Timothy M Kowalewski

List of Publications by Year
in descending order

64	1,011	623734	454955
papers	citations	14 h-index	30 g-index

64	64	64	1007
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Crowd-Sourced Assessment of Technical Skills: a novel method to evaluate surgical performance. Journal of Surgical Research, 2014, 187, 65-71.	1.6	144
2	Virtual Reality Robotic Surgery Warm-Up Improves Task Performance in a Dry Laboratory Environment: A Prospective Randomized Controlled Study. Journal of the American College of Surgeons, 2013, 216, 1181-1192.	0.5	104
3	Crowdsourcing to Assess Surgical Skill. JAMA Surgery, 2015, 150, 1086.	4.3	80
4	Crowd-Sourced Assessment of Technical Skill: A Valid Method for Discriminating Basic Robotic Surgery Skills. Journal of Endourology, 2015, 29, 1295-1301.	2.1	75
5	Crowd-Sourced Assessment of Technical Skills: Differentiating Animate Surgical Skill Through the Wisdom of Crowds. Journal of Endourology, 2015, 29, 1183-1188.	2.1	75
6	Crowd-Sourced Assessment of Technical Skills: An Adjunct to Urology Resident Surgical Simulation Training. Journal of Endourology, 2015, 29, 604-609.	2.1	75
7	Content and Construct Validation of a Robotic Surgery Curriculum Using an Electromagnetic Instrument Tracker. Journal of Urology, 2012, 188, 919-923.	0.4	60
8	Crowd-Sourced Assessment of Technical Skills for Validation of Basic Laparoscopic Urologic Skills Tasks. Journal of Urology, 2016, 195, 1859-1865.	0.4	49
9	Serially Actuated Locomotion for Soft Robots in Tube-Like Environments. IEEE Robotics and Automation Letters, 2017, 2, 1140-1147.	5.1	39
10	Beyond task time: automated measurement augments fundamentals of laparoscopic skills methodology. Journal of Surgical Research, 2014, 192, 329-338.	1.6	31
11	Validation of the AUA BLUS Tasks. Journal of Urology, 2016, 195, 998-1005.	0.4	28
12	Stretchable, Flexible, Scalable Smart Skin Sensors for Robotic Position and Force Estimation. Sensors, 2018, 18, 953.	3.8	24
13	Practical, stretchable smart skin sensors for contact-aware robots in safe and collaborative interactions. , 2015, , .		22
14	Predicting surgical skill from the first N seconds of a task: value over task time using the isogony principle. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 1161-1170.	2.8	22
15	Large-Scale Needfinding: Methods of Increasing User-Generated Needs From Large Populations. Journal of Mechanical Design, Transactions of the ASME, 2015, 137, .	2.9	16
16	Evaluation of Torque Measurement Surrogates as Applied to Grip Torque and Jaw Angle Estimation of Robotic Surgical Tools. IEEE Robotics and Automation Letters, 2018, 3, 3027-3034.	5.1	14
17	Biomechanics of human parietal pleura in uniaxial extension. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 75, 330-335.	3.1	10
18	Da Vinci tool torque mapping over 50,000 grasps and its implications on grip force estimation accuracy. , 2018, , .		9

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19	Conditions for reliable grip force and jaw angle estimation of da Vinci surgical tools. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 117-127.	2.8	9
20	The minimally acceptable classification criterion for surgical skill: intent vectors and separability of raw motion data. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 1151-1159.	2.8	8
21	Bidirectional long short-term memory for surgical skill classification of temporally segmented tasks. International Journal of Computer Assisted Radiology and Surgery, 2020, 15, 2079-2088.	2.8	8
22	3D bioprinting directly onto moving human anatomy. , 2017, , .		7
23	Blended shared control utilizing online identification. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 769-776.	2.8	7
24	Online Free Anatomy Registration via Noncontact Skeletal Tracking for Collaborative Human/Robot Interaction in Surgical Robotics1. Journal of Medical Devices, Transactions of the ASME, 2014, 8, .	0.7	6
25	Soft Passive Valves for Serial Actuation in a Soft Hydraulic Robotic Catheter1. Journal of Medical Devices, Transactions of the ASME, 2016, 10, .	0.7	6
26	Assessing quality of unmet user needs: Effects of need statement characteristics. Design Studies, 2016, 44, 1-27.	3.1	6
27	Crowd-Sourced Reliability of an Assessment of Lower Facial Aging Using a Validated Visual Scale. Plastic and Reconstructive Surgery - Global Open, 2021, 9, e3315.	0.6	6
28	Virtual Reality Warm-up Before Robot-assisted Surgery: A Randomized Controlled Trial. Journal of Surgical Research, 2021, 264, 107-116.	1.6	6
29	Exploratory Visualization of Surgical Training Databases for Improving Skill Acquisition. IEEE Computer Graphics and Applications, 2012, 32, 71-81.	1.2	5
30	Online identification of abdominal tissues in vivo for tissue-aware and injury-avoiding surgical robots. , 2014, , .		5
31	A fast, low-cost, computer vision approach for tracking surgical tools. , 2014, , .		5
32	Flexible, Stretchable Skin Sensors for Two-Dimensional Position Tracking in Medical Simulators1. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.7	5
33	Adaptive Impedance Control with Setpoint Force Tracking for Unknown Soft Environment Interactions. , 2019, , .		5
34	The effect of video playback speed on surgeon technical skill perception. International Journal of Computer Assisted Radiology and Surgery, 2020, 15, 739-747.	2.8	5
35	A Low-Cost Computer Vision Based Approach for Tracking Surgical Robotic Tools. Journal of Medical Devices, Transactions of the ASME, 2013, 7, .	0.7	4
36	SurgTrak â€" A Universal Platform for Quantitative Surgical Data Capture. Journal of Medical Devices, Transactions of the ASME, 2013, 7, .	0.7	4

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37	Tissue Identification Through Back End Sensing on da Vinci EndoWrist Surgical Tool1. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.7	4
38	Quantifying Forces at the Tool-Tissue Interface of a Surgical Laparoscopic Grasper. Journal of Medical Devices, Transactions of the ASME, 2013, 7, .	0.7	3
39	PD19-05 HIGH-VOLUME ASSESSMENT OF SURGICAL VIDEOS VIA CROWD-SOURCING: THE BASIC LAPAROSCOPIC UROLOGIC SKILLS (BLUS) INITIATIVE. Journal of Urology, 2015, 193, .	0.4	3
40	Assessing Quality of User-Submitted Need Statements From Large-Scale Needfinding: Effects of Expertise and Group Size. Journal of Mechanical Design, Transactions of the ASME, 2015, 137, .	2.9	3
41	Medical Simulators for Developing Countries Via Low-Cost Two-Dimensional Position Tracking1. Journal of Medical Devices, Transactions of the ASME, 2014, 8, .	0.7	2
42	Large Scale Needs-Based Open Innovation via Automated Semantic Textual Similarity Analysis. , 2015, , .		2
43	Design of a Dynamic Additive Manufacturing System for Use on Free-Moving Human Anatomy1. Journal of Medical Devices, Transactions of the ASME, 2016, 10, .	0.7	2
44	Real-Time Tissue Differentiation Using Fiber Optic Sensing in Laser Catheters1. Journal of Medical Devices, Transactions of the ASME, 2014, 8, .	0.7	1
45	Quantifying surgical skill: using the wisdom of crowds. Journal of the American College of Surgeons, 2014, 219, e158-e159.	0.5	1
46	PD6-08 CROWD-SOURCED ASSESSMENT OF TECHNICAL SKILLS (C-SATSâ„¢): FAST, ECONOMICAL AND ACCURATE ASSESSMENT OF ROBOTIC SURGERY. Journal of Urology, 2014, 191, .	0.4	1
47	Effects of Grasp Frequency on the Dynamics of a Robotic Surgical Grasper1. Journal of Medical Devices, Transactions of the ASME, 2016, 10, .	0.7	1
48	Laparoscopic Skill Classification Using the Two-Third Power Law and the Isogony Principle. , 2017, , .		1
49	A Simple Free-Fold Test to Measure Bending Stiffness of Slender Soft Actuators. IEEE Robotics and Automation Letters, 2021, 6, 8702-8709.	5.1	1
50	Performance Assessment. Comprehensive Healthcare Simulation, 2019, , 89-105.	0.2	1
51	A Vision for Using Simulation & Virtual Coaching to Improve the Community Practice of Orthopedic Trauma Surgery. Iowa orthopaedic journal, The, 2020, 40, 25-34.	0.5	1
52	Automated Electro-Mechanical Assessment of Psychomotor Skill for High-Stakes Certification in Surgical Robotics. Journal of Medical Devices, Transactions of the ASME, 2013, 7, .	0.7	0
53	Dynamic Calibration Method for Instrumented Laparoscopic Surgical Graspers1. Journal of Medical Devices, Transactions of the ASME, 2014, 8, .	0.7	0
54	Feasibility of a Low-Cost Instrumented Trocar for Universal Surgical Procedure Analyses1. Journal of Medical Devices, Transactions of the ASME, 2014, 8, .	0.7	0

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55	A Framework for Calibrating and Benchmarking Computer Vision Algorithms in Surgical Robotics1. Journal of Medical Devices, Transactions of the ASME, 2014, 8, .	0.7	0
56	Towards Crowd-Based Needfinding in Medical Device Development1. Journal of Medical Devices, Transactions of the ASME, 2014, 8, .	0.7	0
57	PD19-02 USING THE WISDOM OF CROWDS: VALIDATION THROUGH THEÂBASIC LAPAROSCOPIC UROLOGIC SURGERY (BLUS) CURRICULUM. Journal of Urology, 2015, 193, .	0.4	0
58	Feasibility of Online Semantic Labeling of Deformable Tissues for Minimally Invasive Surgery1. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.7	0
59	Variable-Contact Diffuse Reflectance Spectroscopy in Intravascular Conditions Assessment1. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.7	0
60	Crowdsourcing Unmet Clinical Needs in Minimally Invasive Surgery1. Journal of Medical Devices, Transactions of the ASME, 2016, 10, .	0.7	0
61	Decay of Tissue Mechanical Properties Over a 24-hr Period1. Journal of Medical Devices, Transactions of the ASME, 2016, 10, .	0.7	0
62	Dynamic additive manufacturing onto free-moving human anatomy via temporal coarse/fine control. , 2018, , .		0
63	Temporal variability of surgical technical skill perception in real robotic surgery. International Journal of Computer Assisted Radiology and Surgery, 2020, 15, 2101-2107.	2.8	0
64	A Framework for Objective Evaluation of Handheld Robotic Surgical Tools Against Patient Needs. , 2022, , .		0