

# Milan Sonka

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6995612/publications.pdf>

Version: 2024-02-01

105  
papers

14,074  
citations

71102

41  
h-index

30087

103  
g-index

115  
all docs

115  
docs citations

115  
times ranked

17500  
citing authors

#	ARTICLE	IF	CITATIONS
1	3D Slicer as an image computing platform for the Quantitative Imaging Network. Magnetic Resonance Imaging, 2012, 30, 1323-1341.	1.8	5,126
2	Retinal Imaging and Image Analysis. IEEE Reviews in Biomedical Engineering, 2010, 3, 169-208.	18.0	1,021
3	Deep-COVID: Predicting COVID-19 from chest X-ray images using deep transfer learning. Medical Image Analysis, 2020, 65, 101794.	11.6	696
4	Automated 3-D Intraretinal Layer Segmentation of Macular Spectral-Domain Optical Coherence Tomography Images. IEEE Transactions on Medical Imaging, 2009, 28, 1436-1447.	8.9	535
5	Retinal neurodegeneration may precede microvascular changes characteristic of diabetic retinopathy in diabetes mellitus. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E2655-64.	7.1	442
6	Effect of Endothelial Shear Stress on the Progression of Coronary Artery Disease, Vascular Remodeling, and In-Stent Restenosis in Humans. Circulation, 2003, 108, 438-444.	1.6	396
7	3-D active appearance models: segmentation of cardiac MR and ultrasound images. IEEE Transactions on Medical Imaging, 2002, 21, 1167-1178.	8.9	348
8	Intraretinal Layer Segmentation of Macular Optical Coherence Tomography Images Using Optimal 3-D Graph Search. IEEE Transactions on Medical Imaging, 2008, 27, 1495-1505.	8.9	300
9	Quantification of Pulmonary Emphysema from Lung Computed Tomography Images. American Journal of Respiratory and Critical Care Medicine, 1997, 156, 248-254.	5.6	257
10	Automatic segmentation of echocardiographic sequences by active appearance motion models. IEEE Transactions on Medical Imaging, 2002, 21, 1374-1383.	8.9	257
11	Intrathoracic airway trees: segmentation and airway morphology analysis from low-dose CT scans. IEEE Transactions on Medical Imaging, 2005, 24, 1529-1539.	8.9	236
12	Interstitial Lung Disease. American Journal of Respiratory and Critical Care Medicine, 1999, 159, 519-525.	5.6	220
13	Computer Recognition of Regional Lung Disease Patterns. American Journal of Respiratory and Critical Care Medicine, 1999, 160, 648-654.	5.6	209
14	A Fully Parallel 3D Thinning Algorithm and Its Applications. Computer Vision and Image Understanding, 1996, 64, 420-433.	4.7	199
15	MDCT-based 3-D texture classification of emphysema and early smoking related lung pathologies. IEEE Transactions on Medical Imaging, 2006, 25, 464-475.	8.9	198
16	LOGISMOS—Layered Optimal Graph Image Segmentation of Multiple Objects and Surfaces: Cartilage Segmentation in the Knee Joint. IEEE Transactions on Medical Imaging, 2010, 29, 2023-2037.	8.9	190
17	Three-Dimensional Analysis of Retinal Layer Texture: Identification of Fluid-Filled Regions in SD-OCT of the Macula. IEEE Transactions on Medical Imaging, 2010, 29, 1321-1330.	8.9	186
18	Characterization of the interstitial lung diseases via density-based and texture-based analysis of computed tomography images of lung structure and function. Academic Radiology, 2003, 10, 1104-1118.	2.5	179

#	ARTICLE	IF	CITATIONS
19	Three-Dimensional Segmentation of Fluid-Associated Abnormalities in Retinal OCT: Probability Constrained Graph-Search-Graph-Cut. IEEE Transactions on Medical Imaging, 2012, 31, 1521-1531.	8.9	169
20	Regions of low endothelial shear stress are the sites where coronary plaque progresses and vascular remodelling occurs in humans: an in vivo serial study. European Heart Journal, 2007, 28, 705-710.	2.2	152
21	Risk Factors Associated With Aortic and Carotid Intima-Media Thickness in Adolescents and Young Adults. Journal of the American College of Cardiology, 2009, 53, 2273-2279.	2.8	140
22	Intra-retinal layer segmentation of 3D optical coherence tomography using coarse grained diffusion map. Medical Image Analysis, 2013, 17, 907-928.	11.6	140
23	Matching and anatomical labeling of human airway tree. IEEE Transactions on Medical Imaging, 2005, 24, 1540-1547.	8.9	138
24	Quantitative analysis of pulmonary airway tree structures. Computers in Biology and Medicine, 2006, 36, 974-996.	7.0	134
25	Association of visual function and ganglion cell layer thickness in patients with diabetes mellitus type 1 and no or minimal diabetic retinopathy. Vision Research, 2011, 51, 224-228.	1.4	110
26	Vessel Boundary Delineation on Fundus Images Using Graph-Based Approach. IEEE Transactions on Medical Imaging, 2011, 30, 1184-1191.	8.9	93
27	Plaque development, vessel curvature, and wall shear stress in coronary arteries assessed by X-ray angiography and intravascular ultrasound. Medical Image Analysis, 2006, 10, 615-631.	11.6	83
28	Rapid full volume data acquisition by real-time 3-dimensional echocardiography for assessment of left ventricular indexes in children: A validation study compared with magnetic resonance imaging. Journal of the American Society of Echocardiography, 2005, 18, 299-305.	2.8	79
29	Stratified Sampling Voxel Classification for Segmentation of Intraretinal and Subretinal Fluid in Longitudinal Clinical OCT Data. IEEE Transactions on Medical Imaging, 2015, 34, 1616-1623.	8.9	77
30	Reproducibility of coronary lumen, plaque, and vessel wall reconstruction and of endothelial shear stress measurements in vivo in humans. Catheterization and Cardiovascular Interventions, 2003, 60, 67-78.	1.7	74
31	RATS: Rapid Automatic Tissue Segmentation in rodent brain MRI. Journal of Neuroscience Methods, 2014, 221, 175-182.	2.5	74
32	Robust active appearance models and their application to medical image analysis. IEEE Transactions on Medical Imaging, 2005, 24, 1151-1169.	8.9	71
33	Automated analysis of brachial ultrasound image sequences: early detection of cardiovascular disease via surrogates of endothelial function. IEEE Transactions on Medical Imaging, 2002, 21, 1271-1279.	8.9	69
34	The comprehensive imaging-based analysis of the lung. Academic Radiology, 2004, 11, 1370-1380.	2.5	67
35	Automated 3-D method for the correction of axial artifacts in spectral-domain optical coherence tomography images. Biomedical Optics Express, 2011, 2, 2403.	2.9	67
36	Virtual Histology Evaluation of Atherosclerosis Regression During Atorvastatin and Ezetimibe Administration - HEAVEN Study -. Circulation Journal, 2012, 76, 176-183.	1.6	67

#	ARTICLE	IF	CITATIONS
37	Novel Indices for Left-Ventricular Dyssynchrony Characterization Based on Highly Automated Segmentation From Real-Time 3-D Echocardiography. <i>Ultrasound in Medicine and Biology</i> , 2013, 39, 72-88.	1.5	62
38	Graph-Based IVUS Segmentation With Efficient Computer-Aided Refinement. <i>IEEE Transactions on Medical Imaging</i> , 2013, 32, 1536-1549.	8.9	61
39	Congenital aortic disease: 4D magnetic resonance segmentation and quantitative analysis. <i>Medical Image Analysis</i> , 2009, 13, 483-493.	11.6	58
40	Topomorphologic Separation of Fused Isointensity Objects via Multiscale Opening: Separating Arteries and Veins in 3-D Pulmonary CT. <i>IEEE Transactions on Medical Imaging</i> , 2010, 29, 840-851.	8.9	56
41	Quantitative analysis of retinal OCT. <i>Medical Image Analysis</i> , 2016, 33, 165-169.	11.6	45
42	Semiautomated segmentation of ovarian follicular ultrasound images using a knowledge-based algorithm. <i>Ultrasound in Medicine and Biology</i> , 1998, 24, 27-42.	1.5	43
43	A real-time 3-dimensional digital Doppler method for measurement of flow rate and volume through mitral valve in children: A validation study compared with magnetic resonance imaging. <i>Journal of the American Society of Echocardiography</i> , 2005, 18, 1-7.	2.8	42
44	Measurement of Aortic Intimal-Medial Thickness in Adolescents and Young Adults. <i>Ultrasound in Medicine and Biology</i> , 2010, 36, 560-565.	1.5	42
45	Semiautomated segmentation of head and neck cancers in 18F-FDG PET scans: A just-enough interaction approach. <i>Medical Physics</i> , 2016, 43, 2948-2964.	3.0	41
46	Graph-based segmentation of abnormal nuclei in cervical cytology. <i>Computerized Medical Imaging and Graphics</i> , 2017, 56, 38-48.	5.8	41
47	Remodeling Characteristics of Minimally Diseased Coronary Arteries Are Consistent Along the Length of the Artery. <i>American Journal of Cardiology</i> , 2006, 97, 13-16.	1.6	35
48	Computer-aided diagnosis via model-based shape analysis. <i>Academic Radiology</i> , 2005, 12, 358-367.	2.5	34
49	Choroidal thickness maps from spectral domain and swept source optical coherence tomography: algorithmic versus ground truth annotation. <i>British Journal of Ophthalmology</i> , 2016, 100, 1372-1376.	3.9	34
50	Radiomics-based differentiation between glioblastoma and primary central nervous system lymphoma: a comparison of diagnostic performance across different MRI sequences and machine learning techniques. <i>European Radiology</i> , 2021, 31, 8703-8713.	4.5	32
51	Three-dimensional thrombus segmentation in abdominal aortic aneurysms using graph search based on a triangular mesh. <i>Computers in Biology and Medicine</i> , 2010, 40, 271-278.	7.0	30
52	Automated contour detection in X-ray left ventricular angiograms using multiview active appearance models and dynamic programming. <i>IEEE Transactions on Medical Imaging</i> , 2006, 25, 1158-1171.	8.9	29
53	Multi-Surface and Multi-Field Co-Segmentation of 3-D Retinal Optical Coherence Tomography. <i>IEEE Transactions on Medical Imaging</i> , 2014, 33, 2242-2253.	8.9	29
54	Characterization and identification of spatial artifacts during 4D-CT imaging. <i>Medical Physics</i> , 2011, 38, 2074-2087.	3.0	28

#	ARTICLE	IF	CITATIONS
55	A machine-learning graph-based approach for 3D segmentation of Bruch's membrane opening from glaucomatous SD-OCT volumes. <i>Medical Image Analysis</i> , 2017, 39, 206-217.	11.6	28
56	Directional 3D Edge Detection in Anisotropic Data: Detector Design and Performance Assessment. <i>Computer Vision and Image Understanding</i> , 2000, 77, 84-110.	4.7	27
57	Early detection of cardiac allograft vasculopathy using highly automated 3-dimensional optical coherence tomography analysis. <i>Journal of Heart and Lung Transplantation</i> , 2018, 37, 992-1000.	0.6	26
58	LOGISMOS-B: Layered Optimal Graph Image Segmentation of Multiple Objects and Surfaces for the Brain. <i>IEEE Transactions on Medical Imaging</i> , 2014, 33, 1220-1235.	8.9	25
59	Machine learning based differentiation of glioblastoma from brain metastasis using MRI derived radiomics. <i>Scientific Reports</i> , 2021, 11, 10478.	3.3	25
60	Simultaneous Registration of Location and Orientation in Intravascular Ultrasound Pullbacks Pairs Via 3D Graph-Based Optimization. <i>IEEE Transactions on Medical Imaging</i> , 2015, 34, 2550-2561.	8.9	23
61	CorteXpert: A model-based method for automatic renal cortex segmentation. <i>Medical Image Analysis</i> , 2017, 42, 257-273.	11.6	23
62	Lung segmentation refinement based on optimal surface finding utilizing a hybrid desktop/virtual reality user interface. <i>Computerized Medical Imaging and Graphics</i> , 2013, 37, 15-27.	5.8	22
63	Interactive Virtual Endoscopy in Coronary Arteries Based on Multimodality Fusion. <i>IEEE Transactions on Medical Imaging</i> , 2004, 23, 1391-1403.	8.9	20
64	Fully automated 3D segmentation of MR-imaged calf muscle compartments: Neighborhood relationship enhanced fully convolutional network. <i>Computerized Medical Imaging and Graphics</i> , 2021, 87, 101835.	5.8	20
65	Evaluation of the human airway with multi-detector x-ray-computed tomography and optical imaging. <i>Physiological Measurement</i> , 2004, 25, 837-847.	2.1	19
66	Quantitative 3D Analysis of Coronary Wall Morphology in Heart Transplant Patients: OCT-Assessed Cardiac Allograft Vasculopathy Progression. <i>Medical Image Analysis</i> , 2018, 50, 95-105.	11.6	19
67	Multiview Active Appearance Models for Simultaneous Segmentation of Cardiac 2- and 4-Chamber Long-Axis Magnetic Resonance Images. <i>Investigative Radiology</i> , 2005, 40, 195-203.	6.2	18
68	Automated measurement of uptake in cerebellum, liver, and aortic arch in full-body FDG PET/CT scans. <i>Medical Physics</i> , 2012, 39, 3112-3123.	3.0	16
69	Increased contrast enhancement of the parent vessel of unruptured intracranial aneurysms in 7T MR imaging. <i>Journal of NeuroInterventional Surgery</i> , 2020, 12, 1018-1022.	3.3	16
70	Anatomical Modeling with Fuzzy Implicit Surface Templates: Application to Automated Localization of the Heart and Lungs in Thoracic MR Volumes. <i>Computer Vision and Image Understanding</i> , 2000, 80, 1-20.	4.7	15
71	Segmentation of intravascular ultrasound images: a machine learning approach mimicking human vision. <i>International Congress Series</i> , 2004, 1268, 1045-1049.	0.2	15
72	THE LAYERED NET SURFACE PROBLEMS IN DISCRETE GEOMETRY AND MEDICAL IMAGE SEGMENTATION. <i>International Journal of Computational Geometry and Applications</i> , 2007, 17, 261-296.	0.5	15

#	ARTICLE	IF	CITATIONS
73	Optimal multiple-seams search for image resizing with smoothness and shape prior. <i>Visual Computer</i> , 2010, 26, 749-759.	3.5	15
74	Radiomic Based Machine Learning Performance for a Three Class Problem in Neuro-Oncology: Time to Test the Waters?. <i>Cancers</i> , 2021, 13, 2568.	3.7	14
75	Image-Based Biomarkers in Clinical Practice. <i>Seminars in Radiation Oncology</i> , 2011, 21, 157-166.	2.2	13
76	Effects of vessel geometry and catheter position on dose delivery in intracoronary brachytherapy. <i>IEEE Transactions on Biomedical Engineering</i> , 2003, 50, 1286-1295.	4.2	11
77	Quantitative muscle MRI as a sensitive marker of early muscle pathology in myotonic dystrophy type 1. <i>Muscle and Nerve</i> , 2021, 63, 553-562.	2.2	10
78	Automated analysis of four-dimensional magnetic resonance images of the human aorta. <i>International Journal of Cardiovascular Imaging</i> , 2010, 26, 571-578.	1.5	8
79	Feature guided motion artifact reduction with structure-awareness in 4D CT images. , 2011, 2011, 1057-1064.		7
80	Time continuous segmentation of cardiac MR images using Active Appearance Motion Models. <i>International Congress Series</i> , 2001, 1230, 961-966.	0.2	6
81	Nerve Fiber Layer Thickness and Characteristics Associated with Glaucoma in Community Living Older Adults: Prelude to a Screening Trial?. <i>Ophthalmic Epidemiology</i> , 2017, 24, 104-110.	1.7	6
82	Computer-aided diagnosis via model-based shape analysis: cardiac MR and echo. <i>International Congress Series</i> , 2003, 1256, 1013-1018.	0.2	5
83	Improved tensor scale computation with application to medical image interpolation. <i>Computerized Medical Imaging and Graphics</i> , 2011, 35, 64-80.	5.8	5
84	The late stent malapposition develops also after paclitaxel balloon predilatation before bare-metal stent implantation: case description. <i>European Heart Journal</i> , 2011, 32, 1432-1432.	2.2	5
85	Donor specific anti-HLA antibodies and cardiac allograft vasculopathy: A prospective study using highly automated 3-D optical coherence tomography analysis. <i>Transplant Immunology</i> , 2021, 65, 101340.	1.2	5
86	Automated segmentation of choroidal layers from 3-dimensional macular optical coherence tomography scans. <i>Journal of Neuroscience Methods</i> , 2021, 360, 109267.	2.5	5
87	Active Appearance Motion Models for fully automated endocardial contour detection in time sequences of echocardiograms. <i>International Congress Series</i> , 2001, 1230, 941-947.	0.2	4
88	Integrated system for quantitative analysis of coronary plaque via data fusion of biplane angiography and intravascular ultrasound. <i>International Congress Series</i> , 2003, 1256, 1117-1122.	0.2	4
89	Quantitative assessment of the entire thoracic aorta from magnetic resonance images. <i>Cardiology in the Young</i> , 2011, 21, 170-177.	0.8	4
90	Heart rate and early progression of cardiac allograft vasculopathy: A prospective study using highly automated 3-D optical coherence tomography analysis. <i>Clinical Transplantation</i> , 2020, 34, e13773.	1.6	4

#	ARTICLE	IF	CITATIONS
91	NeuriteNet: A convolutional neural network for assessing morphological parameters of neurite growth. <i>Journal of Neuroscience Methods</i> , 2021, 363, 109349.	2.5	4
92	Evaluating Efficacy of Aflibercept in Refractory Exudative Age-Related Macular Degeneration With OCT Segmentation Volumetric Analysis. <i>Ophthalmic Surgery Lasers and Imaging Retina</i> , 2016, 47, 245-251.	0.7	4
93	Image processing and analysis in drug discovery and clinical trials. <i>IEEE Transactions on Medical Imaging</i> , 2002, 21, 1209-1211.	8.9	3
94	Volume-Preserving Smoothing of Three-Dimensional Surfaces: Application to Intravascular Ultrasound. <i>Journal of Biomedical Informatics</i> , 1998, 31, 385-392.	0.7	2
95	Computed Tomography Perfusion-Based Prediction of Core Infarct and Tissue at Risk: Can Artificial Intelligence Help Reduce Radiation Exposure?. <i>Stroke</i> , 2021, 52, e755-e759.	2.0	2
96	Coronary plaque analysis by multimodality fusion. <i>Studies in Health Technology and Informatics</i> , 2005, 113, 321-59.	0.3	2
97	The prediction of coronary artery disease based on non-invasive examinations and heme oxygenase 1 polymorphism versus virtual histology. <i>Journal of Invasive Cardiology</i> , 2013, 25, 32-7.	0.4	2
98	Cardiovascular image analysis: past, present and future. <i>International Congress Series</i> , 2001, 1230, 902-908.	0.2	1
99	Visualization of human coronary arteries with quantification results from 3-D and 4-D computational hemodynamics based upon virtual endoscopy. <i>International Congress Series</i> , 2001, 1230, 923-929.	0.2	1
100	TCT-355 An Automated Computational Method for Quantification of Total Fibrous Cap Volume and Mean Fibrous Cap Thickness with Optical Coherence Tomography. <i>Journal of the American College of Cardiology</i> , 2015, 66, B143-B144.	2.8	1
101	Evaluation of Variable Thin-Cap Fibroatheroma Definitions and Association of Virtual Histology-Intravascular Ultrasound Findings With Cavity Rupture Size. <i>American Journal of Cardiology</i> , 2016, 118, 162-169.	1.6	1
102	Effects of implanting a long-term left ventricle assist device on post-transplant outcomes. <i>International Journal of Artificial Organs</i> , 2021, 44, 39-45.	1.4	1
103	Radiomics-Based Differentiation between Glioblastoma, CNS Lymphoma, and Brain Metastases: Comparing Performance across MRI Sequences and Machine Learning Models. <i>Cancers</i> , 2021, 13, 2261.	3.7	1
104	Real-time three-dimensional digital Doppler method based on Gaussian control surface for measurement of flow volumes. <i>International Congress Series</i> , 2004, 1268, 1084-1089.	0.2	0
105	TCT-96 Progression of coronary atherosclerosis despite lipid-lowering therapy in diabetic patients compared to non-dibetic ones. Study with 3D intravascular ultrasound and virtual histology. <i>Journal of the American College of Cardiology</i> , 2016, 68, B39.	2.8	0