Thomas Neumuth

List of Publications by Year
in descending order

95 papers	1,607 citations	361413 20 h-index	330143 37 g-index
100 all docs	100 docs citations	100 times ranked	1197 citing authors

#	Article	IF	Citations
1	Surgical data science â€“ from concepts toward clinical translation. Medical Image Analysis, 2022, 76, 102306.	11.6	107
2	Measuring and evaluating standardization of scrub nurse instrument table setups: a multi-center study. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 479-485.	2.8	0
3	Automated 3D thorax model generation using handheld video-footage. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 1707-1716.	2.8	4
4	A system for real-time multivariate feature combination of endoscopic mitral valve simulator training data. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 1619-1631.	2.8	1
5	Clinical decision support models for oropharyngeal cancer treatment: design and evaluation of a multi-stage knowledge abstraction and formalization process. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 1643-1650.	2.8	1
6	Nutzung digitalisierter klinischer Daten zur personalisierten Entscheidungsfindung: AnsÃtze und Ergebnisse aus Leipzig. Laryngo- Rhino- Otologie, 2022, 101, .	0.2	0
7	Using digital clinical data for personalized decision-making: approaches made in Leipzig. Laryngo-Rhino- Otologie, 2022, , .	0.2	0
8	A Delphi consensus statement for digital surgery. Npj Digital Medicine, 2022, 5, .	10.9	28
9	Exploratory study of functional and psychological factors associated with employment status in patients with head and neck cancer. Head and Neck, 2021, 43, 1229-1241.	2.0	13
10	Course of Self-Reported Dysphagia, Voice Impairment and Pain in Head and Neck Cancer Survivors. Biology, 2021, 10, 144.	2.8	6
11	The evolution of personalized healthcare and the pivotal role of European regions in its implementation. Personalized Medicine, 2021, 18, 283-294.	1.5	32
12	A deep learning spatial-temporal framework for detecting surgical tools in laparoscopic videos. Biomedical Signal Processing and Control, 2021, 68, 102801.	5.7	12
13	The PostStroke-Manager â€“ combining mobile, digital and sensor-based technology with personal assistance: protocol of the feasibility study. Neurological Research and Practice, 2021, 3, 53.	2.0	3
14	Dysphagia, voice problems, and pain in head and neck cancer patients. European Archives of Oto-Rhino-Laryngology, 2021, 278, 3985-3994.	1.6	20
15	A Deep Learning Framework for Recognising Surgical Phases in Laparoscopic Videos. IFAC-PapersOnLine, 2021, 54, 334-339.	0.9	6
16	Predicting Early Relapse for Patients with Multiple Myeloma through Machine Learning. Blood, 2021, 138, 2953-2953.	1.4	3
17	Bayesian Networks to Support Decision-Making for Immune-Checkpoint Blockade in Recurrent/Metastatic (R/M) Head and Neck Squamous Cell Carcinoma (HNSCC). Cancers, 2021, 13, 5890.	3.7	2
18	Changes of Physiological parameters of the patient during laparoscopic gynaecology. Current Directions in Biomedical Engineering, 2021, 7, 500-503.	0.4	3

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19	Assessing Generalisation Capabilities of CNN Models for Surgical Tool Classification. Current Directions in Biomedical Engineering, 2021, 7, 476-479.	0.4	3
20	The Digital Twin: Modular Model-Based Approach to Personalized Medicine. Current Directions in Biomedical Engineering, 2021, 7, 223-226.	0.4	6
21	Evaluating Electronic Health Record Limitations and Time Expenditure in a German Medical Center. Applied Clinical Informatics, 2021, 12, 1082-1090.	1.7	6
22	Language-based translation and prediction of surgical navigation steps for endoscopic wayfinding assistance in minimally invasive surgery. International Journal of Computer Assisted Radiology and Surgery, 2020, 15, 2089-2100.	2.8	8
23	Obtaining Patient-Reported Outcomes Electronically With â€œOncoFunctionâ€•in Head and Neck Cancer Patients During Aftercare. Frontiers in Oncology, 2020, 10, 549915.	2.8	10
24	Increasing efficiency by optimizing table position for elective primary THA and TKA: a prospective monocentric pilot study. Arthroplasty, 2020, 2, 29.	2.2	2
25	Classification of hyperspectral endocrine tissue images using support vector machines. International Journal of Medical Robotics and Computer Assisted Surgery, 2020, 16, 1-10.	2.3	25
26	Modeling and processing up-to-dateness of patient information in probabilistic therapy decision support. Artificial Intelligence in Medicine, 2020, 104, 101842.	6.5	3
27	Surgical workflow simulation for the design and assessment of operating room setups in orthopedic surgery. BMC Medical Informatics and Decision Making, 2020, 20, 145.	3.0	14
28	Laparoscopic system for simultaneous high-resolution video and rapid hyperspectral imaging in the visible and near-infrared spectral range. Journal of Biomedical Optics, 2020, 25, .	2.6	36
29	Requirements for 5G Integrated Data Transfer in German Prehospital Emergency Care. Current Directions in Biomedical Engineering, 2020, 6, 9-12.	0.4	3
30	Towards an integrated emergency medical care using 5G networks. Current Directions in Biomedical Engineering, 2020, 6, 5-8.	0.4	1
31	Design and evaluation of an eye tracking support system for the scrub nurse. International Journal of Medical Robotics and Computer Assisted Surgery, 2019, 15, e1954.	2.3	2
32	GATOR: connecting integrated operating room solutions based on the IEEE 11073 SDC and ORiN standards. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 2233-2243.	2.8	5
33	Evaluation of hyperspectral imaging (HSI) for the measurement of ischemic conditioning effects of the gastric conduit during esophagectomy. Surgical Endoscopy and Other Interventional Techniques, 2019, 33, 3775-3782.	2.4	63
34	Tissue classification of oncologic esophageal resectates based on hyperspectral data. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 1651-1661.	2.8	29
35	Extending BPMN 2.0 for intraoperative workflow modeling with IEEE 11073 SDC for description and orchestration of interoperable, networked medical devices. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 1403-1413.	2.8	14
36	Der intelligente HNO-Operationssaal der Zukunft. Laryngo- Rhino- Otologie, 2019, 98, S5-S31.	0.2	4

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37	Enabling artificial intelligence in high acuity medical environments. Minimally Invasive Therapy and Allied Technologies, 2019, 28, 120-126.	1.2	12
38	Digital health â€“ Software as a medical device in focus of the medical device regulation (MDR). IT - Information Technology, 2019, 61, 211-218.	0.9	4
39	Surface EMG-based Surgical Instrument Classification for Dynamic Activity Recognition in Surgical Workflows. Current Directions in Biomedical Engineering, 2019, 5, 37-40.	0.4	8
40	OR.NET â€“ secure dynamic networks in the operating room and clinic. Biomedizinische Technik, 2018, 63, 1-3.	0.8	6
41	From SOMDA to application â€“ integration strategies in the OR.NET demonstration sites. Biomedizinische Technik, 2018, 63, 69-80.	0.8	4
42	Auditory display as feedback for a novel eye-tracking system for sterile operating room interaction. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 37-45.	2.8	7
43	Hyperspectral based discrimination of thyroid and parathyroid during surgery. Current Directions in Biomedical Engineering, 2018, 4, 399-402.	0.4	19
44	Context-aware medical technologies - relief or burden for clinical users?. Current Directions in Biomedical Engineering, 2018, 4, 119-122.	0.4	2
45	Context-awareness for control consoles in integrated operating rooms. Current Directions in Biomedical Engineering, 2018, 4, 291-295.	0.4	2
46	Clear oxygen-level forecasts during anaesthesia. Nature Biomedical Engineering, 2018, 2, 715-716.	22.5	0
47	The intelligent OR: design and validation of a context-aware surgical working environment. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 1301-1308.	2.8	18
48	Toward a standard ontology of surgical process models. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 1397-1408.	2.8	54
49	Perioperative Workflow Simulation and Optimization in Orthopedic Surgery. Lecture Notes in Computer Science, 2018, , 3-11.	1.3	1
50	Surgical data science for next-generation interventions. Nature Biomedical Engineering, 2017, 1, 691-696.	22.5	283
51	Online time and resource management based on surgical workflow time series analysis. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 325-338.	2.8	18
52	Situation-Dependent Medical Device Risk Estimation. Journal of Patient Safety, 2017, Publish Ahead of Print, e622-e630.	1.7	2
53	Session 8. Image guided, robotic and miniaturised systems for intervention and therapy I. Biomedizinische Technik, 2017, 62, .	0.8	1
54	Surgical process modeling. Innovative Surgical Sciences, 2017, 2, 123-137.	0.7	25

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55	Ontology-based specification, identification and analysis of perioperative risks. Journal of Biomedical Semantics, 2017, 8, 36.	1.6	12
56	Using Fast Healthcare Interoperability Resources (FHIR) for the Integration of Risk Minimization Systems in Hospitals. Studies in Health Technology and Informatics, 2017, 245, 1378.	0.3	1
57	A service for monitoring the quality of intraoperative cone beam CT images. Current Directions in Biomedical Engineering, 2016, 2, 373-377.	0.4	0
58	A concept for consistent and prioritized presentation of surgical information. , 2016, , .		0
59	Video-based detection of device interaction in the operating room. Biomedizinische Technik, 2016, 61, 567-576.	0.8	3
60	Evaluation of image quality of MRI data for brain tumor surgery. Proceedings of SPIE, 2016, , .	0.8	2
61	Design and evaluation of an interactive training system for scrub nurses. International Journal of Computer Assisted Radiology and Surgery, 2016, 11, 1527-1536.	2.8	6
62	Monitoring of microvascular free flaps following oropharyngeal reconstruction using infrared thermography: first clinical experiences. European Archives of Oto-Rhino-Laryngology, 2016, 273, 2659-2667.	1.6	33
63	Frequency based assessment of surgical activities. Current Directions in Biomedical Engineering, 2015, 1, 152-156.	0.4	1
64	"not these scissors, the other scissors." - a multi-center study comparing surgical instrument descriptions used by scrub nurses. , 2015, , .		1
65	Rule-based medical device adaptation for the digital operating room. , 2015, 2015, 1733-6.		12
66	Standardized semantic workflow modeling in the surgical domain: Proof-of-concept analysis and evaluation for a neurosurgical use-case. , 2015, , .		1
67	Outcome quality assessment by surgical process compliance measures in laparoscopic surgery. Artificial Intelligence in Medicine, 2015, 63, 85-90.	6.5	10
68	Towards structuring contextual information for workflow-driven surgical assistance functionalities. Current Directions in Biomedical Engineering, 2015, 1, 168-171.	0.4	2
69	Surgical instrument similarity metrics and tray analysis for multi-sensor instrument identification. , 2015, , .		2
70	Multi-perspective workflow modeling for online surgical situation models. Journal of Biomedical Informatics, 2015, 54, 158-166.	4.3	27
71	Predicting treatment process steps from events. Journal of Biomedical Informatics, 2015, 53, 308-319.	4.3	17
72	Towards a framework for standardized semantic workflow modeling and management in the surgical domain. Current Directions in Biomedical Engineering, 2015, 1, 172-175.	0.4	3

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73	Intra-operative surgical instrument usage detection on a multi-sensor table. International Journal of Computer Assisted Radiology and Surgery, 2015, 10, 351-362.	2.8	16
74	Closed-loop approach for situation awareness of medical devices and operating room infrastructure. Current Directions in Biomedical Engineering, 2015, 1, 176-179.	0.4	0
75	Sensor-based surgical activity recognition in unconstrained environments. Minimally Invasive Therapy and Allied Technologies, 2014, 23, 198-205.	1.2	24
76	A concept of a generalized electronic patient record for personalized medicine. , 2014, , .		0
77	Requirements for the structured recording of surgical device data in the digital operating room. International Journal of Computer Assisted Radiology and Surgery, 2014, 9, 49-57.	2.8	8
78	Design and evaluation of a multimedia electronic patient record â€œoncoflowâ€•with clinical workflow assistance for head and neck tumor therapy. International Journal of Computer Assisted Radiology and Surgery, 2014, 9, 949-965.	2.8	12
79	Improvement of manual 2D/3D registration by decoupling the visual influence of the six degrees of freedom. , 2014, , .		1
80	Vision-based online recognition of surgical activities. International Journal of Computer Assisted Radiology and Surgery, 2014, 9, 979-986.	2.8	6
81	2D/3D Registration of TEE Probe from Two Non-orthogonal C-Arm Directions. Lecture Notes in Computer Science, 2014, 17, 283-290.	1.3	6
82	The impact of missing sensor information on surgical workflow management. International Journal of Computer Assisted Radiology and Surgery, 2013, 8, 867-875.	2.8	2
83	Intervention time prediction from surgical low-level tasks. Journal of Biomedical Informatics, 2013, 46, 152-159.	4.3	52
84	Multi-site study of surgical practice in neurosurgery based on surgical process models. Journal of Biomedical Informatics, 2013, 46, 822-829.	4.3	27
85	A Hybird Optimization Approach for 2D-3D Registrationbased Fusion of Ultrasound and X-Ray. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.8	0
86	Development of a modular IT-Framework supporting the oncological Patient Treatment in ENT Surgery. Biomedizinische Technik, 2012, 57, .	0.8	2
87	Surgical Workflow Management Schemata for Cataract Procedures. Methods of Information in Medicine, 2012, 51, 371-382.	1.2	17
88	Online recognition of surgical instruments by information fusion. International Journal of Computer Assisted Radiology and Surgery, 2012, 7, 297-304.	2.8	34
89	Similarity metrics for surgical process models. Artificial Intelligence in Medicine, 2012, 54, 15-27.	6.5	27
90	Modeling surgical processes: A four-level translational approach. Artificial Intelligence in Medicine, 2011, 51, 147-161.	6.5	45

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91	Analysis of surgical intervention populations using generic surgical process models. International Journal of Computer Assisted Radiology and Surgery, 2011, 6, 59-71.	2.8	65
92	Identification of surgeonâ€“individual treatment profiles to support the provision of an optimum treatment service for cataract patients. Journal of Ocular Biology, Diseases, and Informatics, 2010, 3, 73-83.	0.2	7
93	Assessment of technical needs for surgical equipment by surgical process models. Minimally Invasive Therapy and Allied Technologies, 2009, 18, 341-349.	1.2	14
94	Validation of Knowledge Acquisition for Surgical Process Models. Journal of the American Medical Informatics Association: JAMIA, 2009, 16, 72-80.	4.4	100
95	Acquisition of Process Descriptions from Surgical Interventions. Lecture Notes in Computer Science, 2006, , 602-611.	1.3	45