

# Tomaz Vrtovec

## List of Publications by Year in descending order

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Version: 2024-02-01

68  
papers

2,056  
citations

257450

24  
h-index

243625

44  
g-index

68  
all docs

68  
docs citations

68  
times ranked

2037  
citing authors

#	ARTICLE	IF	CITATIONS
1	A benchmark for comparison of dental radiography analysis algorithms. <i>Medical Image Analysis</i> , 2016, 31, 63-76.	11.6	229
2	A review of methods for quantitative evaluation of spinal curvature. <i>European Spine Journal</i> , 2009, 18, 593-607.	2.2	193
3	Evaluation and Comparison of Anatomical Landmark Detection Methods for Cephalometric X-Ray Images: A Grand Challenge. <i>IEEE Transactions on Medical Imaging</i> , 2015, 34, 1890-1900.	8.9	135
4	A review of methods for evaluating the quantitative parameters of sagittal pelvic alignment. <i>Spine Journal</i> , 2012, 12, 433-446.	1.3	125
5	A multi-center milestone study of clinical vertebral CT segmentation. <i>Computerized Medical Imaging and Graphics</i> , 2016, 49, 16-28.	5.8	104
6	A Framework for Automated Spine and Vertebrae Interpolation-Based Detection and Model-Based Segmentation. <i>IEEE Transactions on Medical Imaging</i> , 2015, 34, 1649-1662.	8.9	97
7	Parametric modelling and segmentation of vertebral bodies in 3D CT and MR spine images. <i>Physics in Medicine and Biology</i> , 2011, 56, 7505-7522.	3.0	85
8	Automatic segmentation of organs at risk for head and neck radiotherapy planning: From atlas-based to deep learning methods. <i>Medical Physics</i> , 2020, 47, e929-e950.	3.0	85
9	Shape Representation for Efficient Landmark-Based Segmentation in 3-D. <i>IEEE Transactions on Medical Imaging</i> , 2014, 33, 861-874.	8.9	84
10	A review of methods for quantitative evaluation of axial vertebral rotation. <i>European Spine Journal</i> , 2009, 18, 1079-1090.	2.2	60
11	Automated detection of spinal centrelines, vertebral bodies and intervertebral discs in CT and MR images of lumbar spine. <i>Physics in Medicine and Biology</i> , 2010, 55, 247-264.	3.0	60
12	Evaluation and comparison of 3D intervertebral disc localization and segmentation methods for 3D T2 MR data: A grand challenge. <i>Medical Image Analysis</i> , 2017, 35, 327-344.	11.6	59
13	Analysis of Pelvic Incidence From 3-Dimensional Images of a Normal Population. <i>Spine</i> , 2012, 37, E479-E485.	2.0	49
14	A Game-Theoretic Framework for Landmark-Based Image Segmentation. <i>IEEE Transactions on Medical Imaging</i> , 2012, 31, 1761-1776.	8.9	49
15	Automated curved planar reformation of 3D spine images. <i>Physics in Medicine and Biology</i> , 2005, 50, 4527-4540.	3.0	46
16	Computer-Assisted Screw Size and Insertion Trajectory Planning for Pedicle Screw Placement Surgery. <i>IEEE Transactions on Medical Imaging</i> , 2016, 35, 1420-1430.	8.9	45
17	Segmentation of Pathological Structures by Landmark-Assisted Deformable Models. <i>IEEE Transactions on Medical Imaging</i> , 2017, 36, 1457-1469.	8.9	40
18	Evolution of the ischio-iliac lordosis during natural growth and its relation with the pelvic incidence. <i>European Spine Journal</i> , 2014, 23, 1433-1441.	2.2	35

#	ARTICLE	IF	CITATIONS
19	Segmentation of parotid glands from registered CT and MR images. <i>Physica Medica</i> , 2018, 52, 33-41.	0.7	33
20	Segmentation of tongue muscles from super-resolution magnetic resonance images. <i>Medical Image Analysis</i> , 2015, 20, 198-207.	11.6	32
21	Automated generation of curved planar reformations from MR images of the spine. <i>Physics in Medicine and Biology</i> , 2007, 52, 2865-2878.	3.0	31
22	Minimum cement volume for vertebroplasty. <i>International Orthopaedics</i> , 2015, 39, 727-733.	1.9	31
23	A deep learning tool for fully automated measurements of sagittal spinopelvic balance from X-ray images: performance evaluation. <i>European Spine Journal</i> , 2020, 29, 2295-2305.	2.2	30
24	Evaluation of pelvic morphology in the sagittal plane. <i>Spine Journal</i> , 2013, 13, 1500-1509.	1.3	29
25	Quantitative analysis of spinal curvature in 3D: application to CT images of normal spine. <i>Physics in Medicine and Biology</i> , 2008, 53, 1895-1908.	3.0	28
26	Analysis of Four Manual and a Computerized Method for Measuring Axial Vertebral Rotation in Computed Tomography Images. <i>Spine</i> , 2010, 35, E535-E541.	2.0	20
27	Sagittal spinal profile and spinopelvic balance in parents of scoliotic children. <i>Spine Journal</i> , 2013, 13, 1789-1800.	1.3	20
28	The odyssey of sagittal pelvic morphology during human evolution: a perspective on different Hominoidea. <i>Spine Journal</i> , 2017, 17, 1202-1206.	1.3	18
29	Parametric modeling of the intervertebral disc space in 3D: Application to CT images of the lumbar spine. <i>Computerized Medical Imaging and Graphics</i> , 2014, 38, 596-605.	5.8	17
30	Computer-assisted pedicle screw trajectory planning using CT-inferred bone density: A demonstration against surgical outcomes. <i>Medical Physics</i> , 2019, 46, 3543-3554.	3.0	17
31	Accurate landmark-based segmentation by incorporating landmark misdetections. , 2016, , .		16
32	Determination of axial vertebral rotation in MR images: comparison of four manual and a computerized method. <i>European Spine Journal</i> , 2010, 19, 774-781.	2.2	12
33	Quantitative vertebral morphometry based on parametric modeling of vertebral bodies in 3D. <i>Osteoporosis International</i> , 2013, 24, 1357-1368.	3.1	12
34	A Symmetry-Based Method for the Determination of Vertebral Rotation in 3D. <i>Lecture Notes in Computer Science</i> , 2008, 11, 942-950.	1.3	11
35	Variability Analysis of Manual and Computer-Assisted Preoperative Thoracic Pedicle Screw Placement Planning. <i>Spine</i> , 2018, 43, 1487-1495.	2.0	10
36	Three-dimensional pelvic incidence is much higher in (thoraco)lumbar scoliosis than in controls. <i>European Spine Journal</i> , 2019, 28, 544-550.	2.2	10

#	ARTICLE	IF	CITATIONS
37	Computer-assisted pedicle screw placement planning: Towards clinical practice. , 2018, , .		9
38	AUTOMATED CONSTRUCTION OF 3D STATISTICAL SHAPE MODELS. Image Analysis and Stereology, 2004, 23, 111.	0.9	9
39	Spinopelvic measurements of sagittal balance with deep learning: systematic review and critical evaluation. European Spine Journal, 2022, 31, 2031-2045.	2.2	9
40	Automated tracking and analysis of phospholipid vesicle contours in phase contrast microscopy images. Medical and Biological Engineering and Computing, 2011, 49, 957-966.	2.8	8
41	A deep learning framework for vertebral morphometry and Cobb angle measurement with external validation. European Spine Journal, 2022, 31, 2115-2124.	2.2	7
42	Multi-landmark environment analysis with reinforcement learning for pelvic abnormality detection and quantification. Medical Image Analysis, 2022, 78, 102417.	11.6	6
43	Manual and computerized measurement of coronal vertebral inclination on MRI images: A pilot study. Clinical Radiology, 2013, 68, 807-814.	1.1	5
44	Vertebral End-Plate Perforation for Intervertebral Disc Height Preservation After Single-level Lumbar Discectomy. Clinical Spine Surgery, 2017, 30, E707-E712.	1.3	5
45	A computerized method for evaluating scoliotic deformities using elliptical pattern recognition in X-ray spine images. Computer Methods and Programs in Biomedicine, 2018, 161, 85-92.	4.7	5
46	Generation of Curved Planar Reformations from Magnetic Resonance Images of the Spine. Lecture Notes in Computer Science, 2006, 9, 135-143.	1.3	5
47	Manual and Computerized Measurement of Sagittal Vertebral Inclination in Computed Tomography Images. Spine, 2011, 36, E875-E881.	2.0	4
48	Sparse and multi-object pose+shape modeling of the three-dimensional scoliotic spine. , 2016, , .		4
49	Spine-based coordinate system. , 2005, 2005, 5120-3.		3
50	Automated determination of spinal centerline in CT and MR images. , 2009, , .		3
51	Automated determination of the centers of vertebral bodies and intervertebral discs in CT and MR lumbar spine images. Proceedings of SPIE, 2010, , .	0.8	3
52	Automated robust generation of compact 3D statistical shape models. , 2004, , .		2
53	Automated Determination of the Spine-Based Coordinate System for an Efficient Cross-Sectional Visualization of 3D Spine Images. Lecture Notes in Computational Vision and Biomechanics, 2015, , 231-299.	0.5	2
54	Automated determination of pedicle morphometry in the thoracic spine. , 2016, , .		2

#	ARTICLE	IF	CITATIONS
55	Semi-automated measurement of the cobb angle from 3D mesh models of the scoliotic spine. , 2017, , .		2
56	Automated Tracking of Vesicles in Phase Contrast Microscopy Images. , 2010, , .		1
57	VARIABILITY OF MANUAL AND COMPUTERIZED METHODS FOR MEASURING CORONAL VERTEBRAL INCLINATION IN COMPUTED TOMOGRAPHY IMAGES. Image Analysis and Stereology, 2015, 34, 199.	0.9	1
58	3D Cobb Angle Measurements from Scoliotic Mesh Models with Varying Face-Vertex Density. Lecture Notes in Computer Science, 2018, , 48-58.	1.3	1
59	Automated Measurement of Pelvic Incidence from X-Ray Images. Lecture Notes in Computer Science, 2019, , 146-152.	1.3	1
60	RaÄunalniÄki podprto merjenje parametrov sagitalne orientacije medenice iz rentgenskih slik. ZdravniÄki Vestnik, 2019, 87, 519-529.	0.1	1
61	Computerized three-dimensional pedicle morphometry from computed tomography images of the thoracic spine. Image Analysis and Stereology, 0, , .	0.9	1
62	Evaluation of sagittal vertebral rotation in CT images by manual and automated methods. , 2010, , .		0
63	Evaluation of manual and computerized methods for the determination of axial vertebral rotation. Proceedings of SPIE, 2010, , .	0.8	0
64	Investigation of the reproducibility and reliability of sagittal vertebral inclination measurements from MR images of the spine. Computerized Medical Imaging and Graphics, 2014, 38, 620-627.	5.8	0
65	Letter to the editor concerning "Pelvic incidence: an anatomic investigation of 880 cadaveric specimens" by Weinberg DS, Morris WZ, Gebhart JJ, Liu RW: Eur Spine J (2015), doi: 10.1007/s00586-015-4317-z. European Spine Journal, 2016, 25, 3004-3005.	2.2	0
66	Comparison of Manual and Computerized Measurements of Sagittal Vertebral Inclination in MR Images. Lecture Notes in Computational Vision and Biomechanics, 2014, , 111-121.	0.5	0
67	Image Analysis & Stereology: 2017 Research Highlights. Image Analysis and Stereology, 2018, 37, 1.	0.9	0
68	Segmentation of Organs-At-Risk from Ct and Mr Images of the Head and Neck: Baseline Results. , 2022, , .		0