

# Parsaoran Hutapea

## List of Publications by Year in descending order

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Version: 2024-02-01

72  
papers

640  
citations

623734

14  
h-index

713466

21  
g-index

72  
all docs

72  
docs citations

72  
times ranked

507  
citing authors

#	ARTICLE	IF	CITATIONS
1	A novel curvilinear approach for prostate seed implantation. <i>Medical Physics</i> , 2012, 39, 1887-1892.	3.0	48
2	A model to predict deflection of bevel-tipped active needle advancing in soft tissue. <i>Medical Engineering and Physics</i> , 2014, 36, 285-293.	1.7	40
3	Polyacrylamide phantom for self-actuating needle-tissue interaction studies. <i>Medical Engineering and Physics</i> , 2014, 36, 140-145.	1.7	36
4	Effect of mechanical vibration on platinum particle agglomeration and growth in Polymer Electrolyte Membrane Fuel Cell catalyst layers. <i>Journal of Power Sources</i> , 2012, 214, 59-67.	7.8	35
5	Effect of temperature on elastic properties of woven-glass epoxy composites for printed circuit board applications. <i>Journal of Electronic Materials</i> , 2003, 32, 221-227.	2.2	31
6	Novel design of honeybee-inspired needles for percutaneous procedure. <i>Bioinspiration and Biomimetics</i> , 2018, 13, 036013.	2.9	27
7	Sensing Hydrogen Gas from Atmospheric Pressure to a Hundred Parts per Million with Nanogaps Fabricated Using a Single-Step Bending Deformation. <i>ACS Sensors</i> , 2016, 1, 73-80.	7.8	26
8	Simulation and experimental studies in needle-tissue interactions. <i>Journal of Clinical Monitoring and Computing</i> , 2017, 31, 861-872.	1.6	23
9	Prediction of microelectronic substrate warpage using homogenized finite element models. <i>Microelectronic Engineering</i> , 2006, 83, 557-569.	2.4	20
10	Influence of electric artwork on thermomechanical properties and warpage of printed circuit boards. <i>Journal of Applied Physics</i> , 2003, 94, 686-696.	2.5	18
11	Design optimization study of a shape memory alloy active needle for biomedical applications. <i>Medical Engineering and Physics</i> , 2015, 37, 469-477.	1.7	17
12	Insertion mechanics of bioinspired needles into soft tissues. <i>Minimally Invasive Therapy and Allied Technologies</i> , 2018, 27, 284-291.	1.2	17
13	Study of Unrecovered Strain and Critical Stresses in One-Way Shape Memory Nitinol. <i>Journal of Materials Engineering and Performance</i> , 2014, 23, 2885-2893.	2.5	16
14	Using waviness to reduce thermal warpage in printed circuit boards. <i>Applied Physics Letters</i> , 2002, 81, 4079-4081.	3.3	15
15	Development of a smart wing. <i>Aircraft Engineering and Aerospace Technology</i> , 2008, 80, 439-444.	0.8	15
16	Feasibility of Shape Memory Alloy Wire Actuation for an Active Steerable Cannula. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2015, 9, .	0.7	15
17	The effect of thermal aging on the Mode-I interlaminar fracture behavior of a high-temperature IM7/LaRC-RP46 composite. <i>Composites Science and Technology</i> , 1999, 59, 1271-1286.	7.8	14
18	Towards a Nitinol Actuator for an Active Surgical Needle. , 2012, , .		13

#	ARTICLE	IF	CITATIONS
19	MEMS integrated submount alignment for optoelectronics. Journal of Lightwave Technology, 2005, 23, 504-509.	4.6	11
20	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
21	Flexure-Based Active Needle for Enhanced Steering Within Soft Tissue. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.7	11
22	Application of SMA Wire for an Active Steerable Cannula. , 2013, , .		10
23	A flexible active needle for steering in soft tissues. , 2014, , .		10
24	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
25	Effect of vibration on insertion force and deflection of bioinspired needle in tissues. Bioinspiration and Biomimetics, 2020, 15, 054001.	2.9	8
26	Micro-stress prediction in composite laminates with high stress gradients. International Journal of Solids and Structures, 2003, 40, 2215-2248.	2.7	7
27	Size Effect on the Critical Stress of Nitinol Wires. , 2013, , .		7
28	Control of Shape Memory Alloy Actuated Flexible Needle Using Multimodal Sensory Feedbacks. Journal of Automation and Control Engineering, 2015, , 428-434.	0.3	7
29	Tissue Deformation and Insertion Force of Bee-Stinger Inspired Surgical Needles. Journal of Medical Devices, Transactions of the ASME, 2018, 12, .	0.7	7
30	Effect of composite coating on insertion mechanics of needle structure in soft materials. Medical Engineering and Physics, 2021, 95, 104-110.	1.7	7
31	Micropolar in-Plane Shear and Rotation Moduli of Unidirectional Fiber Composites with Fiber-Matrix Interfacial Debonding. Journal of Composite Materials, 2002, 36, 1381-1399.	2.4	6
32	Influence of harsh environmental conditions on CFRP-aluminum single lap joints. Aircraft Engineering and Aerospace Technology, 2008, 80, 371-377.	0.8	6
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	Assessment of tissue damage from mosquito-inspired surgical needle. Minimally Invasive Therapy and Allied Technologies, 2022, 31, 1112-1121.	1.2	6
36	Tuning of electric artworks of printed circuit boards to reduce warpage. , 0, , .		5

#	ARTICLE	IF	CITATIONS
37	Development of Self-Actuating Flexible Needle System for Surgical Procedures1. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.7	5
38	X-ray Diffraction Investigations of Shape Memory NiTi Wire. Journal of Materials Engineering and Performance, 2015, 24, 3038-3048.	2.5	5
39	Insertion Mechanics of 3D Printed Honeybee-Inspired Needle Prototypes for Percutaneous Procedure. , 2017, , .		5
40	Smart Needling System for Fully Conformal Radiation Dose Delivery in Treating Prostate Cancer. , 2010, , .		4
41	Development of a coordinated controller for robot-assisted shape memory alloy actuated needle for prostate brachytherapy. , 2014, 2014, 357-60.		4
42	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
43	Design of a Bone Transport Device Using Smart Material Actuators. Journal of Mechanical Design, Transactions of the ASME, 2009, 131, .	2.9	3
44	Development of a proofâ€“ofâ€“concept aircraft smart control system. Aeronautical Journal, 2009, 113, 587-590.	1.6	3
45	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
46	Finite Element Simulation of an Active Surgical Needle for Prostate Brachytherapy. , 2013, , .		3
47	Path planning for robot-assisted active flexible needle using improved Rapidly-Exploring Random trees. , 2014, 2014, 380-3.		3
48	Dynamic estimation of an active surgical needle deflection for brachytherapy procedures. , 2014, , .		3
49	Finite Element Studies of Needleâ€“Tissue Interactions for Percutaneous Procedures1. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.7	3
50	Design of Smart Barb of Honeybee-Inspired Surgery Needle. , 2017, , .		3
51	A Machine Learning Enabled Wireless Intracranial Brain Deformation Sensing System. IEEE Transactions on Biomedical Engineering, 2020, 67, 3521-3530.	4.2	3
52	Development of a proof-of-concept hybrid electric fuel cell vehicle. Journal of Renewable and Sustainable Energy, 2012, 4, 033107.	2.0	2
53	Towards the design and development of an active needle for therapeutic procedures. , 2015, , .		2
54	Polydopamine Coating for Thermal Insulation of Shape Memory Alloy Wires. , 2016, , .		2

#	ARTICLE	IF	CITATIONS
55	Study of Bioinspired Surgery Needle Advancing in Soft Tissues. , 2017, , .		2
56	Design and Experimental Evaluation of Mosquito-Inspired Needle Structure in Soft Materials. , 2020, , .		2
57	Modifying electric artworks to improve dimensional stability of microelectronic substrates. Microelectronics International, 2007, 24, 15-22.	0.6	1
58	Mechanical characterization of Polyacrylamide for Prostate Tissue-Mimicking Phantoms. Journal of Medical Devices, Transactions of the ASME, 2012, 6, .	0.7	1
59	Design, Development and Evaluation of a Two Way Actuated Steerable Needle. , 2015, , .		1
60	Simulation and experimental studies of the SMA-activated needle behavior inside the tissue. Proceedings of SPIE, 2015, , .	0.8	1
61	Investigation of crystal structures of one-way shape memory Nitinol wire actuators for active steerable needle. Proceedings of SPIE, 2015, , .	0.8	1
62	Nitinol based flexible smart needle design. , 2015, , .		1
63	Closed loop control of a robot assisted smart flexible needle for percutaneous intervention. , 2015, 2015, 3663-6.		1
64	Novel Steerable Smart Needle With a Built-In Recovery Mechanism for Multiple Actuations. , 2017, , .		1
65	Design and Evaluation of Advanced Smart Needles for Brain Biopsy. , 2017, , .		1
66	Predicting length of hospital stay in infants with acute bronchiolitis using machine learning algorithms. Acta Paediatrica, International Journal of Paediatrics, 2021, 110, 961-962.	1.5	1
67	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
68	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
69	Prediction of Microelectronic Substrate Warpage Using Homogenized Thermomechanical Finite Element Models. , 2005, , 1141.		0
70	Computational design optimization of a SMA-based active steerable needle. Proceedings of SPIE, 2015, , .	0.8	0
71	Energy Based Model to Predict the Tissue-Needle Interaction Mechanics of Active Surgical Needles. , 2013, , .		0
72	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