# Holger R Roth

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/4149624/publications.pdf

Version: 2024-02-01

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|---|---|---|---|
| 104 papers | 9,876 citations | 201385 27 h-index | 62479 80 g-index |
| 110 all docs | 110 docs citations | 110 times ranked | 11472 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Deep learning-based artificial intelligence for prostate cancer detection at biparametric MRI. Abdominal Radiology, 2022, 47, 1425-1434. | 1.0 | 18 |
| 2 | Automatic detection of decreased ejection fraction and left ventricular hypertrophy on 4D cardiac CTA: Use of artificial intelligence with transfer learning to facilitate multi-site operations. Intelligence-based Medicine, 2022, 6, 100051. | 1.4 | 0 |
| 3 | A cascaded fully convolutional network framework for dilated pancreatic duct segmentation. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 343-354. | 1.7 | 7 |
| 4 | Cardiac segmentation on late gadolinium enhancement MRI: A benchmark study from multi-sequence cardiac MR segmentation challenge. Medical Image Analysis, 2022, 81, 102528. | 7.0 | 22 |
| 5 | Federated Whole Prostate Segmentation in MRI with Personalized Neural Architectures. Lecture Notes in Computer Science, 2021, , 357-366. | 1.0 | 17 |
| 6 | Accounting for Dependencies in Deep Learning Based Multiple Instance Learning for Whole Slide Imaging. Lecture Notes in Computer Science, 2021, , 329-338. | 1.0 | 16 |
| 7 | Federated learning improves site performance in multicenter deep learning without data sharing. Journal of the American Medical Informatics Association: JAMIA, 2021, 28, 1259-1264. | 2.2 | 93 |
| 8 | Federated semi-supervised learning for COVID region segmentation in chest CT using multi-national data from China, Italy, Japan. Medical Image Analysis, 2021, 70, 101992. | 7.0 | 140 |
| 9 | Going to Extremes: Weakly Supervised Medical Image Segmentation. Machine Learning and Knowledge Extraction, 2021, 3, 507-524. | 3.2 | 21 |
| 10 | Radiomic Features at CT Can Distinguish Pancreatic Cancer from Noncancerous Pancreas. Radiology Imaging Cancer, 2021, 3, e210010. | 0.7 | 22 |
| 11 | Performance improvement of weakly supervised fully convolutional networks by skip connections for brain structure segmentation. Medical Physics, 2021, 48, 7215-7227. | 1.6 | 1 |
| 12 | Federated learning for predicting clinical outcomes in patients with COVID-19. Nature Medicine, 2021, 27, 1735-1743. | 15.2 | 300 |
| 13 | Guest Editorial Annotation-Efficient Deep Learning: The Holy Grail of Medical Imaging. IEEE Transactions on Medical Imaging, 2021, 40, 2526-2533. | 5.4 | 10 |
| 14 | Diminishing Uncertainty Within the Training Pool: Active Learning for Medical Image Segmentation. IEEE Transactions on Medical Imaging, 2021, 40, 2534-2547. | 5.4 | 28 |
| 15 | Multi-task Federated Learning for Heterogeneous Pancreas Segmentation. Lecture Notes in Computer Science, 2021, , 101-110. | 1.0 | 7 |
| 16 | Technical and Clinical Factors Affecting Success Rate of a Deep Learning Method for Pancreas Segmentation on CT. Academic Radiology, 2020, 27, 689-695. | 1.3 | 16 |
| 17 | Data Augmentation and Transfer Learning to Improve Generalizability of an Automated Prostate Segmentation Model. American Journal of Roentgenology, 2020, 215, 1403-1410. | 1.0 | 23 |
| 18 | C2FNAS: Coarse-to-Fine Neural Architecture Search for 3D Medical Image Segmentation. , 2020, , . | | 80 |

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|---|---|---|---|
| 19 | Artificial intelligence for the detection of COVID-19 pneumonia on chest CT using multinational datasets. Nature Communications, 2020, 11, 4080. | 5.8 | 405 |
| 20 | The future of digital health with federated learning. Npj Digital Medicine, 2020, 3, 119. | 5.7 | 887 |
| 21 | Deep learning to distinguish pancreatic cancer tissue from non-cancerous pancreatic tissue: a retrospective study with cross-racial external validation. The Lancet Digital Health, 2020, 2, e303-e313. | 5.9 | 121 |
| 22 | Uncertainty-aware multi-view co-training for semi-supervised medical image segmentation and domain adaptation. Medical Image Analysis, 2020, 65, 101766. | 7.0 | 137 |
| 23 | Generalizing Deep Learning for Medical Image Segmentation to Unseen Domains via Deep Stacked Transformation. IEEE Transactions on Medical Imaging, 2020, 39, 2531-2540. | 5.4 | 220 |
| 24 | Automated Pancreas Segmentation Using Multi-institutional Collaborative Deep Learning. Lecture Notes in Computer Science, 2020, , 192-200. | 1.0 | 13 |
| 25 | Cardiac fiber tracking on super high-resolution CT images: a comparative study. Journal of Medical Imaging, 2020, 7, 1. | 0.8 | 1 |
| 26 | Radiomics nomogram for predicting the malignant potential of gastrointestinal stromal tumours preoperatively. European Radiology, 2019, 29, 1074-1082. | 2.3 | 52 |
| 27 | Abdominal artery segmentation method from CT volumes using fully convolutional neural network. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 2069-2081. | 1.7 | 20 |
| 28 | Precise estimation of renal vascular dominant regions using spatially aware fully convolutional networks, tensor-cut and Voronoi diagrams. Computerized Medical Imaging and Graphics, 2019, 77, 101642. | 3.5 | 18 |
| 29 | Stable polypâ€scene classification via subsampling and residual learning from an imbalanced large dataset. Healthcare Technology Letters, 2019, 6, 237-242. | 1.9 | 5 |
| 30 | Weakly Supervised Segmentation from Extreme Points. Lecture Notes in Computer Science, 2019, , 42-50. | 1.0 | 9 |
| 31 | Precision Medicine in Pancreatic Diseaseâ€"Knowledge Gaps and Research Opportunities. Pancreas, 2019, 48, 1250-1258. | 0.5 | 9 |
| 32 | Unsupervised Segmentation of Micro-CT Images of Lung Cancer Specimen Using Deep Generative Models. Lecture Notes in Computer Science, 2019, , 240-248. | 1.0 | 7 |
| 33 | Searching Learning Strategy with Reinforcement Learning for 3D Medical Image Segmentation. Lecture Notes in Computer Science, 2019, , 3-11. | 1.0 | 25 |
| 34 | End-to-End Adversarial Shape Learning for Abdomen Organ Deep Segmentation. Lecture Notes in Computer Science, 2019, , 124-132. | 1.0 | 9 |
| 35 | Interactive 3D Segmentation Editing and Refinement via Gated Graph Neural Networks. Lecture Notes in Computer Science, 2019, , 9-17. | 1.0 | 3 |
| 36 | Fully automated prostate whole gland and central gland segmentation on MRI using holistically nested networks with short connections. Journal of Medical Imaging, 2019, 6, 1. | 0.8 | 14 |

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|---|---|---|---|
| 37 | Lung segmentation based on a deep learning approach for dynamic chest radiography. , 2019, , . | | 8 |
| 38 | Weakly-supervised deep learning of interstitial lung disease types on CT images. , 2019, , . | | 8 |
| 39 | Improving V-Nets for multi-class abdominal organ segmentation. , 2019, , . | | 4 |
| 40 | Tunable CT Lung Nodule Synthesis Conditioned on Background Image and Semantic Features. Lecture Notes in Computer Science, 2019, , 62-70. | 1.0 | 7 |
| 41 | Scanning, registration, and fiber estimation of rabbit hearts using micro-focus and refraction-contrast x-ray CT. , 2019, , . | | 1 |
| 42 | Unsupervised segmentation of micro-CT images based on a hybrid of variational inference and adversarial learning. , 2019, , . | | 0 |
| 43 | Colonoscope tracking method based on shape estimation network. , 2019, , . | | 1 |
| 44 | Dynamic chest radiography for pulmonary function diagnosis: A validation study using 4D extended cardiac-torso (XCAT) phantom. , 2019, , . | | 1 |
| 45 | Polyp-size classification with RGB-D features for colonoscopy. , 2019, , . | | 0 |
| 46 | Artificial Intelligence-Assisted Polyp Detection for Colonoscopy: Initial Experience. Gastroenterology, 2018, 154, 2027-2029.e3. | 0.6 | 281 |
| 47 | Spatial aggregation of holistically-nested convolutional neural networks for automated pancreas localization and segmentation. Medical Image Analysis, 2018, 45, 94-107. | 7.0 | 255 |
| 48 | An application of cascaded 3D fully convolutional networks for medical image segmentation. Computerized Medical Imaging and Graphics, 2018, 66, 90-99. | 3.5 | 227 |
| 49 | Holistic classification of CT attenuation patterns for interstitial lung diseases via deep convolutional neural networks. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2018, 6, 1-6. | 1.3 | 172 |
| 50 | An analysis of robust cost functions for CNN in computer-aided diagnosis. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2018, 6, 253-258. | 1.3 | 11 |
| 51 | Fully Convolutional Network-Based Eyeball Segmentation from Sparse Annotation for Eye Surgery SimulationÂModel. Lecture Notes in Computer Science, 2018, , 118-126. | 1.0 | 1 |
| 52 | BESNet: Boundary-Enhanced Segmentation of Cells in Histopathological Images. Lecture Notes in Computer Science, 2018, , 228-236. | 1.0 | 46 |
| 53 | Towards Automated Colonoscopy Diagnosis: Binary Polyp Size Estimation via Unsupervised Depth Learning. Lecture Notes in Computer Science, 2018, , 611-619. | 1.0 | 9 |
| 54 | A Multi-scale Pyramid of 3D Fully Convolutional Networks for Abdominal Multi-organ Segmentation. Lecture Notes in Computer Science, 2018, , 417-425. | 1.0 | 55 |

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|---|---|---|---|
| 55 | Dense volumetric detection and segmentation of mediastinal lymph nodes in chest CT images. , 2018, , . | | 12 |
| 56 | Unsupervised pathology image segmentation using representation learning with spherical k-means. , 2018, , . | | 9 |
| 57 | Unsupervised segmentation of 3D medical images based on clustering and deep representation learning. , 2018, , . | | 25 |
| 58 | Towards dense volumetric pancreas segmentation in CT using 3D fully convolutional networks. , 2018, , . | | 7 |
| 59 | Automatic segmentation of eyeball structures from micro-CT images based on sparse annotation. , 2018, , . | | 1 |
| 60 | Convolutional neural network based deep-learning architecture for prostate cancer detection on multiparametric magnetic resonance images. Proceedings of SPIE, 2017, , . | 0.8 | 30 |
| 61 | Automatic MR prostate segmentation by deep learning with holistically-nested networks. Proceedings of SPIE, 2017, , . | 0.8 | 2 |
| 62 | Tracking and Segmentation of the Airways in Chest CT Using a Fully Convolutional Network. Lecture Notes in Computer Science, 2017, , 198-207. | 1.0 | 25 |
| 63 | Motion Vector for Outlier Elimination in Feature Matching and Its Application in SLAM Based Laparoscopic Tracking. Lecture Notes in Computer Science, 2017, , 60-69. | 1.0 | 1 |
| 64 | Comparison of the deep-learning-based automated segmentation methods for the head sectioned images of the virtual Korean human project. , 2017, , . | | 2 |
| 65 | Three Aspects on Using Convolutional Neural Networks for Computer-Aided Detection in Medical Imaging. Advances in Computer Vision and Pattern Recognition, 2017, , 113-136. | 0.9 | 8 |
| 66 | Deep learning with orthogonal volumetric HED segmentation and 3D surface reconstruction model of prostate MRI. , 2017, , . | | 11 |
| 67 | A Bottom-Up Approach for Pancreas Segmentation Using Cascaded Superpixels and (Deep) Image Patch Labeling. IEEE Transactions on Image Processing, 2017, 26, 386-399. | 6.0 | 136 |
| 68 | Automatic segmentation of head anatomical structures from sparsely-annotated images. , 2017, , . | | 0 |
| 69 | Holistic segmentation of the lung in cine MRI. Journal of Medical Imaging, 2017, 4, 1. | 0.8 | 9 |
| 70 | Automatic Pancreas Segmentation Using Coarse-to-Fine Superpixel Labeling. Advances in Computer Vision and Pattern Recognition, 2017, , 279-302. | 0.9 | 4 |
| 71 | Efficient False Positive Reduction in Computer-Aided Detection Using Convolutional Neural Networks and Random View Aggregation. Advances in Computer Vision and Pattern Recognition, 2017, , 35-48. | 0.9 | 4 |
| 72 | Micro-CT Guided 3D Reconstruction ofÂHistological Images. Lecture Notes in Computer Science, 2017, , 93-101. | 1.0 | 3 |

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| 73 | 3D FCN Feature Driven Regression Forest-Based Pancreas Localization and Segmentation. Lecture Notes in Computer Science, 2017, , 222-230. | 1.0 | 4 |
| 74 | Automatic magnetic resonance prostate segmentation by deep learning with holistically nested networks. Journal of Medical Imaging, 2017, 4, 1. | 0.8 | 55 |
| 75 | Multi-atlas Segmentation with Joint Label Fusion of Osteoporotic Vertebral Compression Fractures on CT. Lecture Notes in Computer Science, 2016, , 74-84. | 1.0 | 7 |
| 76 | Improving vertebra segmentation through joint vertebra-rib atlases. Proceedings of SPIE, 2016, , . | 0.8 | 2 |
| 77 | Deep convolutional networks for automated detection of posterior-element fractures on spine CT. Proceedings of SPIE, 2016, , . | 0.8 | 23 |
| 78 | Improving Computer-Aided Detection Using<?Pub _newline?>Convolutional Neural Networks and Random View Aggregation. IEEE Transactions on Medical Imaging, 2016, 35, 1170-1181. | 5.4 | 465 |
| 79 | Active appearance model and deep learning for more accurate prostate segmentation on MRI. Proceedings of SPIE, 2016, , . | 0.8 | 22 |
| 80 | Deep Convolutional Neural Networks for Computer-Aided Detection: CNN Architectures, Dataset Characteristics and Transfer Learning. IEEE Transactions on Medical Imaging, 2016, 35, 1285-1298. | 5.4 | 4,024 |
| 81 | Automatic Lymph Node Cluster Segmentation Using Holistically-Nested Neural Networks andÂStructured Optimization in CT Images. Lecture Notes in Computer Science, 2016, , 388-397. | 1.0 | 31 |
| 82 | Spatial Aggregation of Holistically-Nested Networks for Automated Pancreas Segmentation. Lecture Notes in Computer Science, 2016, , 451-459. | 1.0 | 88 |
| 83 | Anatomy-specific classification of medical images using deep convolutional nets. , 2015, , . | | 109 |
| 84 | Detection of Sclerotic Spine Metastases viaÂRandom Aggregation of Deep ConvolutionalÂNeural Network Classifications. Lecture Notes in Computational Vision and Biomechanics, 2015, , 3-12. | 0.5 | 34 |
| 85 | Deep convolutional networks for pancreas segmentation in CT imaging. Proceedings of SPIE, 2015, , . | 0.8 | 60 |
| 86 | DeepOrgan: Multi-level Deep Convolutional Networks for Automated Pancreas Segmentation. Lecture Notes in Computer Science, 2015, , 556-564. | 1.0 | 347 |
| 87 | Leveraging Mid-Level Semantic Boundary Cues for Automated Lymph Node Detection. Lecture Notes in Computer Science, 2015, , 53-61. | 1.0 | 24 |
| 88 | A New 2.5D Representation for Lymph Node Detection Using Random Sets of Deep Convolutional Neural Network Observations. Lecture Notes in Computer Science, 2014, 17, 520-527. | 1.0 | 286 |
| 89 | Computer-assisted polyp matching between optical colonoscopy and CT colonography: a phantom study. , 2014, , . | | 1 |
| 90 | CT Colonography: Clinical Evaluation of a Method for Automatic Coregistration of Polyps at Follow-up Surveillance Studies. Radiology, 2014, 273, 417-424. | 3.6 | 2 |

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|---|---|---|---|
| 91 | 2D View Aggregation for Lymph Node Detection Using a Shallow Hierarchy of Linear Classifiers. Lecture Notes in Computer Science, 2014, 17, 544-552. | 1.0 | 38 |
| 92 | Endoluminal surface registration for CT colonography using haustral fold matching. Medical Image Analysis, 2013, 17, 946-958. | 7.0 | 12 |
| 93 | CT Colonography: External Clinical Validation of an Algorithm for Computer-assisted Prone and Supine Registration. Radiology, 2013, 268, 752-760. | 3.6 | 6 |
| 94 | CT colonography: inverse-consistent symmetric registration of prone and supine inner colon surfaces. , 2013, , . | | 0 |
| 95 | Registration of Temporally Separated CT Colonography Cases. Lecture Notes in Computer Science, 2013, , 46-52. | 1.0 | 0 |
| 96 | Registration of Prone and Supine CT Colonography Datasets with Differing Endoluminal Distension. Lecture Notes in Computer Science, 2013, , 29-38. | 1.0 | 0 |
| 97 | Spatial Correspondence between Prone and Supine CT Colonography Images: Creating a Reference Standard. Lecture Notes in Computer Science, 2013, , 39-45. | 1.0 | 0 |
| 98 | Establishing spatial correspondence for the analysis of images from highly deforming anatomy. , 2012, 2012, 3732-5. | | 0 |
| 99 | External Clinical Validation of Prone and Supine CT Colonography Registration. Lecture Notes in Computer Science, 2012, , 10-19. | 1.0 | 2 |
| 100 | Prone to Supine CT Colonography Registration Using a Landmark and Intensity Composite Method. Lecture Notes in Computer Science, 2012, , 1-9. | 1.0 | 2 |
| 101 | Inverse Consistency Error in the Registration of Prone and Supine Images in CT Colonography. Lecture Notes in Computer Science, 2012, , 1-7. | 1.0 | 1 |
| 102 | Registration of the endoluminal surfaces of the colon derived from prone and supine CT colonography. Medical Physics, 2011, 38, 3077-3089. | 1.6 | 25 |
| 103 | Automatic Prone to Supine Haustral Fold Matching in CT Colonography Using a Markov Random Field Model. Lecture Notes in Computer Science, 2011, 14, 508-515. | 1.0 | 9 |
| 104 | Establishing Spatial Correspondence between the Inner Colon Surfaces from Prone and Supine CT Colonography. Lecture Notes in Computer Science, 2010, 13, 497-504. | 1.0 | 6 |