , .		3
103	Examining Whether Secondary Effects of Temperature-Associated Virtual Stimuli Influence Subjective Perception of Duration. , 2020, , .		3
104	Technical Report: Exploring Human Surrogate Characteristics. Lecture Notes in Computer Science, 2015, , 215-228.	1.3	3
105	Augmented Reality for Tactical Combat Casualty Care Training. Lecture Notes in Computer Science, 2018, , 227-239.	1.3	3
106	Analysis of Peripheral Vision and Vibrotactile Feedback During Proximal Search Tasks with Dynamic Virtual Entities in Augmented Reality. , 2019, , .		3
107	Dynamic state estimation of a synchronous machine using PMU data: A comparative study. , 2015, , .		2
108	Secure and adaptive state estimation for a PMU-equipped smart grid. , 2015, , .		2

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109	HuSIS: A Dedicated Space for Studying Human Interactions. IEEE Computer Graphics and Applications, 2016, 36, 26-36.	1.2	2
110	Coherence changes gaze behavior in virtual human interactions. , 2017, , .		2
111	Virtual Big Heads: Analysis of Human Perception and Comfort of Head Scales in Social Virtual Reality. , 2020, , .		2
112	Good Enough Yet? A Preliminary Evaluation of Human-Surrogate Interaction. Lecture Notes in Computer Science, 2014, , 239-250.	1.3	2
113	Trade-offs in Augmented Reality User Interfaces for Controlling a Smart Environment. , 2021, , .		2
114	Shader Lamps Virtual Patients: the physical manifestation of virtual patients. Studies in Health Technology and Informatics, 2012, 173, 372-8.	0.3	2
115	Using Simulation to Test Validity and Reliability of I-BIDS: A New Handoff Tool. Simulation and Gaming, 0, , 104687812210985.	1.9	2
116	Experimental Comparison of 2D and 3D Technology Mediated Paramedicâ€Physician Collaboration in Remote Emergency Medical Situations. Proceedings of the American Society for Information Science and Technology, 2006, 43, 1-19.	0.2	1
117	On-line control of active camera networks for computer vision tasks. , 2011, , .		1
118	Physical-Virtual Humans: Challenges and Opportunities. , 2012, , .		1
119	The A-Desk: A Unified Workspace of the Future. IEEE Computer Graphics and Applications, 2020, 40, 56-71.	1.2	1
120	Beyond Visible Light: User and Societal Impacts of Egocentric Multispectral Vision. Lecture Notes in Computer Science, 2021, , 317-335.	1.3	1
121	Automated Camera Selection and Control for Better Training Support. Lecture Notes in Computer Science, 2013, , 50-59.	1.3	1
122	Virtual Humans with Pets and Robots: Exploring the Influence of Social Priming on Oneâ€™s Perception of a Virtual Human. , 2022, , .		1
123	Experiential telepresence. , 2003, , .		0
124	General chairs. , 2012, , .		0
125	Gen chairs. , 2012, , .		0
126	Matching vs. Non-Matching Visuals and Shape for Embodied Virtual Healthcare Agents. , 2019, , .		0

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127	Mixed Reality Technology Capabilities for Combat-Casualty Handoff Training. Lecture Notes in Computer Science, 2021, , 695-711.	1.3	0
128	3D Motion Segmentation Using Intensity Trajectory. Lecture Notes in Computer Science, 2010, , 157-168.	1.3	0
129	Mitigating Perceptual Error in Synthetic Animatronics using Visual Feature Flow. Journal of Vision, 2017, 17, 331.	0.3	0
130	Mine the Gap. , 2018, , .		0
131	Augmenting Human Perception: Mediation of Extrasensory Signals in Head-Worn Augmented Reality. , 2021, , .		0