Mandayam A Srinivasan

List of Publications by Year
in descending order

53 papers	4,368 citations	236925 25 h-index	189892 50 g-index
54 all docs	54 docs citations	54 times ranked	3498 citing authors

#	Article	IF	Citations
1	Real-time prediction of hand trajectory by ensembles of cortical neurons in primates. Nature, 2000, 408, 361-365.	27.8	1,371
2	Haptics in virtual environments: Taxonomy, research status, and challenges. Computers and Graphics, 1997, 21, 393-404.	2.5	410
3	An experimental study on the role of touch in shared virtual environments. ACM Transactions on Computer-Human Interaction, 2000, 7, 443-460.	5.7	324
4	Haptic rendering - beyond visual computing - Haptics in minimally invasive surgical simulation and training. IEEE Computer Graphics and Applications, 2004, 24, 56-64.	1.2	285
5	3-D Finite-Element Models of Human and Monkey Fingertips to Investigate the Mechanics of Tactile Sense. Journal of Biomechanical Engineering, 2003, 125, 682-691.	1.3	257
6	Manual discrimination of compliance using active pinch grasp: The roles of force and work cues. Perception & Psychophysics, 1995, 57, 495-510.	2.3	181
7	Efficient Point-Based Rendering Techniques for Haptic Display of Virtual Objects. Presence: Teleoperators and Virtual Environments, 1999, 8, 477-491.	0.6	141
8	Transatlantic Touch: A Study of Haptic Collaboration over Long Distance. Presence: Teleoperators and Virtual Environments, 2004, 13, 328-337.	0.6	110
9	Continuous Shared Control for Stabilizing Reaching and Grasping With Brain-Machine Interfaces. IEEE Transactions on Biomedical Engineering, 2006, 53, 1164-1173.	4.2	101
10	Statistics of envelope of high-frequency ultrasonic backscatter from human skin in vivo. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2002, 49, 871-882.	3.0	95
11	Encoding of Shape and Orientation of Objects Indented Into the Monkey Fingerpad by Populations of Slowly and Rapidly Adapting Mechanoreceptors. Journal of Neurophysiology, 1998, 79, 3238-3251.	1.8	69
12	High-frequency ultrasonic attenuation and backscatter coefficients of in vivo normal human dermis and subcutaneous fat. Ultrasound in Medicine and Biology, 2001, 27, 1543-1556.	1.5	64
13	Quantitative ultrasonic methods for characterization of skin lesions in vivo. Ultrasound in Medicine and Biology, 2003, 29, 825-838.	1.5	60
14	In Vivo Mechanical Behavior of Intra-abdominal Organs. IEEE Transactions on Biomedical Engineering, 2006, 53, 2129-2138.	4.2	60
15	Natural Infection of C.Âelegans by an Oomycete Reveals a New Pathogen-Specific Immune Response. Current Biology, 2018, 28, 640-648.e5.	3.9	48
16	Tactual discrimination of softness: abilities and mechanisms. , 1996, , 123-135.		48
17	Responses of cutaneous mechanoreceptors to the shape of objects applied to the primate fingerpad. Acta Psychologica, 1993, 84, 41-51.	1.5	37
18	The Muscle Activation Method: An Approach to Impedance Control of Brain-Machine Interfaces Through a Musculoskeletal Model of the Arm. IEEE Transactions on Biomedical Engineering, 2007, 54, 1520-1529.	4.2	36

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19	Discrimination and identification of finger joint-angle position using active motion. ACM Transactions on Applied Perception, 2007, 4, 10.	1.9	35
20	Physically Realistic Virtual Surgery Using the Point-Associated Finite Field (PAFF) Approach. Presence: Teleoperators and Virtual Environments, 2006, 15, 294-308.	0.6	34
21	A compact planar distributed tactile display and effects of frequency on texture judgment. Advanced Robotics, 2006, 20, 563-580.	1.8	32
22	Robust deconvolution of high-frequency ultrasound images using higher-order spectral analysis and wavelets. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2003, 50, 1286-1295.	3.0	30
23	Expertâ€level automated malaria diagnosis on routine blood films with deep neural networks. American Journal of Hematology, 2020, 95, 883-891.	4.1	30
24	Vibrotactile Sensitivity Threshold: Nonlinear Stochastic Mechanotransduction Model of the Pacinian Corpuscle. IEEE Transactions on Haptics, 2015, 8, 102-113.	2.7	29
25	Multiscale Layered Biomechanical Model of the Pacinian Corpuscle. IEEE Transactions on Haptics, 2015, 8, 31-42.	2.7	29
26	Mechanical properties measured by atomic force microscopy define health biomarkers in ageing C. elegans. Nature Communications, 2020, 11, 1043.	12.8	29
27	Rehabilitation program integrating virtual environment to improve orientation and mobility skills for people who are blind. Computers and Education, 2015, 80, 1-14.	8.3	28
28	In-vivo high resolution AFM topographic imaging of Caenorhabditis elegans reveals previously unreported surface structures of cuticle mutants. Nanomedicine: Nanotechnology, Biology, and Medicine, 2017, 13, 183-189.	3.3	28
29	Virtual-reality-based laparoscopic surgical training: The role of simulation fidelity in haptic feedback. Computer Aided Surgery, 2004, 9, 227-234.	1.8	26
30	Newly blind persons using virtual environment system in a traditional orientation and mobility rehabilitation program: a case study. Disability and Rehabilitation: Assistive Technology, 2012, 7, 420-435.	2.2	25
31	Virtual surgery simulation for medical training using multiâ€resolution organ models. International Journal of Medical Robotics and Computer Assisted Surgery, 2007, 3, 149-158.	2.3	24
32	An efficient soft tissue characterization algorithm from in vivo indentation experiments for medical simulation. International Journal of Medical Robotics and Computer Assisted Surgery, 2008, 4, 277-285.	2.3	23
33	Three-dimensional behavioural phenotyping of freely moving C. elegans using quantitative light field microscopy. PLoS ONE, 2018, 13, e0200108.	2.5	20
34	The point collocation-based method of finite spheres (PCMFS) for real time surgery simulation. Computers and Structures, 2005, 83, 1515-1525.	4.4	19
35	Developments in brainâ€“machine interfaces from the perspective of robotics. Human Movement Science, 2009, 28, 191-203.	1.4	18
36	BlindAid: A learning environment for enabling people who are blind to explore and navigate through unknown real spaces. , 2008, , .		17

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37	Encoding of Shape in the Responses of Cutaneous Mechanoreceptors. , 1991, , 59-69.		17
38	Data-driven malaria prevalence prediction in large densely populated urban holoendemic sub-Saharan West Africa. Scientific Reports, 2020, 10, 15918.	3.3	16
39	Viscoelastic Characterization of the Primate Finger Pad In Vivo by Microstep Indentation and Three-Dimensional Finite Element Models for Tactile Sensation Studies. Journal of Biomechanical Engineering, 2015, 137, 061002.	1.3	15
40	Determining the biomechanics of touch sensation in C. elegans. Scientific Reports, 2017, 7, 12329.	3.3	14
41	Beaming into the Rat World: Enabling Real-Time Interaction between Rat and Human Each at Their Own Scale. PLoS ONE, 2012, 7, e48331.	2.5	13
42	wUbi-Pen: Sensory Feedback Stylus Interacting with Graphical User Interface. Presence: Teleoperators and Virtual Environments, 2012, 21, 142-155.	0.6	10
43	Virtual Environments for People who Are Visually Impaired Integrated into an Orientation and Mobility Program. Journal of Visual Impairment and Blindness, 2015, 109, 5-16.	0.7	10
44	Synchronization control for physics-based collaborative virtual environments with shared haptics. Advanced Robotics, 2007, 21, 1001-1029.	1.8	9
45	Human haptic perception is interrupted by explorative stops of milliseconds. Frontiers in Psychology, 2014, 5, 292.	2.1	9
46	Coding source localization through inter-spike delay: modelling a cluster of Pacinian Corpuscles using time-division multiplexing approach. Somatosensory & Motor Research, 2020, 37, 63-73.	0.9	9
47	A Virtual Map to Support People Who are Blind in Navigation through Real Spaces. Journal of Special Education Technology, 2011, 26, 41-57.	2.2	7
48	Virtual Environment System in Support of a Traditional Orientation and Mobility Rehabilitation Program for People Who Are Blind. Presence: Teleoperators and Virtual Environments, 2013, 22, 235-254.	0.6	7
49	Nano-mechanical single-cell sensing of cellâ€“matrix contacts. Nanoscale, 2016, 8, 18105-18112.	5.6	7
50	Interactive deformable geometry maps. Visual Computer, 2007, 23, 119-131.	3.5	6
51	Investigation of mechanosensation in C elegans using light field calcium imaging. Biomedical Optics Express, 2016, 7, 2877.	2.9	6
52	Flexible membrane tactile sensor for contact traction distribution measurement on a microscale. , 2011, , .		2
53	Haptic texture generation using stochastic models and teleoperation. International Journal of Control, Automation and Systems, 2012, 10, 1245-1253.	2.7	1