Fons van der Sommen

List of Publications by Year
in descending order

72	1,512	566801 15	344852 36
papers	citations	h-index	g-index

74	74	74	1542
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Deep-Learning System Detects Neoplasia in Patients With Barrettâ€™s Esophagus With Higher Accuracy Than Endoscopists in a Multistep Training and Validation Study With Benchmarking. Gastroenterology, 2020, 158, 915-929.e4.	0.6	227
2	Why rankings of biomedical image analysis competitions should be interpreted with care. Nature Communications, 2018, 9, 5217.	5.8	198
3	Computer-aided detection of early neoplastic lesions in Barrettâ€™s esophagus. Endoscopy, 2016, 48, 617-624.	1.0	142
4	Computer-aided detection of early Barrettâ€™s neoplasia using volumetric laser endomicroscopy. Gastrointestinal Endoscopy, 2017, 86, 839-846.	0.5	117
5	The Argos project: The development of a computerâ€aided detection system to improve detection of Barrett's neoplasia on white light endoscopy. United European Gastroenterology Journal, 2019, 7, 538-547.	1.6	95
6	Deep learning algorithm detection of Barrettâ€™s neoplasia with high accuracy during live endoscopic procedures: a pilot study (with video). Gastrointestinal Endoscopy, 2020, 91, 1242-1250.	0.5	88
7	Machine learning in GI endoscopy: practical guidance in how to interpret a novel field. Gut, 2020, 69, 2035-2045.	6.1	85
8	Supportive automatic annotation of early esophageal cancer using local gabor and color features. Neurocomputing, 2014, 144, 92-106.	3.5	53
9	A computer-assisted algorithm for narrow-band imaging-based tissue characterization in Barrettâ€™s esophagus. Gastrointestinal Endoscopy, 2021, 93, 89-98.	0.5	50
10	Standalone performance of artificial intelligence for upper GI neoplasia: a meta-analysis. Gut, 2021, 70, 1458-1468.	6.1	45
11	Novel Developments in Endoscopic Mucosal Imaging. Gastroenterology, 2018, 154, 1876-1886.	0.6	32
12	Hyperspectral Imaging for Glioblastoma Surgery: Improving Tumor Identification Using a Deep Spectral-Spatial Approach. Sensors, 2020, 20, 6955.	2.1	27
13	Predictive features for early cancer detection in Barrett's esophagus using Volumetric Laser Endomicroscopy. Computerized Medical Imaging and Graphics, 2018, 67, 9-20.	3.5	18
14	Automatic Detection of Early Esophageal Cancer with CNNS Using Transfer Learning. , 2018, , .		18
15	A CNN CADx System for Multimodal Classification of Colorectal Polyps Combining WL, BLI, and LCI Modalities. Applied Sciences (Switzerland), 2020, 10, 5040.	1.3	17
16	EndoscopistsÊ¼ diagnostic accuracy in detecting upper gastrointestinal neoplasia in the framework of artificial intelligence studies. Endoscopy, 2022, 54, 403-411.	1.0	17
17	Ensemble of Deep Convolutional Neural Networks for Classification of Early Barrettâ€™s Neoplasia Using Volumetric Laser Endomicroscopy. Applied Sciences (Switzerland), 2019, 9, 2183.	1.3	16
18	Optical diagnosis of colorectal polyp images using a newly developed computer-aided diagnosis system (CADx) compared with intuitive optical diagnosis. Endoscopy, 2021, 53, 1219-1226.	1.0	15

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19	Multi-stage domain-specific pretraining for improved detection and localization of Barrett's neoplasia: A comprehensive clinically validated study. Artificial Intelligence in Medicine, 2020, 107, 101914.	3.8	14
20	Towards Optical Imaging for Spine Tracking without Markers in Navigated Spine Surgery. Sensors, 2020, 20, 3641.	2.1	14
21	Hyperspectral Imaging for Skin Feature Detection: Advances in Markerless Tracking for Spine Surgery. Applied Sciences (Switzerland), 2020, 10, 4078.	1.3	14
22	Multi-Modal Classification of Polyp Malignancy using CNN Features with Balanced Class Augmentation. , 2019, , .		13
23	Computer-aided detection of early cancer in the esophagus using HD endoscopy images. Proceedings of SPIE, 2013, , .	0.8	12
24	Prospective development and validation of a volumetric laser endomicroscopy computer algorithm for detection of Barrettâ€™s neoplasia. Gastrointestinal Endoscopy, 2021, 93, 871-879.	0.5	11
25	How to Exploit Weaknesses in Biomedical Challenge Design and Organization. Lecture Notes in Computer Science, 2018, , 388-395.	1.0	10
26	Deep principal dimension encoding for the classification of early neoplasia in Barrett's Esophagus with volumetric laser endomicroscopy. Computerized Medical Imaging and Graphics, 2020, 80, 101701.	3.5	10
27	Image Noise Reduction Based on a Fixed Wavelet Frame and CNNs Applied to CT. IEEE Transactions on Image Processing, 2021, 30, 9386-9401.	6.0	10
28	Deep Learning Biopsy Marking of Early Neoplasia in Barrettâ€™s Esophagus by Combining WLE and BLI Modalities. , 2019, , .		9
29	Automatic image and text-based description for colorectal polyps using BASIC classification. Artificial Intelligence in Medicine, 2021, 121, 102178.	3.8	9
30	Pseudo-labeled Bootstrapping and Multi-stage Transfer Learning for the Classification and Localization of Dysplasia in Barrettâ€™s Esophagus. Lecture Notes in Computer Science, 2019, , 169-177.	1.0	9
31	Hyperspectral imaging for colon cancer classification in surgical specimens: towards optical biopsy during image-guided surgery. , 2020, 2020, 1169-1173.		8
32	237 Feasibility of a Computer Algorithm for Detection of Early Barrett's Neoplasia Using Volumetric Laser Endomicroscopy. Gastroenterology, 2016, 150, S56.	0.6	7
33	297 â€“ Deep Learning Algorithm for Characterization of Barrett's Neoplasia Demonstrates High Accuracy on Nbi-Zoom Images. Gastroenterology, 2019, 156, S-58.	0.6	7
34	Cancer detection in mass spectrometry imaging data by dilated convolutional neural networks. , 2019, , .		7
35	Informative Frame Classification of Endoscopic Videos Using Convolutional Neural Networks and Hidden Markov Models. , 2019, , .		6
36	Improving Temporal Stability and Accuracy for Endoscopic Video Tissue Classification Using Recurrent Neural Networks. Sensors, 2020, 20, 4133.	2.1	6

#	Article	IF	Citations
37	Endoscopy-Driven Pretraining for Classification of Dysplasia in Barrettâ€™s Esophagus with Endoscopic Narrow-Band Imaging Zoom Videos. Applied Sciences (Switzerland), 2020, 10, 3407.	1.3	6
38	Tissue segmentation in volumetric laser endomicroscopy data using FusionNet and a domain-specific loss function. , 2019, , .		6
39	Colorectal polyp classification using confidence-calibrated convolutional neural networks. , 2022, , .		6
40	Early esophageal cancer detection using RF classifiers. Proceedings of SPIE, 2016, , .	0.8	5
41	Evaluation of image features and classification methods for Barrett's cancer detection using VLE imaging. , 2017, , .		5
42	Depth estimation from a single SEM image using pixel-wise fine-tuning with multimodal data. Machine Vision and Applications, 2022, 33, .	1.7	5
43	244 COMPUTER-AIDED DETECTION ALGORITHM DETECTS BARRETT NEOPLASIA WITH HIGH DIAGNOSTIC ACCURACY DURING LIVE ENDOSCOPIC PROCEDURES: A PILOT STUDY.. Gastrointestinal Endoscopy, 2020, 91, AB23-AB24.	0.5	4
44	Automated tumor assessment of squamous cell carcinoma on tongue cancer patients with hyperspectral imaging. , 2019, , .		4
45	Advanced Imaging and Sampling in Barrettâ€™s Esophagus. Gastrointestinal Endoscopy Clinics of North America, 2021, 31, 91-103.	0.6	3
46	Quantitative CT based radiomics as predictor of resectability of pancreatic adenocarcinoma. , 2018, , .		3
47	A novel clinical gland feature for detection of early Barrettâ€™s neoplasia using volumetric laser endomicroscopy. , 2019, , .		3
48	Influence of decoder size for binary segmentation tasks in medical imaging. , 2020, , .		3
49	First steps into endoscopic video analysis for Barrettâ€™s cancer detection: challenges and opportunities. , 2020, , .		3
50	Real-time semantic context labeling for image understanding. , 2015, , .		2
51	Tu2011 - The Argos Project: Evaluation of Results of a Clinicallyinspired Algorithm vs. a Deep Learning Algorithm for the Detection and Delineation of Barrett's Neoplasia. Gastroenterology, 2018, 154, S-1368.	0.6	2
52	Sa1969 THE ARGOS PROJECT: FIRST RESULTS OF THE DEVELOPMENT OF A COMPUTER AIDED DETECTION SYSTEM FOR BARRETT'S NEOPLASIA.. Gastrointestinal Endoscopy, 2018, 87, AB270.	0.5	2
53	The field effect in Barrett's Esophagus: a macroscopic view using white light endoscopy and deep learning. , 2020, , .		2
54	Sweet-spot training for early esophageal cancer detection. , 2016, , .		1

#	Article	IF	Citations
55	640 THE ARGOS PROJECT: FIRST DEEP LEARNING ALGORITHM FOR DETECTION OF BARRETTâ€™S NEOPLASIA OUTPERFORMS CONVENTIONAL COMPUTER AIDED DETECTION SYSTEMS IN A MULTI-STEP TRANING ANDÂEXTERNAL VALIDATION STUDY. Gastrointestinal Endoscopy, 2019, 89, AB99.	0.5	1
56	Time for second-generation artificial intelligence in medical imaging. Endoscopy, 2019, 51, 1113-1114.	1.0	1
57	Towards non-invasive patient tracking: optical image analysis for spine tracking during spinal surgery procedures. , 2019, 2019, 3909-3914.		1
58	Modeling clinical assessor intervariability using deep hypersphere encoderâ€“decoder networks. Neural Computing and Applications, 2020, 32, 10705-10717.	3.2	1
59	Computer-aided classification of colorectal polyps using blue-light and linked-color imaging. , 2019, , .		1
60	Mo1683 Computer-Aided Delineation of Early Neoplasia in Barrett's Esophagus Using High Definition Endoscopic Images. Gastrointestinal Endoscopy, 2013, 77, AB471.	0.5	0
61	805 Computer-Aided Detection of Early Neoplastic Lesions in Barrett's Esophagus: Towards a Supportive Detection System in Endoscopy. Gastroenterology, 2014, 146, S-141.	0.6	0
62	Accurate biopsy-needle depth estimation in limited-angle tomography using multi-view geometry. Proceedings of SPIE, 2016, , .	0.8	0
63	Bladder Cancer Segmentation on Multispectral Images. , 2018, , .		0
64	Tu1962 - Improved Barrett's Neoplasia Detection Using Computer Assisted Multi-Frame Analysis of Volumetric Laser Endomicroscopy Images. Gastroenterology, 2018, 154, S-1066.	0.6	0
65	Efficient Decoder Reduction for a Variety of Encoder-Decoder Problems. IEEE Access, 2020, 8, 169444-169455.	2.6	0
66	Sa2026 EXPLOITING INTERVARIABLITY OF EXPERT ANNOTATIONS FOR EARLY BARRETT'S CANCER IN WHITE LIGHT ENDOSCOPY LEADS TO BETTER LOCALIZATION PERFORMANCE OF AI ALGORITHMS. Gastrointestinal Endoscopy, 2020, 91, AB248-AB249.	0.5	0
67	Robust Algorithm for Denoising of Photon-Limited Dual-Energy Cone Beam CT Projections. , 2020, , .		0
68	Algorithm combining virtual chromoendoscopy features for colorectal polyp classification. Endoscopy International Open, 2021, 09, E1497-E1503.	0.9	0
69	AIM in Barrettâ€™s Esophagus. , 2022, , 951-966.		0
70	Efficient endoscopic frame informativeness assessment by reusing the encoder of the primary CAD task. , 2022, , .		0
71	The paradox of artificial intelligence diversification in endoscopy: creating blind spots by exposing them. Endoscopy, 2022, , .	1.0	0
72	REAL-TIME CLASSIFICATION OF COLORECTAL POLYPS USING ARTIFICIAL INTELLIGENCE â€“ A PROSPECTIVE PILOT STUDY COMPARING TWO COMPUTER-AIDED DIAGNOSIS SYSTEMS AND ONE EXPERT ENDOSCOPIST. Gastrointestinal Endoscopy, 2022, 95, AB250-AB251.	0.5	0