

# Timothy

## List of Publications by Year in descending order

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131  
papers

5,435  
citations

57631

44  
h-index

106150

65  
g-index

131  
all docs

131  
docs citations

131  
times ranked

4935  
citing authors

#	ARTICLE	IF	CITATIONS
1	Single- and Multi-Fraction Stereotactic Radiosurgery Dose Tolerances of the Optic Pathways. International Journal of Radiation Oncology Biology Physics, 2021, 110, 87-99.	0.4	86
2	An artificial intelligence framework integrating longitudinal electronic health records with real-world data enables continuous pan-cancer prognostication. Nature Cancer, 2021, 2, 709-722.	5.7	41
3	Attention-Aware Discrimination for MR-to-CT Image Translation Using Cycle-Consistent Generative Adversarial Networks. Radiology: Artificial Intelligence, 2020, 2, e190027.	3.0	35
4	Reply to Nock and Nielsen: On the work of Nock and Nielsen and its relationship to the additive tree. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 8694-8695.	3.3	0
5	DoseGAN: a generative adversarial network for synthetic dose prediction using attention-gated discrimination and generation. Scientific Reports, 2020, 10, 11073.	1.6	50
6	Expert-augmented machine learning. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 4571-4577.	3.3	68
7	Integrated models incorporating radiologic and radiomic features predict meningioma grade, local failure, and overall survival. Neuro-Oncology Advances, 2019, 1, vdz011.	0.4	64
8	Building more accurate decision trees with the additive tree. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 19887-19893.	3.3	55
9	Predicting radiation pneumonitis in locally advanced stage II&#x2013;III non-small cell lung cancer using machine learning. Radiotherapy and Oncology, 2019, 133, 106-112.	0.3	66
10	Attention-enabled 3D boosted convolutional neural networks for semantic CT segmentation using deep supervision. Physics in Medicine and Biology, 2019, 64, 135001.	1.6	37
11	A convolutional neural network algorithm for automatic segmentation of head and neck organs at risk using deep lifelong learning. Medical Physics, 2019, 46, 2204-2213.	1.6	51
12	Ex vivo validation of a stoichiometric dual energy CT proton stopping power ratio calibration. Physics in Medicine and Biology, 2018, 63, 055016.	1.6	42
13	Salvage HDR Brachytherapy: Multiple Hypothesis Testing Versus Machine Learning Analysis. International Journal of Radiation Oncology Biology Physics, 2018, 101, 694-703.	0.4	17
14	Dentate gyrus neurogenesis ablation via cranial irradiation enhances morphine self-administration and locomotor sensitization. Addiction Biology, 2018, 23, 665-675.	1.4	13
15	DoseNet: a volumetric dose prediction algorithm using 3D fully-convolutional neural networks. Physics in Medicine and Biology, 2018, 63, 235022.	1.6	129
16	In Reply to Gensheimer and Trister. International Journal of Radiation Oncology Biology Physics, 2018, 102, 1594-1596.	0.4	0
17	The application of artificial intelligence in the IMRT planning process for head and neck cancer. Oral Oncology, 2018, 87, 111-116.	0.8	50
18	Exploratory analysis using machine learning to predict for chest wall pain in patients with stage I non-small cell lung cancer treated with stereotactic body radiation therapy. Journal of Applied Clinical Medical Physics, 2018, 19, 539-546.	0.8	13

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19	Preoperative and postoperative prediction of long-term meningioma outcomes. PLoS ONE, 2018, 13, e0204161.	1.1	31
20	Assessing the Validity of Clinician Advice That Patients Avoid Use of Topical Agents Before Daily Radiotherapy Treatments. JAMA Oncology, 2018, 4, 1742.	3.4	12
21	A Deep Look Into the Future of Quantitative Imaging in Oncology: A Statement of Working Principles and Proposal for Change. International Journal of Radiation Oncology Biology Physics, 2018, 102, 1074-1082.	0.4	86
22	Machine Learning in Radiation Oncology: Opportunities, Requirements, and Needs. Frontiers in Oncology, 2018, 8, 110.	1.3	82
23	Validation and clinical implementation of an accurate Monte Carlo code for pencil beam scanning proton therapy. Journal of Applied Clinical Medical Physics, 2018, 19, 558-572.	0.8	46
24	An unsupervised convolutional neural network-based algorithm for deformable image registration. Physics in Medicine and Biology, 2018, 63, 185017.	1.6	48
25	Clinical Applications of Quantitative 3-Dimensional MRI Analysis for Pediatric Embryonal Brain Tumors. International Journal of Radiation Oncology Biology Physics, 2018, 102, 744-756.	0.4	10
26	A continuous arc delivery optimization algorithm for CyberKnife m6. Medical Physics, 2018, 45, 3861-3870.	1.6	12
27	Evaluation of motion mitigation using abdominal compression in the clinical implementation of pencil beam scanning proton therapy of liver tumors. Medical Physics, 2017, 44, 703-712.	1.6	56
28	A study of the beam-specific interplay effect in proton pencil beam scanning delivery in lung cancer. Acta Oncologica, 2017, 56, 531-540.	0.8	44
29	Phantom-to-clinic development of hypofractionated stereotactic body radiotherapy for early-stage glottic laryngeal cancer. Medical Dosimetry, 2017, 42, 90-96.	0.4	5
30	A benchmarking method to evaluate the accuracy of a commercial proton monte carlo pencil beam scanning treatment planning system. Journal of Applied Clinical Medical Physics, 2017, 18, 44-49.	0.8	44
31	Prompt Gamma Imaging for In Vivo Range Verification of Pencil Beam Scanning Proton Therapy. International Journal of Radiation Oncology Biology Physics, 2017, 99, 210-218.	0.4	127
32	The Dark Side of the MedPhys Match. Journal of Applied Clinical Medical Physics, 2017, 18, 4-5.	0.8	0
33	Avoiding antiperspirants during breast radiation therapy: Myth or sound advice?. Radiotherapy and Oncology, 2017, 124, 204-207.	0.3	4
34	<sc>IMRT QA</sc> using machine learning: A multi-institutional validation. Journal of Applied Clinical Medical Physics, 2017, 18, 279-284.	0.8	111
35	Clinical decision support of radiotherapy treatment planning: A data-driven machine learning strategy for patient-specific dosimetric decision making. Radiotherapy and Oncology, 2017, 125, 392-397.	0.3	78
36	CyberArc: a non-coplanar-arc optimization algorithm for CyberKnife. Physics in Medicine and Biology, 2017, 62, 5777-5789.	1.6	16

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37	The Potential of Heavy-Ion Therapy to Improve Outcomes for Locally Advanced Non-Small Cell Lung Cancer. <i>Frontiers in Oncology</i> , 2017, 7, 201.	1.3	5
38	Quantitative assessment of anatomical change using a virtual proton depth radiograph for adaptive head and neck proton therapy. <i>Journal of Applied Clinical Medical Physics</i> , 2016, 17, 427-440.	0.8	26
39	Journey Toward High Reliability: A Comprehensive Safety Program to Improve Quality of Care and Safety Culture in a Large, Multisite Radiation Oncology Department. <i>Journal of Oncology Practice</i> , 2016, 12, e603-e612.	2.5	14
40	Proton computed tomography using a 1D silicon diode array. <i>Medical Physics</i> , 2016, 43, 5758-5766.	1.6	3
41	Toward improved target conformity for two spot scanning proton therapy delivery systems using dynamic collimation. <i>Medical Physics</i> , 2016, 43, 1421-1427.	1.6	25
42	Using machine learning to predict radiation pneumonitis in patients with stage I non-small cell lung cancer treated with stereotactic body radiation therapy. <i>Physics in Medicine and Biology</i> , 2016, 61, 6105-6120.	1.6	82
43	MediBoost: a Patient Stratification Tool for Interpretable Decision Making in the Era of Precision Medicine. <i>Scientific Reports</i> , 2016, 6, 37854.	1.6	85
44	First Clinical Investigation of Cone Beam Computed Tomography and Deformable Registration for Adaptive Proton Therapy for Lung Cancer. <i>International Journal of Radiation Oncology Biology Physics</i> , 2016, 95, 549-559.	0.4	172
45	<i>Radiation Physics</i> , 2016, , 148-158.e2.		0
46	Breaking bad IMRT QA practice. <i>Journal of Applied Clinical Medical Physics</i> , 2015, 16, 154-165.	0.8	43
47	Technical Note: Validation of halo modeling for proton pencil beam spot scanning using a quality assurance test pattern. <i>Medical Physics</i> , 2015, 42, 5138-5143.	1.6	10
48	Beam-specific planning target volumes incorporating 4D CT for pencil beam scanning proton therapy of thoracic tumors. <i>Journal of Applied Clinical Medical Physics</i> , 2015, 16, 281-292.	0.8	64
49	Comparing proton treatment plans of pediatric brain tumors in two pencil beam scanning nozzles with different spot sizes. <i>Journal of Applied Clinical Medical Physics</i> , 2015, 16, 41-50.	0.8	16
50	Experimental observation of acoustic emissions generated by a pulsed proton beam from a hospital-based clinical cyclotron. <i>Medical Physics</i> , 2015, 42, 7090-7097.	1.6	56
51	Use of a novel two-dimensional ionization chamber array for pencil beam scanning proton therapy beam quality assurance. <i>Journal of Applied Clinical Medical Physics</i> , 2015, 16, 270-276.	0.8	38
52	Pencil beam scanning dosimetry for large animal irradiation. <i>Journal of Radiation Research</i> , 2014, 55, 855-861.	0.8	0
53	Experimentally validated pencil beam scanning source model in TOPAS. <i>Physics in Medicine and Biology</i> , 2014, 59, 6859-6873.	1.6	35
54	Experimental characterization of two-dimensional spot profiles for two proton pencil beam scanning nozzles. <i>Physics in Medicine and Biology</i> , 2014, 59, 493-504.	1.6	44

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55	A Nonhuman Primate Model of Human Radiation-Induced Venocclusive Liver Disease and Hepatocyte Injury. <i>International Journal of Radiation Oncology Biology Physics</i> , 2014, 88, 404-411.	0.4	30
56	Commissioning and verification of the collapsed cone convolution superposition algorithm for SBRT delivery using flattening filter-free beams. <i>Journal of Applied Clinical Medical Physics</i> , 2014, 15, 39-49.	0.8	22
57	Commissioning and initial stereotactic ablative radiotherapy experience with Vero. <i>Journal of Applied Clinical Medical Physics</i> , 2014, 15, 205-225.	0.8	33
58	Implementation of an improved dose-per-EMU model for double-scattered proton beams to address interbeamline modulation width variability. <i>Journal of Applied Clinical Medical Physics</i> , 2014, 15, 297-306.	0.8	10
59	Multi-staged robotic stereotactic radiosurgery for large cerebral arteriovenous malformations. <i>Radiotherapy and Oncology</i> , 2013, 109, 452-456.	0.3	17
60	Development of a locally advanced orthotopic prostate tumor model in rats for assessment of combined modality therapy. <i>International Journal of Oncology</i> , 2013, 42, 1613-1619.	1.4	11
61	Spinal cord tolerance to single-session uniform irradiation in pigs: Implications for a dose-volume effect. <i>Radiotherapy and Oncology</i> , 2013, 106, 101-105.	0.3	26
62	Optimization of normalized prescription isodose selection for stereotactic body radiation therapy: Conventional vs robotic linac. <i>Medical Physics</i> , 2013, 40, 051705.	1.6	19
63	Partial Depletion of Regulatory T Cells Does Not Influence the Inflammation Caused by High Dose Hemi-Body Irradiation. <i>PLoS ONE</i> , 2013, 8, e56607.	1.1	11
64	Quality assurance for nonradiographic radiotherapy localization and positioning systems: Report of Task Group 147. <i>Medical Physics</i> , 2012, 39, 1728-1747.	1.6	100
65	Spinal Cord Tolerance to Reirradiation With Single-Fraction Radiosurgery: A Swine Model. <i>International Journal of Radiation Oncology Biology Physics</i> , 2012, 83, 1031-1037.	0.4	43
66	Quality and safety considerations in stereotactic radiosurgery and stereotactic body radiation therapy: Executive summary. <i>Practical Radiation Oncology</i> , 2012, 2, 2-9.	1.1	164
67	A comparison of radiographic techniques and electromagnetic transponders for localization of the prostate. <i>Radiation Oncology</i> , 2012, 7, 101.	1.2	20
68	An athymic rat model of cutaneous radiation injury designed to study human tissue-based wound therapy. <i>Radiation Oncology</i> , 2012, 7, 68.	1.2	15
69	A technique for pediatric total skin electron irradiation. <i>Radiation Oncology</i> , 2012, 7, 40.	1.2	19
70	Spinal Cord Tolerance to Single-Fraction Partial-Volume Irradiation: A Swine Model. <i>International Journal of Radiation Oncology Biology Physics</i> , 2011, 79, 226-232.	0.4	36
71	Comparison of transabdominal ultrasound and electromagnetic transponders for prostate localization. <i>Journal of Applied Clinical Medical Physics</i> , 2010, 11, 57-67.	0.8	20
72	High Dose-Per-Fraction Irradiation of Limited Lung Volumes Using an Image-Guided, Highly Focused Irradiator: Simulating Stereotactic Body Radiotherapy Regimens in a Small-Animal Model. <i>International Journal of Radiation Oncology Biology Physics</i> , 2010, 77, 895-902.	0.4	40

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73	An Orthotopic Lung Tumor Model for Image-Guided Microirradiation in Rats. Radiation Research, 2010, 174, 62-71.	0.7	32
74	Fast, accurate photon beam accelerator modeling using <scp>BEAMnrc</scp>: A systematic investigation of efficiency enhancing methods and crossâ€section data. Medical Physics, 2009, 36, 5451-5466.	1.6	18
75	Hepatic irradiation augments engraftment of donor cells following hepatocyte transplantation. Hepatology, 2009, 49, 258-267.	3.6	113
76	Non-coplanar automatic beam orientation selection in cranial IMRT: a practical methodology. Physics in Medicine and Biology, 2009, 54, 1337-1368.	1.6	20
77	Use of the BrainLAB ExacTrac X-Ray 6D System in Image-Guided Radiotherapy. Medical Dosimetry, 2008, 33, 124-134.	0.4	187
78	Correlation Between Tumor Growth Delay and Expression of Cancer and Host VEGF, VEGFR2, and Osteopontin in Response to Radiotherapy. International Journal of Radiation Oncology Biology Physics, 2008, 72, 918-926.	0.4	43
79	Antiproton therapy. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 530-534.	0.6	12
80	Quality Assurance of Immobilization and Target Localization Systems for Frameless Stereotactic Cranial and Extracranial Hypofractionated Radiotherapy. International Journal of Radiation Oncology Biology Physics, 2008, 71, S131-S135.	0.4	67
81	Dosimetric Consequences of Intrafraction Prostate Motion. International Journal of Radiation Oncology Biology Physics, 2008, 71, 801-812.	0.4	110
82	Experimental verification and clinical implementation of a commercial Monte Carlo electron beam dose calculation algorithm. Medical Physics, 2008, 35, 1028-1038.	1.6	27
83	Stereotactic Body Radiation Therapy: A New Paradigm in Radiotherapy Management of Cancer. Journal of the American College of Radiology, 2008, 5, 673-677.	0.9	3
84	Antiproton radiotherapy. Radiotherapy and Oncology, 2008, 86, 14-19.	0.3	27
85	Quantifying the interplay effect in prostate IMRT delivery using a convolutionâ€based method. Medical Physics, 2008, 35, 1703-1710.	1.6	24
86	AN ARTERIOVENOUS MALFORMATION MODEL FOR STEREOTACTIC RADIOSURGERY RESEARCH. Neurosurgery, 2007, 61, 152-159.	0.6	31
87	Evaluation of Image Noise in Respiratory Gated PET. IEEE Transactions on Nuclear Science, 2007, 54, 66-70.	1.2	7
88	Improvements in prostate brachytherapy dosimetry due to seed stranding. Brachytherapy, 2007, 6, 44-48.	0.2	21
89	The biological effectiveness of antiproton irradiation. Radiotherapy and Oncology, 2006, 81, 233-242.	0.3	60
90	Stereotactic Radiosurgery of the Rete Mirabile in Swine: A Longitudinal Study of Histopathological Changes. Neurosurgery, 2006, 58, 551-558.	0.6	17

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91	Technical and anatomical aspects of novalis stereotactic radiosurgery sphenopalatine ganglionectomy. International Journal of Radiation Oncology Biology Physics, 2006, 66, S53-S57.	0.4	11
92	Image-guided radiotherapy using a mobile kilovoltage x-ray device. Medical Dosimetry, 2006, 31, 40-50.	0.4	22
93	Dosimetric characteristics of a new linear accelerator under gated operation. Journal of Applied Clinical Medical Physics, 2006, 7, 65-76.	0.8	9
94	Phase versus amplitude sorting of 4D-CT data. Journal of Applied Clinical Medical Physics, 2006, 7, 77-85.	0.8	75
95	Three-dimensional Fast Imaging Employing Steady-state Acquisition Magnetic Resonance Imaging for Stereotactic Radiosurgery of Trigeminal Neuralgia. Neurosurgery, 2005, 56, E628-E628.	0.6	62
96	Targeting accuracy of an image guided gating system for stereotactic body radiotherapy. Physics in Medicine and Biology, 2005, 50, 5443-5462.	1.6	20
97	Respiratory correlated cone-beam computed tomography on an isocentric C-arm. Physics in Medicine and Biology, 2005, 50, 5263-5280.	1.6	59
98	Optimization of multi-slice helical respiration-correlated CT: the effects of table speed and rotation time. Physics in Medicine and Biology, 2005, 50, 5717-5729.	1.6	12
99	Intracranial stereotactic positioning systems: Report of the American Association of Physicists in Medicine Radiation Therapy Committee Task Group No. 68. Medical Physics, 2005, 32, 2380-2398.	1.6	94
100	Biological effectiveness of antiproton annihilation. Nuclear Instruments & Methods in Physics Research B, 2004, 221, 210-214.	0.6	19
101	Biological effectiveness of antiproton annihilation. Nuclear Instruments & Methods in Physics Research B, 2004, 214, 181-185.	0.6	17
102	Stereotactic radiotherapy for treatment of cavernous sinus meningiomas. International Journal of Radiation Oncology Biology Physics, 2004, 59, 101-111.	0.4	145
103	Degeneracy, frequency response and filtering in IMRT optimization. Physics in Medicine and Biology, 2004, 49, 2853-2880.	1.6	17
104	Functional stereotactic radiosurgery involving a dedicated linear accelerator and gamma unit: a comparison study. Journal of Neurosurgery, 2004, 101 Suppl 3, 373-80.	0.9	6
105	A feasibility study of 18F-fluorodeoxyglucose positron emission tomography targeting and simultaneous integrated boost for intensity-modulated radiosurgery and radiotherapy. Journal of Neurosurgery, 2004, 101 Suppl 3, 381-9.	0.9	7
106	Absence of multiple local minima effects in intensity modulated optimization with dose-volume constraints. Physics in Medicine and Biology, 2003, 48, 183-210.	1.6	57
107	The effects of tumor motion on planning and delivery of respiratory-gated IMRT. Medical Physics, 2003, 30, 1052-1066.	1.6	49
108	Segmental and dynamic intensity-modulated radiotherapy delivery techniques for micro-multileaf collimator. Medical Physics, 2003, 30, 1758-1767.	1.6	23

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109	Stereotactic radiotherapy for the treatment of lymphocytic hypophysitis. <i>Journal of Neurosurgery</i> , 2003, 99, 591-596.	0.9	55
110	Patient specific quality assurance for the delivery of intensity modulated radiotherapy. <i>Journal of Applied Clinical Medical Physics</i> , 2003, 4, 40-50.	0.8	69
111	A seed specific dose kernel method for low-energy brachytherapy dosimetry. <i>Journal of Applied Clinical Medical Physics</i> , 2003, 4, 66-74.	0.8	2
112	Initial Clinical Results of Stereotactic Radiotherapy for the Treatment of Craniopharyngiomas. <i>Technology in Cancer Research and Treatment</i> , 2002, 1, 51-59.	0.8	49
113	A Monte Carlo based phase space model for quality assurance of intensity modulated radiotherapy incorporating leaf specific characteristics. <i>Medical Physics</i> , 2002, 29, 2952-2958.	1.6	36
114	Contrast-enhanced Brachytherapy for Prostate Cancer. <i>Academic Radiology</i> , 2002, 9, S182-S184.	1.3	6
115	Dosimetric parameters for three low-energy brachytherapy sources using the Monte Carlo N-Particle code. <i>Medical Physics</i> , 2002, 29, 662-668.	1.6	8
116	An evaluation of gating window size, delivery method, and composite field dosimetry of respiratory-gated IMRT. <i>Medical Physics</i> , 2002, 29, 2517-2525.	1.6	67
117	Dosimetric parameters of three new solid core I-125 brachytherapy sources. <i>Journal of Applied Clinical Medical Physics</i> , 2002, 3, 119-134.	0.8	21
118	Investigations of a minimally invasive method for treatment of spinal malignancies with LINAC stereotactic radiation therapy: accuracy and animal studies. <i>International Journal of Radiation Oncology Biology Physics</i> , 2002, 52, 1111-1122.	0.4	70
119	Comparative behaviour of the Dynamically Penalized Likelihood algorithm in inverse radiation therapy planning. <i>Physics in Medicine and Biology</i> , 2001, 46, 2637-2663.	1.6	57
120	Radiosurgery and Stereotactic Radiation Therapy of Skull Base Meningiomas: Proposal of a Grading System. <i>Stereotactic and Functional Neurosurgery</i> , 2001, 76, 218-229.	0.8	33
121	Dynamic arc radiosurgery field shaping: a comparison with static field conformal and noncoplanar circular arcs. <i>International Journal of Radiation Oncology Biology Physics</i> , 2001, 49, 1481-1491.	0.4	111
122	Infrared patient positioning for stereotactic radiosurgery of extracranial tumors. <i>Computers in Biology and Medicine</i> , 2001, 31, 101-111.	3.9	71
123	Radiosurgery performed with the aid of a 3-mm collimator in the subthalamic nucleus and substantia nigra of the vervet monkey. <i>Journal of Neurosurgery</i> , 2001, 95, 990-997.	0.9	47
124	Experimental Radiosurgery Simulations Using a Theoretical Model of Cerebral Arteriovenous Malformations. <i>Stroke</i> , 2000, 31, 2466-2477.	1.0	13
125	CT-based dosimetry calculations for 125I prostate implants. <i>International Journal of Radiation Oncology Biology Physics</i> , 1999, 45, 1347-1353.	0.4	34
126	Reproducibility of Frame Positioning for Fractionated Stereotactic Radiosurgery. <i>Journal of Radiosurgery</i> , 1999, 2, 57-64.	0.1	9



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127	Radiation dose in Spiral CT: The relative effects of collimation and pitch. Medical Physics, 1999, 26, 409-414.	1.6	33
128	Single-Fraction Radiosurgery for Primary and Recurrent Malignant Gliomas. Journal of Radiosurgery, 1998, 1, 155-168.	0.1	8
129	Reduction of Hippocampal-Kindled Seizure Activity in Rats by Stereotactic Radiosurgery. Experimental Neurology, 1998, 154, 691-695.	2.0	33
130	Monte Carlo treatment planning for stereotactic radiosurgery. Radiotherapy and Oncology, 1998, 49, 73-84.	0.3	52
131	Implications of tissue heterogeneity for radiosurgery in head and neck tumors. International Journal of Radiation Oncology Biology Physics, 1995, 32, 235-239.	0.4	45