Parsaoran Hutapea

List of Publications by Year
in descending order

72	640	623734 14	713466 21
papers	citations	h-index	g-index

72	72	72	507
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Assessment of tissue damage from mosquito-inspired surgical needle. Minimally Invasive Therapy and Allied Technologies, 2022, 31, 1112-1121.	1.2	6
2	Predicting length of hospital stay in infants with acute bronchiolitis using machineâ€learning algorithms. Acta Paediatrica, International Journal of Paediatrics, 2021, 110, 961-962.	1.5	1
3	Effect of composite coating on insertion mechanics of needle structure in soft materials. Medical Engineering and Physics, 2021, 95, 104-110.	1.7	7
4	Effect of vibration on insertion force and deflection of bioinspired needle in tissues. Bioinspiration and Biomimetics, 2020, 15, 054001.	2.9	8
5	A Machine Learning Enabled Wireless Intracranial Brain Deformation Sensing System. IEEE Transactions on Biomedical Engineering, 2020, 67, 3521-3530.	4.2	3
6	Design and Experimental Evaluation of Mosquito-Inspired Needle Structure in Soft Materials. , 2020, , .		2
7	Novel design of honeybee-inspired needles for percutaneous procedure. Bioinspiration and Biomimetics, 2018, 13, 036013.	2.9	27
8	Insertion mechanics of bioinspired needles into soft tissues. Minimally Invasive Therapy and Allied Technologies, 2018, 27, 284-291.	1.2	17
9	Tissue Deformation and Insertion Force of Bee-Stinger Inspired Surgical Needles. Journal of Medical Devices, Transactions of the ASME, 2018, 12, .	0.7	7
10	Simulation and experimental studies in needleâ€“tissue interactions. Journal of Clinical Monitoring and Computing, 2017, 31, 861-872.	1.6	23
11	Novel Steerable Smart Needle With a Built-In Recovery Mechanism for Multiple Actuations. , 2017, , .		1
12	Design and Evaluation of Advanced Smart Needles for Brain Biopsy. , 2017, , .		1
13	Design of Smart Barb of Honeybee-Inspired Surgery Needle. , 2017, , .		3
14	Study of Bioinspired Surgery Needle Advancing in Soft Tissues. , 2017, , .		2
15	Insertion Mechanics of 3D Printed Honeybee-Inspired Needle Prototypes for Percutaneous Procedure. , 2017, , .		5
16	Polydopamine Coating for Thermal Insulation of Shape Memory Alloy Wires. , 2016, , .		2
17	Sensing Hydrogen Gas from Atmospheric Pressure to a Hundred Parts per Million with Nanogaps Fabricated Using a Single-Step Bending Deformation. ACS Sensors, 2016, 1, 73-80.	7.8	26
18	Flexure-Based Active Needle for Enhanced Steering Within Soft Tissue. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.7	11

#	Article	IF	Citations
19	Development of Self-Actuating Flexible Needle System for Surgical Procedures1. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.7	5
20	Finite Element Studies of Needleâ€“Tissue Interactions for Percutaneous Procedures1. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.7	3
21	Towards the design and development of an active needle for therapeutic procedures. , 2015, , .		2
22	Design, Development and Evaluation of a Two Way Actuated Steerable Needle. , 2015, , .		1
23	Simulation and experimental studies of the SMA-activated needle behavior inside the tissue. Proceedings of SPIE, 2015, , .	0.8	1
24	Investigation of crystal structures of one-way shape memory Nitinol wire actuators for active steerable needle. Proceedings of SPIE, 2015, , .	0.8	1
25	Nitinol based flexible smart needle design. , 2015, , .		1
26	Closed loop control of a robot assisted smart flexible needle for percutaneous intervention. , 2015, 2015, 3663-6.		1
27	Feasibility of Shape Memory Alloy Wire Actuation for an Active Steerable Cannula. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.7	15
28	X-ray Diffraction Investigations of Shape Memory NiTi Wire. Journal of Materials Engineering and Performance, 2015, 24, 3038-3048.	2.5	5
29	Computational design optimization of a SMA-based active steerable needle. Proceedings of SPIE, 2015, , .	0.8	0
30	Control of Shape Memory Alloy Actuated Flexible Needle Using Multimodal Sensory Feedbacks. Journal of Automation and Control Engineering, 2015, , 428-434.	0.3	7
31	Design optimization study of a shape memory alloy active needle for biomedical applications. Medical Engineering and Physics, 2015, 37, 469-477.	1.7	17
32	TU-AB-201-12: Effects of Tissue Interference On Electromagnetic Sensor and Ultrasound Imaging Sensing for Robot-Guided Needle Interventions. Medical Physics, 2015, 42, 3596-3596.	3.0	0
33	Analysis Driven Design Optimization of SMA-Based Steerable Active Needle. , 2014, , .		6
34	Studies With SMA Actuated Needle for Steering Within Tissue. , 2014, , .		6
35	Path planning for robot-assisted active flexible needle using improved Rapidly-Exploring Random trees. , 2014, 2014, 380-3.		3
36	Development of a coordinated controller for robot-assisted shape memory alloy actuated needle for prostate brachytherapy. , 2014, 2014, 357-60.		4

#	Article	IF	Citations
37	Dynamic estimation of an active surgical needle deflection for brachytherapy procedures. , 2014, , .		3
38	A flexible active needle for steering in soft tissues. , 2014, , .		10
39	Polyacrylamide phantom for self-actuating needleâ€“tissue interaction studies. Medical Engineering and Physics, 2014, 36, 140-145.	1.7	36
40	A model to predict deflection of bevel-tipped active needle advancing in soft tissue. Medical Engineering and Physics, 2014, 36, 285-293.	1.7	40
41	Study of Unrecovered Strain and Critical Stresses in One-Way Shape Memory Nitinol. Journal of Materials Engineering and Performance, 2014, 23, 2885-2893.	2.5	16
42	Application of SMA Wire for an Active Steerable Cannula. , 2013, , .		10
43	Finite Element Simulation of an Active Surgical Needle for Prostate Brachytherapy. , 2013, , .		3
44	Size Effect on the Critical Stress of Nitinol Wires. , 2013, , .		7
45	WE-A-108-08: Development of Shape Memory Alloy Actuated Flexible Needle Control System for Prostate Brachytherapy. Medical Physics, 2013, 40, 467-467.	3.0	1
46	Energy Based Model to Predict the Tissue-Needle Interaction Mechanics of Active Surgical Needles. , 2013, , .		0
47	Development of a proof-of-concept hybrid electric fuel cell vehicle. Journal of Renewable and Sustainable Energy, 2012, 4, 033107.	2.0	2
48	Mechanical characterization of Polyacrylamide for Prostate Tissue-Mimicking Phantoms. Journal of Medical Devices, Transactions of the ASME, 2012, 6, .	0.7	1
49	Development of a Proof-of-Concept Proton Exchange Membrane Fuel Cell Powered Scooter. Journal of Fuel Cell Science and Technology, 2012, 9, .	0.8	3
50	A novel curvilinear approach for prostate seed implantation. Medical Physics, 2012, 39, 1887-1892.	3.0	48
51	Effect of mechanical vibration on platinum particle agglomeration and growth in Polymer Electrolyte Membrane Fuel Cell catalyst layers. Journal of Power Sources, 2012, 214, 59-67.	7.8	35
52	Towards a Nitinol Actuator for an Active Surgical Needle. , 2012, , .		13
53	Electro Thermomechanical Behavior of a Smart Actuator for an Active Surgical Needle. Journal of Medical Devices, Transactions of the ASME, 2012, 6, .	0.7	1
54	Influence of Bolting Parameters on the Ultimate Tensile Strength and Stiffness of Composite-Metal Joints[#]. Mechanics Based Design of Structures and Machines, 2010, 38, 261-271.	4.7	11

#	Article	IF	Citations
55	Smart Needling System for Fully Conformal Radiation Dose Delivery in Treating Prostate Cancer. , 2010, , .		4
56	Design of a Bone Transport Device Using Smart Material Actuators. Journal of Mechanical Design, Transactions of the ASME, 2009, 131, .	2.9	3
57	Development of a proofâ€“ofâ€“concept aircraft smart control system. Aeronautical Journal, 2009, 113, 587-590.	1.6	3
58	Development of a smart wing. Aircraft Engineering and Aerospace Technology, 2008, 80, 439-444.	0.8	15
59	Stress-Strain Behavior of a Smart Magnetostrictive Actuator for a Bone Transport Device. Journal of Medical Devices, Transactions of the ASME, 2008, 2, .	0.7	3
60	Influence of harsh environmental conditions on CFRPâ€aluminum single lap joints. Aircraft Engineering and Aerospace Technology, 2008, 80, 371-377.	0.8	6
61	Modifying electric artworks to improve dimensional stability of microelectronic substrates. Microelectronics International, 2007, 24, 15-22.	0.6	1
62	Prediction of microelectronic substrate warpage using homogenized finite element models. Microelectronic Engineering, 2006, 83, 557-569.	2.4	20
63	Prediction of Microelectronic Substrate Warpage Using Homogenized Thermomechanical Finite Element Models. , 2005, , 1141.		0
64	MEMS integrated submount alignment for optoelectronics. Journal of Lightwave Technology, 2005, 23, 504-509.	4.6	11
65	Reducing Warpage of Printed Circuit Boards by Using Wavy Traces. Journal of Electronic Packaging, Transactions of the ASME, 2004, 126, 282-287.	1.8	8
66	Effect of temperature on elastic properties of woven-glass epoxy composites for printed circuit board applications. Journal of Electronic Materials, 2003, 32, 221-227.	2.2	31
67	Micro-stress prediction in composite laminates with high stress gradients. International Journal of Solids and Structures, 2003, 40, 2215-2248.	2.7	7
68	Influence of electric artwork on thermomechanical properties and warpage of printed circuit boards. Journal of Applied Physics, 2003, 94, 686-696.	2.5	18
69	Using waviness to reduce thermal warpage in printed circuit boards. Applied Physics Letters, 2002, 81, 4079-4081.	3.3	15
70	Micropolar in-Plane Shear and Rotation Moduli of Unidirectional Fiber Composites with Fiberâ€“Matrix Interfacial Debonding. Journal of Composite Materials, 2002, 36, 1381-1399.	2.4	6
71	The effect of thermal aging on the Mode-I interlaminar fracture behavior of a high-temperature IM7/LaRC-RP46 composite. Composites Science and Technology, 1999, 59, 1271-1286.	7.8	14
72	Tuning of electric artworks of printed circuit boards to reduce warpage. , 0, , .		5