Michael H Friebe

List of Publications by Year
in descending order

117 papers	678 citations	759233 12 h-index	713466 21 g-index
120 all docs	120 docs citations	120 times ranked	675 citing authors

#	Article	IF	Citations
1	Epileptic seizure detection using cross-bispectrum of electroencephalogram signal. Seizure: the Journal of the British Epilepsy Association, 2019, 66, 4-11.	2.0	70
2	Electrochemotherapy: A Review of Current Status, Alternative IGP Approaches, and Future Perspectives. Journal of Healthcare Engineering, 2019, 2019, 1-11.	1.9	59
3	Evaluation of Commonly Used Algorithms for Thyroid Ultrasound Images Segmentation and Improvement Using Machine Learning Approaches. Journal of Healthcare Engineering, 2018, 2018, 1-13.	1.9	44
4	Novel clinical device tracking and tissue event characterization using proximally placed audio signal acquisition and processing. Scientific Reports, 2018, 8, 12070.	3.3	27
5	Thyroid Ultrasound Texture Classification Using Autoregressive Features in Conjunction With Machine Learning Approaches. IEEE Access, 2019, 7, 79354-79365.	4.2	27
6	Radiation therapy techniques in the treatment of skin cancer: an overview of the current status and outlook. Journal of Dermatological Treatment, 2019, 30, 831-839.	2.2	27
7	Thyroid Nodule Classification for Physician Decision Support Using Machine Learning-Evaluated Geometric and Morphological Features. Sensors, 2020, 20, 6110.	3.8	23
8	Endoscopic Imaging Technology Today. Diagnostics, 2022, 12, 1262.	2.6	17
9	Proximal detection of guide wire perforation using feature extraction from bispectral audio signal analysis combined with machine learning. Computers in Biology and Medicine, 2019, 107, 10-17.	7.0	15
10	Evaluation of Vascular Patterns Using Contact Endoscopy and Narrow-Band Imaging (CE-NBI) for the Diagnosis of Vocal Fold Malignancy. Cancers, 2020, 12, 248.	3.7	14
11	Magnetic Resonance-Guided Angioplasty With Delivery of Contrast-Media Doped Solutions to the Vessel Wall: An Experimental Study in Swine. Investigative Radiology, 2008, 43, 530-537.	6.2	13
12	3D segmentation of thyroid ultrasound images using active contours. Current Directions in Biomedical Engineering, 2016, 2, 467-470.	0.4	13
13	Novel automated vessel pattern characterization of larynx contact endoscopic video images. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 1751-1761.	2.8	13
14	Laryngeal Lesion Classification Based on Vascular Patterns in Contact Endoscopy and Narrow Band Imaging: Manual Versus Automatic Approach. Sensors, 2020, 20, 4018.	3.8	13
15	Comparison of thyroid segmentation techniques for 3D ultrasound. Proceedings of SPIE, 2017, , .	0.8	11
16	Anatomical Structure Segmentation in Ultrasound Volumes Using Cross Frame Belief Propagating Iterative Random Walks. IEEE Journal of Biomedical and Health Informatics, 2019, 23, 1110-1118.	6.3	11
17	Parametrical modelling for texture characterization—A novel approach applied to ultrasound thyroid segmentation. PLoS ONE, 2019, 14, e0211215.	2.5	11
18	Operational framework and training standard requirements for AI-empowered robotic surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2020, 16, 1-13.	2.3	11

#	ARTICLE	IF	CITATIONS
19	Proximally placed signal acquisition sensoric for robotic tissue tool interactions. Current Directions in Biomedical Engineering, 2018, 4, 67-70.	0.4	9
20	Deep Convolution Neural Network for Laryngeal Cancer Classification on Contact Endoscopy-Narrow Band Imaging. Sensors, 2021, 21, 8157.	3.8	9
21	Computed tomography and magnetic resonance imaging contrast media injectors: technical feature review &ndash; what is really needed?. Medical Devices: Evidence and Research, 2016, Volume 9, 231-239.	0.8	8
22	RF-ablation pattern shaping employing switching channels of dual bipolar needle electrodes: ex vivo results. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 905-916.	2.8	8
23	A study of concentration changes of Protoporphyrin IX and Coproporphyrin III in mixed samples mimicking conditions inside cancer cells for Photodynamic Therapy. PLoS ONE, 2018, 13, e0202349.	2.5	8
24	Cyclist Effort Features: A Novel Technique for Image Texture Characterization Applied to Larynx Cancer Classification in Contact Endoscopyâ€"Narrow Band Imaging. Diagnostics, 2021, 11, 432.	2.6	8
25	A Structured Pathway Toward Disruption: A Novel HealthTec Innovation Design Curriculum With Entrepreneurship in Mind. Frontiers in Public Health, 2021, 9, 715768.	2.7	8
26	Active contours extension and similarity indicators for improved 3D segmentation of thyroid ultrasound images. Proceedings of SPIE, 2017, , .	0.8	8
27	Patch Based Texture Classification of Thyroid Ultrasound Images using Convolutional Neural Network. , 2019, 2019, 5828-5831.		7
28	Comparison of Deep Learning Algorithms for Semantic Segmentation of Ultrasound Thyroid Nodules. Current Directions in Biomedical Engineering, 2021, 7, 879-882.	0.4	7
29	Combination of intra-operative freehand SPECT imaging with MR images for guidance and navigation. , 2013, 2013, 3383-6.		6
30	Intraoperative delivery of cell-killing boost radiation â€" a review of current and future methods. Minimally Invasive Therapy and Allied Technologies, 2016, 25, 176-187.	1.2	6
31	Conceptual design of a personalized radiation therapy patch for skin cancer. Current Directions in Biomedical Engineering, 2018, 4, 607-610.	0.4	6
32	Surgical Audio Guidance SurAG: Extracting Non-Invasively Meaningful Guidance Information During Minimally Invasive Procedures. , 2019, , .		6
33	Seizure prediction with cross-higher-order spectral analysis of EEG signals. Signal, Image and Video Processing, 2020, 14, 821-828.	2.7	6
34	Image guided surgery innovation with graduate students - a new lecture format. Current Directions in Biomedical Engineering, 2015, 1, 475-479.	0.4	5
35	Vascular pattern detection and recognition in endoscopic imaging of the vocal folds. Current Directions in Biomedical Engineering, 2018, 4, 75-78.	0.4	5
36	Superficial skin cancer therapy with Yâ€90 microspheres: A feasibility study on patch preparation. Skin Research and Technology, 2020, 26, 25-29.	1.6	5

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37	A multiwell applicator for conformal brachytherapy of superficial skin tumors: A simulation study. Skin Research and Technology, 2020, 26, 537-541.	1.6	5
38	Intravascular endoscopy improvement through narrow-band imaging. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 2015-2021.	2.8	4
39	A Preliminary Study on Automatic Characterization and Classification of Vascular Patterns of Contact Endoscopy Images. , 2019, 2019, 2703-2706.		4
40	Design of an Auscultation System for Phonoangiography and Monitoring of Carotid Artery Diseases. , 2019, 2019, 1776-1779.		4
41	Feasibility test of Dynamic Cooling for detection of small tumors in IR thermographic breast imaging. Current Directions in Biomedical Engineering, 2019, 5, 397-399.	0.4	4
42	Next Generation 5G Mobile Health Network for User Interfacing in Radiology Workflows. IEEE Access, 2021, 9, 102899-102907.	4.2	4
43	Collaborative Robot as Scrub Nurse. Current Directions in Biomedical Engineering, 2021, 7, 162-165.	0.4	4
44	Surgical audio information as base for haptic feedback in robotic-assisted procedures. Current Directions in Biomedical Engineering, 2020, 6, .	0.4	4
45	Acoustic sensing of tissue-tool interactions â€" potential applications in arthroscopic surgery. Current Directions in Biomedical Engineering, 2020, 6, 595-598.	0.4	4
46	Breast sentinel lymph node biopsy with imaging towards minimally invasive surgery. Biomedizinische Technik, 2017, 62, 547-555.	0.8	3
47	A Database of Electrocardiogram Signals Acquired in Different Magnetic Resonance Imaging Scanners. , 0, , .		3
48	Ultrasound thermal monitoring with an external ultrasound source for customized bipolar RF ablation shapes. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 815-826.	2.8	3
49	In-room ultrasound fusion combined with fully compatible 3D-printed holding arm &ndash; rethinking interventional MRI. Medical Devices: Evidence and Research, 2018, Volume 11, 77-85.	0.8	3
50	<p>NITINOL-based actuator for device control even in high-field MRI environment</p>. Medical Devices: Evidence and Research, 2019, Volume 12, 285-296.	0.8	3
51	Improved Acquisition of Vibroarthrographic Signals of the Knee Joint. , 2019, 2019, 1259-1262.		3
52	Optical endovascular imaging combining endoscopy, NBI and OCT, a feasibility study. Current Directions in Biomedical Engineering, 2019, 5, 577-580.	0.4	3
53	HealthTEC Innovation Design - a proposal for a novel Master degree program based on Unmet Clinical Need, global Healthcare Challenges, and 21st century skills. Current Directions in Biomedical Engineering, 2020, 6, 599-603.	0.4	3
54	Study of needle punctures into soft tissue through audio and force sensing: can audio be a simple alternative for needle guidance?. International Journal of Computer Assisted Radiology and Surgery, 2021, 16, 1683-1697.	2.8	3

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55	Collision Avoidance Route Planning for Autonomous Medical Devices Using Multiple Depth Cameras. IEEE Access, 2022, 10, 29903-29915.	4.2	3
56	Assessing MRI susceptibility artefact through an indicator of image distortion. Current Directions in Biomedical Engineering, 2016, 2, 427-431.	0.4	2
57	Interactive monitoring system for visual respiratory biofeedback. Current Directions in Biomedical Engineering, 2016, 2, 723-726.	0.4	2
58	Contactless respiratory monitoring system for magnetic resonance imaging applications using a laser range sensor. Current Directions in Biomedical Engineering, 2016, 2, 719-722.	0.4	2
59	Advanced inside-out tracking approach for real-time combination of MRI and US images in the radio-frequency shielded room using combination markers. , 2016, 2016, 2558-2561.		2
60	Calibration free beam hardening correction using grangeat-based consistency measure. , 2016, , .		2
61	INNOLAB- image guided surgery and therapy lab. Current Directions in Biomedical Engineering, 2017, 3, 235-237.	0.4	2
62	Characterization of a Carotid Distension Waveform from Audio Signal Acquired with a Stethoscope. , 0, , .		2
63	Time-varying Acoustic Emission Characterization for Guidewire Coronary Artery Perforation Identification. , 2017, , .		2
64	Fiber-optic filter fluorometer for emission detection of Protoporphyrin IX and its direct precursors â€" A preliminary study for improved Photodynamic Therapy applications. Results in Physics, 2018, 8, 1232-1233.	4.1	2
65	Computer Assisted Auscultation System for Phonoangiography of the Carotid Artery. Current Directions in Biomedical Engineering, 2019, 5, 175-178.	0.4	2
66	A new 3D printed applicator with radioactive gel for conformal brachytherapy of superficial skin tumors. , 2019, 2019, 6979-6982.		2
67	Assessment of Sound Features for Needle Perforation Event Detection. , 2019, 2019, 2597-2600.		2
68	Auscultation System for Acquisition of Vascular Sounds â€" Towards Sound-Based Monitoring of the Carotid Artery . Medical Devices: Evidence and Research, 2020, Volume 13, 349-364.	0.8	2
69	CUST: CNN for Ultrasound Thermal Image Reconstruction Using Sparse Time-of-Flight Information. Lecture Notes in Computer Science, 2018, , 29-37.	1.3	2
70	Surgical Audio Guidance: Feasibility Check for Robotic Surgery Procedures. Current Directions in Biomedical Engineering, 2020, 6, 571-574.	0.4	2
71	Feasibility Check: Can Audio Be a Simple Alternative to Force-Based Feedback for Needle Guidance?. Lecture Notes in Computer Science, 2020, , 24-33.	1.3	2
72	Manual versus Automatic Classification of Laryngeal Lesions based on Vascular Patterns in CE+NBI Images. Current Directions in Biomedical Engineering, 2020, 6, 70-73.	0.4	2

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73	Transverse dose profile simulation of extruded lines for a 3D printed models for superficial skin cancer therapy. Current Directions in Biomedical Engineering, 2020, 6, 559-562.	0.4	2
74	Forecasting the Future of Healthcare Democratization. Current Directions in Biomedical Engineering, 2021, 7, 155-158.	0.4	2
75	Inside-Out access strategy using new trans-vascular catheter approach. Current Directions in Biomedical Engineering, 2016, 2, 455-458.	0.4	1
76	Passive artifact behavior prediction of interventional tools in high-field MRI using a 0.55T portable benchtop MR scanner. , 2016, 2016, 1252-1255.		1
77	Image guided laryngoscopy versus laryngectomy surgery: Patient safety and system review. Cogent Engineering, 2016, 3, 1256563.	2.2	1
78	Miniature CNT-based X-ray tube: assessment for use in intraoperative radiation therapy. Current Directions in Biomedical Engineering, 2017, 3, 643-646.	0.4	1
79	Trans-oral miniature X-ray radiation delivery system with endoscopic optical feedback. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 1995-2002.	2.8	1
80	Evaluation and image quality comparison of ultra-thin fibre endoscopes for vascular endoscopy. Current Directions in Biomedical Engineering, 2017, 3, 231-233.	0.4	1
81	Cyclostationary analysis of ECG signals acquired inside an ultra-high field MRI scanner. , 2017, , .		1
82	Flexible interventional imaging system based on miniaturized X-ray tubes (FlexScan). Current Directions in Biomedical Engineering, 2018, 4, 63-66.	0.4	1
83	Audio waves and its loss of energy in puncture needles. Current Directions in Biomedical Engineering, 2019, 5, 21-24.	0.4	1
84	Evaluation of MRI-compatible pneumatic muscle stepper motors. Current Directions in Biomedical Engineering, 2019, 5, 339-341.	0.4	1
85	Novel Similarity Metric for Image-Based Out-Of-Plane Motion Estimation in 3D Ultrasound. , 2019, 2019, 5739-5742.		1
86	Surveyed impact of intellectual property training in STEM education on innovation, research, and development. Journal of World Intellectual Property, 2020, 23, 658-678.	0.6	1
87	Vascular Auscultation of Carotid Artery: Towards Biometric Identification and Verification of Individuals. Sensors, 2021, 21, 6656.	3.8	1
88	Exploring the Possibilities to Characterize the Soft Tissue Using Acoustic Emission Waveforms. IFMBE Proceedings, 2020, , 9-14.	0.3	1
89	Endoscopic filter fluorometer for emission detection of Protoporphyrin IX and its direct precursors in PDT and PDD. Current Directions in Biomedical Engineering, 2020, 6, 587-590.	0.4	1
90	How do we need to adapt Biomedical Engineering Education for the Health 4.0 challenges?. Current Directions in Biomedical Engineering, 2020, 6, 604-607.	0.4	1

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91	BODYTUNE: Multi Auscultation Device â€" Personal Health Parameter Monitoring at Home. Current Directions in Biomedical Engineering, 2021, 7, 5-8.	0.4	1
92	US/MRI fusion with new optical tracking and marker approach for interventional procedures inside the MRI suite. Current Directions in Biomedical Engineering, 2016, 2, 459-462.	0.4	0
93	Resectoscope with an easy to use twist mechanism for improved handling. Current Directions in Biomedical Engineering, 2016, 2, 379-382.	0.4	0
94	Distortion indicator algorithm for simple artifact assessment of passive MRI markers. , 2016, 2016, 1248-1251.		0
95	Setup and initial testing of an endoscope manipulator system for assistance in transoral endoscopic surgery. Biomedizinische Technik, 2019, 64, 347-356.	0.8	0
96	Remotely controllable phantom rotation system for ultra-high field MRI to improve Cross Calibration. Current Directions in Biomedical Engineering, 2019, 5, 429-431.	0.4	0
97	Feasibility and Initial Results of Assisted Ultrasound Scan Acquisition for Improved Tomographic Visualization. , 2019, , .		0
98	Temperature Controlled and Monitored Ex Vivo Lung Perfusion System for Research and Training Purposes. Current Directions in Biomedical Engineering, 2019, 5, 293-295.	0.4	0
99	Automated alignment detection of an additively manufactured Z-frame marker to process instrument targeting signals in interventional MRI. Current Directions in Biomedical Engineering, 2019, 5, 425-427.	0.4	0
100	<p>Injection And Infusion Technology Disruption For Use In MRI</p>. Medical Devices: Evidence and Research, 2019, Volume 12, 469-478.	0.8	0
101	Innovation Generation, Disruption and Exponential Technologies in Medical Imaging. Informatik Aktuell, 2018, , 7-7.	0.6	0
102	Conformal radiofrequency ablation to validate ultrasound thermometry. , 2019, , .		0
103	Endoscopic filter fluorometer for detection of accumulation of Protoporphyrin IX to improve photodynamic diagnostic (PDD). Current Directions in Biomedical Engineering, 2020, 6, .	0.4	0
104	Frequency and average gray-level information for thermal ablation status in ultrasound B-Mode sequences. Current Directions in Biomedical Engineering, 2020, 6, .	0.4	0
105	ENT Endoscopic Surgery and Mixed Reality. Advances in Bioinformatics and Biomedical Engineering Book Series, 2020, , 17-29.	0.4	0
106	Innovative Hospital Management. International Journal of Biomedical and Clinical Engineering, 2020, 9, 33-47.	0.2	0
107	Integration of Acoustic Emission and Ultrasound for Needle Guidance in Interventional Procedures. International Journal of Biomedical and Clinical Engineering, 2020, 9, 45-55.	0.2	0
108	Improved Patient Safety Due to Catheter-Based Gas Bubble Removal During TURBT. International Journal of Biomedical and Clinical Engineering, 2020, 9, 1-11.	0.2	0

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109	Novel flexible endoscope concept with swiveling camera tip. Current Directions in Biomedical Engineering, 2020, 6, 288-291.	0.4	0
110	Novel Assistive Device for Tomographic Ultrasound Neck Imaging vs. Freehand. Current Directions in Biomedical Engineering, 2020, 6, 28-31.	0.4	0
111	Is a thin diameter ureteroscope feasible for image guided intravascular procedures?. Current Directions in Biomedical Engineering, 2020, 6, 591-594.	0.4	0
112	Sensor-based measurement for advanced monitoring and early detection of PE wear in total knee arthroplasties. Current Directions in Biomedical Engineering, 2021, 7, 283-286.	0.4	0
113	Concept for parallel placement of flexible needles for Irreversible Electroporation. Current Directions in Biomedical Engineering, 2021, 7, 219-222.	0.4	0
114	Image processing-based mTICI grading after endovascular treatment for acute ischemic stroke. Current Directions in Biomedical Engineering, 2021, 7, 235-238.	0.4	0
115	Towards an intraoperative feedback system for laparoscopic access with the Veress needle. Current Directions in Biomedical Engineering, 2021, 7, 29-32.	0.4	0
116	Carotid Sound Signal Artifact Detection based on Discrete Wavelet Transform Decomposition. Current Directions in Biomedical Engineering, 2021, 7, 299-302.	0.4	0
117	State-of-the-Art: Biodesign based Innovation Ecosystems in Europe. Current Directions in Biomedical Engineering, 2021, 7, 231-234.	0.4	0