Cagatay Basdogan

List of Publications by Year
in descending order

88	3,904	185998 28	133063 59
papers	citations	h-index	g-index

91	91	91	2758
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Haptics in virtual environments: Taxonomy, research status, and challenges. Computers and Graphics, 1997, 21, 393-404.	1.4	410
2	An experimental study on the role of touch in shared virtual environments. ACM Transactions on Computer-Human Interaction, 2000, 7, 443-460.	4.6	324
3	Haptic rendering - beyond visual computing - Haptics in minimally invasive surgical simulation and training. IEEE Computer Graphics and Applications, 2004, 24, 56-64.	1.0	285
4	Virtual environments for medical training: graphical and haptic simulation of laparoscopic common bile duct exploration. IEEE/ASME Transactions on Mechatronics, 2001, 6, 269-285.	3.7	226
5	The role of roles: Physical cooperation between humans and robots. International Journal of Robotics Research, 2012, 31, 1656-1674.	5.8	216
6	A robotic indenter for minimally invasive measurement and characterization of soft tissue response. Medical Image Analysis, 2007, 11, 361-373.	7.0	170
7	On the Measurement of Dynamic Stability of Human Locomotion. Journal of Biomechanical Engineering, 1994, 116, 30-36.	0.6	162
8	VR-Based Simulators for Training in Minimally Invasive Surgery. IEEE Computer Graphics and Applications, 2007, 27, 54-66.	1.0	143
9	Efficient Point-Based Rendering Techniques for Haptic Display of Virtual Objects. Presence: Teleoperators and Virtual Environments, 1999, 8, 477-491.	0.3	141
10	A Review of Surface Haptics: Enabling Tactile Effects on Touch Surfaces. IEEE Transactions on Haptics, 2020, 13, 450-470.	1.8	109
11	Effect of Waveform on Tactile Perception by Electrovibration Displayed on Touch Screens. IEEE Transactions on Haptics, 2017, 10, 488-499.	1.8	90
12	Kinematics and Dynamic Stability of the Locomotion of Post-Polio Patients. Journal of Biomechanical Engineering, 1996, 118, 405-411.	0.6	77
13	Estimation of fracture toughness of liver tissue: Experiments and validation. Medical Engineering and Physics, 2012, 34, 882-891.	0.8	68
14	Contact mechanics between the human finger and a touchscreen under electroadhesion. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12668-12673.	3.3	64
15	Surgical Simulation: An Emerging Technology for Training in Emergency Medicine. Presence: Teleoperators and Virtual Environments, 1997, 6, 147-159.	0.3	58
16	Lower limb kinematics during treadmill walking after space flight: implications for gaze stabilization. Experimental Brain Research, 1996, 112, 325-34.	0.7	54
17	Real-Time Finite-Element Simulation of Linear Viscoelastic Tissue Behavior Based on Experimental Data. IEEE Computer Graphics and Applications, 2006, 26, 58-68.	1.0	54
18	Intention Recognition for Dynamic Role Exchange in Haptic Collaboration. IEEE Transactions on Haptics, 2013, 6, 58-68.	1.8	51

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19	Presenting joint kinematics of human locomotion using phase plane portraits and PoincarÃ© maps. Journal of Biomechanics, 1994, 27, 1495-1499.	0.9	46
20	Haptic negotiation and role exchange for collaboration in virtual environments. , 2010, , .		40
21	Haptic guidance for improved task performance in steering microparticles with optical tweezers. Optics Express, 2007, 15, 11616.	1.7	37
22	Effect of Preservation Period on the Viscoelastic Material Properties of Soft Tissues With Implications for Liver Transplantation. Journal of Biomechanical Engineering, 2010, 132, 101007.	0.6	37
23	A robotic indenter for minimally invasive characterization of soft tissues. International Congress Series, 2005, 1281, 713-718.	0.2	36
24	Recognition of Haptic Interaction Patterns in Dyadic Joint Object Manipulation. IEEE Transactions on Haptics, 2015, 8, 54-66.	1.8	36
25	Stable Physical Human-Robot Interaction Using Fractional Order Admittance Control. IEEE Transactions on Haptics, 2018, 11, 464-475.	1.8	36
26	Tactile Masking by Electrovibration. IEEE Transactions on Haptics, 2018, 11, 623-635.	1.8	35
27	Roughness perception of virtual textures displayed by electrovibration on touch screens. , 2017, , .		33
28	Characterization of frequency-dependent material properties of human liver and its pathologies using an impact hammer. Medical Image Analysis, 2011, 15, 45-52.	7.0	31
29	Adaptive Q control for tapping-mode nanoscanning using a piezoactuated bimorph probe. Review of Scientific Instruments, 2007, 78, 043707.	0.6	30
30	Electroadhesion with application to touchscreens. Soft Matter, 2019, 15, 1758-1775.	1.2	29
31	Effect of Waveform in Haptic Perception of Electrovibration on Touchscreens. Lecture Notes in Computer Science, 2016, , 190-203.	1.0	29
32	A New Haptic Interaction and Visualization Approach for Rigid Molecular Docking in Virtual Environments. Presence: Teleoperators and Virtual Environments, 2008, 17, 73-90.	0.3	28
33	State feedback control for adjusting the dynamic behavior of a piezoactuated bimorph atomic force microscopy probe. Review of Scientific Instruments, 2009, 80, 063701.	0.6	28
34	Correlation between the mechanical and histological properties of liver tissue. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 29, 403-416.	1.5	28
35	Real-time visio-haptic interaction with static soft tissue models having geometric and material nonlinearity. Computers and Graphics, 2010, 34, 43-54.	1.4	27
36	A new feature-based method for robust and efficient rigid-body registration of overlapping point clouds. Visual Computer, 2008, 24, 679-688.	2.5	26

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37	Robust Repetitive Controller for Fast AFM Imaging. IEEE Nanotechnology Magazine, 2011, 10, 1074-1082.	1.1	26
38	HapTable: An Interactive Tabletop Providing Online Haptic Feedback for Touch Gestures. IEEE Transactions on Visualization and Computer Graphics, 2019, 25, 2749-2762.	2.9	24
39	Tactile Roughness Perception of Virtual Gratings by Electrovibration. IEEE Transactions on Haptics, 2020, 13, 562-570.	1.8	23
40	Effect of normal compression on the shear modulus of soft tissue in rheological measurements. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 49, 235-243.	1.5	22
41	Supporting Negotiation Behavior with Haptics-Enabled Human-Computer Interfaces. IEEE Transactions on Haptics, 2012, 5, 274-284.	1.8	21
42	Haptics in medicine and clinical skill acquisition [special section intro.]. IEEE Transactions on Haptics, 2011, 4, 153-154.	1.8	20
43	Psychophysical Evaluation of Change in Friction on an Ultrasonically-Actuated Touchscreen. IEEE Transactions on Haptics, 2018, 11, 599-610.	1.8	20
44	Numerical simulation of nano scanning in intermittent-contact mode AFM underQcontrol. Nanotechnology, 2008, 19, 075503.	1.3	19
45	Vibrotactile feedback in steering wheel reduces navigation errors during GPS-guided car driving. , 2011, , .		19
46	Fingerpad contact evolution under electrovibration. Journal of the Royal Society Interface, 2019, 16, 20190166.	1.5	19
47	Effect of solution and post-mortem time on mechanical and histological properties of liver during cold preservation. Biorheology, 2014, 51, 47-70.	1.2	18
48	Adaptive Human Force Scaling via Admittance Control for Physical Human-Robot Interaction. IEEE Transactions on Haptics, 2021, 14, 750-761.	1.8	17
49	Using Haptics to Convey Cause-and-Effect Relations in Climate Visualization. IEEE Transactions on Haptics, 2008, 1, 130-141.	1.8	16
50	A Computational Multicriteria Optimization Approach to Controller Design for Physical Human-Robot Interaction. IEEE Transactions on Robotics, 2020, 36, 1791-1804.	7.3	16
51	Perception of Skin Stretch Applied to Palm: Effects of Speed and Displacement. Lecture Notes in Computer Science, 2016, , 180-189.	1.0	16
52	Haptic Manipulation of Microspheres Using Optical Tweezers Under the Guidance of Artificial Force Fields. Presence: Teleoperators and Virtual Environments, 2008, 17, 344-364.	0.3	15
53	Repetitive control of an XYZ piezo-stage for faster nano-scanning: Numerical simulations and experiments. Mechatronics, 2011, 21, 1098-1107.	2.0	15
54	Data-driven vibrotactile rendering of digital buttons on touchscreens. International Journal of Human Computer Studies, 2020, 135, 102363.	3.7	15

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55	Conveying intentions through haptics in human-computer collaboration. , 2011, , .		14
56	Visuo-Haptic Discrimination of Viscoelastic Materials. IEEE Transactions on Haptics, 2019, 12, 438-450.	1.8	14
57	Modeling Sliding Friction Between Human Finger and Touchscreen Under Electroadhesion. IEEE Transactions on Haptics, 2020, 13, 511-521.	1.8	14
58	An Optoelectromechanical Tactile Sensor for Detection of Breast Lumps. IEEE Transactions on Haptics, 2013, 6, 145-155.	1.8	13
59	Haptic stylus with inertial and vibro-tactile feedback. , 2013, , .		13
60	A Variable-Fractional Order Admittance Controller for pHRI. , 2020, , .		12
61	Towards collaborative drilling with a cobot using admittance controller. Transactions of the Institute of Measurement and Control, 2021, 43, 1760-1773.	1.1	11
62	Step-Change in Friction Under Electrovibration. IEEE Transactions on Haptics, 2020, 13, 137-143.	1.8	11
63	Dynamic Material Properties of Human and Animal Livers. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2012, , 229-241.	0.7	10
64	Detecting Human Motion Intention during pHRI Using Artificial Neural Networks Trained by EMG Signals. , 2020, , .		10
65	Tactile Perception of Virtual Edges and Gratings Displayed by Friction Modulation via Ultrasonic Actuation. IEEE Transactions on Haptics, 2020, 13, 368-379.	1.8	10
66	A new control architecture for physical human-robot interaction based on haptic communication. , 2014, , .		8
67	HaptiStylus: A Novel Stylus for Conveying Movement and Rotational Torque Effects. IEEE Computer Graphics and Applications, 2016, 36, 30-41.	1.0	8
68	Fractional order admittance control for physical human-robot interaction. , 2017, , .		8
69	A Novel Haptic Feature Set for the Classification of Interactive Motor Behaviors in Collaborative Object Transfer. IEEE Transactions on Haptics, 2021, 14, 384-395.	1.8	7
70	Improving Human-Computer Cooperation Through Haptic Role Exchange and Negotiation. Springer Series on Touch and Haptic Systems, 2012, , 229-254.	0.2	7
71	An adaptive admittance controller for collaborative drilling with a robot based on subtask classification via deep learning. Mechatronics, 2022, 86, 102851.	2.0	6
72	Virtual reality and medicine: from training systems to performance machines. , 1996, , .		5

#	ARTICLE	IF	CITATIONS
73	Immersive haptic interaction with media. , 2010, , .		5
74	Force-Based Calibration of a Particle System for Realistic Simulation of Nonlinear and Viscoelastic Soft Tissue Behavior. Lecture Notes in Computer Science, 2010, , 23-28.	1.0	5
75	Tactile perception of change in friction on an ultrasonically actuated glass surface. , 2017, , .		5
76	Exploration strategies for tactile graphics displayed by electrovibration on a touchscreen. International Journal of Human Computer Studies, 2022, 160, 102760.	3.7	5
77	An investigation of haptic perception of viscoelastic materials in the frequency domain. , 2018, , .		4
78	Effect of Remote Masking on Detection of Electrovibration. , 2019, , .		4
79	Effect of Remote Masking on Tactile Perception of Electrovibration. IEEE Transactions on Haptics, 2021, 14, 132-142.	1.8	4
80	A Novel Tactile Sensor for Detecting Lumps in Breast Tissue. Lecture Notes in Computer Science, 2010, , 367-372.	1.0	4
81	Finite Element Modeling of a Vibrating Touch Screen Actuated by Piezo Patches for Haptic Feedback. Lecture Notes in Computer Science, 2012, , 47-57.	1.0	4
82	Frequency-Dependent Behavior of Electrostatic Forces Between Human Finger and Touch Screen Under Electroadhesion. IEEE Transactions on Haptics, 2022, 15, 416-428.	1.8	4
83	Autostereoscopic and haptic visualization for space exploration and mission design. , 0, , .		3
84	From 2D Images to 3D Tangible Models: Autostereoscopic and Haptic Visualization of Martian Rocks in Virtual Environments. Presence: Teleoperators and Virtual Environments, 2007, 16, 1-15.	0.3	3
85	Role allocation through haptics in physical human-robot interaction. , 2013, , .		1
86	Vibrotactile haptics for touch screens. , 2011, , .		0
87	Effect of Finger Velocity on Frictional Forces Modulated by Electrovibration. , 2017, , .		0
88	Haptic Perception of 2D Equilateral Geometric Shapes via Electrovibration on Touch Screen. , 2017, , .		0