

Punit Prakash

List of Publications by Year in descending order

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100
papers

1,514
citations

304743

22
h-index

377865

34
g-index

100
all docs

100
docs citations

100
times ranked

1233
citing authors

#	ARTICLE	IF	CITATIONS
1	Theoretical Modeling for Hepatic Microwave Ablation. Open Biomedical Engineering Journal, 2010, 4, 27-38.	0.5	72
2	Considerations for theoretical modelling of thermal ablation with catheter-based ultrasonic sources: Implications for treatment planning, monitoring and control. International Journal of Hyperthermia, 2012, 28, 69-86.	2.5	69
3	Microwave ablation at 915 MHz vs 2.45 GHz: A theoretical and experimental investigation. Medical Physics, 2015, 42, 6152-6161.	3.0	63
4	Current status of liver tumor ablation devices. Expert Review of Medical Devices, 2007, 4, 523-537.	2.8	61
5	An Optimal Sliding Choke Antenna for Hepatic Microwave Ablation. IEEE Transactions on Biomedical Engineering, 2009, 56, 2470-2476.	4.2	59
6	Influence of injection technique, drug formulation and tumor microenvironment on intratumoral immunotherapy delivery and efficacy. , 2021, 9, e001800.		59
7	A Directional Interstitial Antenna for Microwave Tissue Ablation: Theoretical and Experimental Investigation. IEEE Transactions on Biomedical Engineering, 2015, 62, 2144-2150.	4.2	55
8	Antenna Designs for Microwave Tissue Ablation. Critical Reviews in Biomedical Engineering, 2018, 46, 495-521.	0.9	55
9	Sensitivity of microwave ablation models to tissue biophysical properties: A first step toward probabilistic modeling and treatment planning. Medical Physics, 2016, 43, 2649-2661.	3.0	53
10	Pulsed Magnetic Field Induced Fast Drug Release from Magneto Liposomes via Ultrasound Generation. Journal of Physical Chemistry B, 2014, 118, 11715-11722.	2.6	46
11	Design optimization of a robust sleeve antenna for hepatic microwave ablation. Physics in Medicine and Biology, 2008, 53, 1057-1069.	3.0	43
12	Physical modeling of microwave ablation zone clinical margin variance. Medical Physics, 2016, 43, 1764-1776.	3.0	41
13	Experimental measurement of microwave ablation heating pattern and comparison to computer simulations. International Journal of Hyperthermia, 2017, 33, 74-82.	2.5	40
14	Analysis of minimally invasive directional antennas for microwave tissue ablation. International Journal of Hyperthermia, 2017, 33, 51-60.	2.5	36
15	Theoretical Modeling for Hepatic Microwave Ablation~!2009-10-21~!2009-12-30~!2010-02-04~!. Open Biomedical Engineering Journal, 2010, 4, 27-38.	0.5	30
16	Design and characterisation of a phased antenna array for intact breast hyperthermia. International Journal of Hyperthermia, 2018, 34, 250-260.	2.5	29
17	Implant strategies for endocervical and interstitial ultrasound hyperthermia adjunct to HDR brachytherapy for the treatment of cervical cancer. Physics in Medicine and Biology, 2011, 56, 3967-3984.	3.0	26
18	The ACUSITT ultrasonic ablator: the first steerable needle with an integrated interventional tool. Proceedings of SPIE, 2010, , .	0.8	25

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19	Modelling of endoluminal and interstitial ultrasound hyperthermia and thermal ablation: Applications for device design, feedback control and treatment planning. <i>International Journal of Hyperthermia</i> , 2013, 29, 296-307.	2.5	25
20	An integrated platform for small-animal hyperthermia investigations under ultra-high-field MRI guidance. <i>International Journal of Hyperthermia</i> , 2018, 34, 341-351.	2.5	25
21	Therapeutic Systems and Technologies: State-of-the-Art Applications, Opportunities, and Challenges. <i>IEEE Reviews in Biomedical Engineering</i> , 2020, 13, 325-339.	18.0	25
22	Broadband Dielectric Properties of <i>Ex Vivo</i> Bovine Liver Tissue Characterized at Ablative Temperatures. <i>IEEE Transactions on Biomedical Engineering</i> , 2021, 68, 90-98.	4.2	24
23	Hyperthermia and Tumor Immunity. <i>Cancers</i> , 2021, 13, 2507.	3.7	24
24	Interstitial ultrasound ablation of vertebral and paraspinal tumours: Parametric and patient-specific simulations. <i>International Journal of Hyperthermia</i> , 2014, 30, 228-244.	2.5	23
25	Design of a compact antenna with flared groundplane for a wearable breast hyperthermia system. <i>International Journal of Hyperthermia</i> , 2015, 31, 726-736.	2.5	22
26	Adaptive Whitening in Electromyogram Amplitude Estimation for Epoch-Based Applications. <i>IEEE Transactions on Biomedical Engineering</i> , 2005, 52, 331-334.	4.2	19
27	Multiple applicator hepatic ablation with interstitial ultrasound devices: Theoretical and experimental investigation. <i>Medical Physics</i> , 2012, 39, 7338-7349.	3.0	19
28	Applicators for Magnetic Resonance-Guided Ultrasonic Ablation of Benign Prostatic Hyperplasia. <i>Investigative Radiology</i> , 2013, 48, 387-394.	6.2	19
29	Model-based feasibility assessment and evaluation of prostate hyperthermia with a commercial MR-guided endorectal HIFU ablation array. <i>Medical Physics</i> , 2014, 41, 033301.	3.0	19
30	Broadband lung dielectric properties over the ablative temperature range: Experimental measurements and parametric models. <i>Medical Physics</i> , 2019, 46, 4291-4303.	3.0	17
31	Microwave antennas for thermal ablation of benign adrenal adenomas. <i>Biomedical Physics and Engineering Express</i> , 2019, 5, 025044.	1.2	17
32	Directional Microwave Ablation: Experimental Evaluation of a 2.45-GHz Applicator in <i>Ex Vivo</i> and <i>In Vivo</i> Liver. <i>Journal of Vascular and Interventional Radiology</i> , 2020, 31, 1170-1177.e2.	0.5	17
33	Approaches for modelling interstitial ultrasound ablation of tumours within or adjacent to bone: Theoretical and experimental evaluations. <i>International Journal of Hyperthermia</i> , 2013, 29, 629-642.	2.5	16
34	Experimental Investigation of Magnetic Nanoparticle-Enhanced Microwave Hyperthermia. <i>Journal of Functional Biomaterials</i> , 2017, 8, 21.	4.4	16
35	Catheter-based ultrasound hyperthermia with HDR brachytherapy for treatment of locally advanced cancer of the prostate and cervix. <i>Proceedings of SPIE</i> , 2011, 7901, 790100.	0.8	15
36	Bronchoscopically delivered microwave ablation in an <i>in vivo</i> porcine lung model. <i>ERJ Open Research</i> , 2020, 6, 00146-2020.	2.6	15

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37	Experimental assessment of microwave ablation computational modeling with MR thermometry. <i>Medical Physics</i> , 2020, 47, 3777-3788.	3.0	14
38	Measurement of the specific heat capacity of liver phantom. <i>Physiological Measurement</i> , 2006, 27, N41-N46.	2.1	13
39	Computational modeling of 915 MHz microwave ablation: Comparative assessment of temperature-dependent tissue dielectric models. <i>Medical Physics</i> , 2017, 44, 4859-4868.	3.0	13
40	Motion Artifact Detection and Reduction in Bed-Based Ballistocardiogram. <i>IEEE Access</i> , 2019, 7, 13693-13703.	4.2	13
41	Short pulsed microwave ablation: computer modeling and <i>ex vivo</i> experiments. <i>International Journal of Hyperthermia</i> , 2021, 38, 409-420.	2.5	12
42	Bed-based instrumentation for unobtrusive sleep quality assessment in severely disabled autistic children. , 2016, 2016, 4909-4912.		11
43	Using microwave thermal ablation to develop a subtotal, cortical-sparing approach to the management of primary aldosteronism. <i>International Journal of Hyperthermia</i> , 2019, 36, 904-913.	2.5	11
44	Microwave ablation of lung tumors: A probabilistic approach for simulation-based treatment planning. <i>Medical Physics</i> , 2021, 48, 3991-4003.	3.0	11
45	MULTILAYERED BROADBAND ANTENNA FOR COMPACT EMBEDDED IMPLANTABLE MEDICAL DEVICES: DESIGN AND CHARACTERIZATION. <i>Progress in Electromagnetics Research</i> , 2017, 159, 1-13.	4.4	10
46	Smart bed based daytime behavior prediction in Children with autism spectrum disorder - A Pilot Study. <i>Medical Engineering and Physics</i> , 2020, 83, 15-25.	1.7	10
47	Shaping the future of microwave tumor ablation: a new direction in precision and control of device performance. <i>International Journal of Hyperthermia</i> , 2022, 39, 664-674.	2.5	10
48	Nested Helmholtz coil design for producing homogeneous transient rotating magnetic fields. <i>Review of Scientific Instruments</i> , 2015, 86, 034701.	1.3	9
49	Magnetic Field Induced Ultrasound from Colloidal Superparamagnetic Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2016, 120, 2386-2391.	3.1	9
50	Temperature superposition for fast computation of 3D temperature distributions during optimization and planning of interstitial ultrasound hyperthermia treatments. <i>International Journal of Hyperthermia</i> , 2012, 28, 235-249.	2.5	8
51	Technological requirements for microwave ablation of adrenal masses. , 2017, , .		7
52	Motion Detection in Bed-Based Ballistocardiogram to Quantify Sleep Quality. , 2017, , .		7
53	Simulation-based design and characterization of a microwave applicator for MR-guided hyperthermia experimental studies in small animals. <i>Biomedical Physics and Engineering Express</i> , 2020, 6, 015001.	1.2	7
54	How large is the periablation zone after radiofrequency and microwave ablation? Computer-based comparative study of two currently used clinical devices. <i>International Journal of Hyperthermia</i> , 2020, 37, 1131-1138.	2.5	7

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55	Preclinical Studies in Small Animals for Advanced Drug Delivery Using Hyperthermia and Intravital Microscopy. <i>Cancers</i> , 2021, 13, 5146.	3.7	7
56	Design optimization of coaxial antennas for hepatic microwave ablation using genetic algorithms. , 2008, , .		6
57	Design and analysis of a conformal patch antenna for a wearable breast hyperthermia treatment system. , 2015, , .		6
58	Introduction to microwave tumour ablation special issue. <i>International Journal of Hyperthermia</i> , 2017, 33, 1-2.	2.5	6
59	Interstitial ultrasound ablation of tumors within or adjacent to bone: Contributions of preferential heating at the bone surface. <i>Proceedings of SPIE</i> , 2013, , .	0.8	5
60	Sensors and instrumentation for unobtrusive sleep quality assessment in autistic children. , 2014, 2014, 800-3.		5
61	Multiple-antenna microwave ablation: analysis of non-parallel antenna implants. <i>Proceedings of SPIE</i> , 2015, , .	0.8	5
62	Wearable device for thermotherapies. , 2020, , 179-200.		5
63	Temperature-dependent dielectric properties of human uterine fibroids over microwave frequencies. <i>Biomedical Physics and Engineering Express</i> , 2021, 7, 065038.	1.2	5
64	MR guided thermal therapy of pancreatic tumors with endoluminal, intraluminal and interstitial catheter-based ultrasound devices: preliminary theoretical and experimental investigations. , 2013, 8584, 85840V.		4
65	Flexible microwave ablation applicator for the treatment of pulmonary malignancies. <i>Proceedings of SPIE</i> , 2017, , .	0.8	4
66	Measurement of Broadband Temperature-Dependent Dielectric Properties of Liver Tissue. , 2018, , .		4
67	Experimental Validation of Computational Models of Microwave Tissue Heating with Magnetic Resonance Thermometry. , 2018, , .		4
68	A Pilot Study of Catheter-Based Ultrasound Hyperthermia with HDR Brachytherapy for Treatment of Locally Advanced Cancer of the Prostate and Cervix. , 2011, , .		3
69	Microwave ablation at 915 MHz vs. 2.45 GHz: Single and multiple-antenna considerations. , 2014, , .		3
70	Compact microwave applicator for thermal therapy of breast cancer: Comparative assessment of arrays operating at 434 and 915 MHz. , 2016, , .		3
71	Design projects motivated and informed by the needs of severely disabled autistic children. , 2016, 2016, 3015-3018.		3
72	A Pilot Study of an Unobtrusive Bed-Based Sleep Quality Monitor for Severely Disabled Autistic Children*. , 2018, 2018, 4343-4346.		3

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73	Design of a Microwave Global Endometrial Ablation Device. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2019, 3, 148-156.	3.4	3
74	An enhanced hybrid MRI thermometry technique for monitoring microwave thermal therapy. , 2019, , .		3
75	Extracorporeal Removal of Thermosensitive Liposomal Doxorubicin from Systemic Circulation after Tumor Delivery to Reduce Toxicities. Cancers, 2022, 14, 1322.	3.7	3
76	Targeted hyperthermia in prostate with an MR-guided endorectal ultrasound phased array: patient specific modeling and preliminary experiments. , 2013, , .		2
77	A paraeducator glove for counting disabled-child behaviors that incorporates a Bluetooth Low Energy wireless link to a smart phone. , 2014, 2014, 796-9.		2
78	Feasibility Assessment of Microwave Ablation for Treating Esophageal Varices. Journal of Medical Devices, Transactions of the ASME, 2017, 11, .	0.7	2
79	CHAPTER 8. Image-Guided Cancer Thermal Therapies. RSC Smart Materials, 2017, , 195-220.	0.1	2
80	Microwave ablation. , 2022, , 139-167.		2
81	A computational model of radiofrequency ablation in the stomach, an emerging therapy for gastric dysrhythmias. , 2021, 2021, 1495-1498.		2
82	Fabrication of Solid Microneedle using Multi-slit Diffraction UV Lithography. , 2022, , .		2
83	Patient specific optimization-based treatment planning for catheter-based ultrasound hyperthermia and thermal ablation. , 2009, , .		1
84	Developing an open platform for evidence-based microwave ablation treatment planning and validation. , 2015, , .		1
85	Investigation of interstitial ultrasound ablation of spinal and paraspinal tumors: A patient-specific and parametric simulation study. AIP Conference Proceedings, 2017, , .	0.4	1
86	Thermal dosimetry analysis combined with patient-specific thermal modeling of clinical interstitial ultrasound hyperthermia integrated within HDR brachytherapy for treatment of locally advanced prostate cancer. AIP Conference Proceedings, 2017, , .	0.4	1
87	Model-based feasibility assessment and evaluation of prostate hyperthermia with a commercial MR-guided endorectal HIFU ablation array. AIP Conference Proceedings, 2017, , .	0.4	1
88	Transcervical microwave ablation in type 2 uterine fibroids via a hysteroscopic approach: analysis of ablation profiles. Biomedical Physics and Engineering Express, 2021, 7, 045014.	1.2	1
89	Global microwave endometrial ablation for menorrhagia treatment. Proceedings of SPIE, 2017, , .	0.8	1
90	Effect of Non-parallel Applicator Insertion on 2.45 GHz Microwave Ablation Zone Size and Shape. , 2019, , 305-314.		1

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91	System for delivering microwave ablation to subcutaneous tumors in small-animals under high-field MRI thermometry guidance. International Journal of Hyperthermia, 2022, 39, 584-594.	2.5	1
92	Development of a 3D patient-specific planning platform for interstitial and transurethral ultrasound thermal therapy. , 2010, , .		0
93	Endocavity Ultrasound Hyperthermia for Locally Advanced Cervical Cancer: Patient-specific Modeling, Experimental Verification, and Combination with HDR Brachytherapy. , 2010, , .		0
94	Hepatic ablation with multiple interstitial ultrasound applicators: initial ex vivo and computational studies. Proceedings of SPIE, 2011, , .	0.8	0
95	Fast optimization and planning of clinical interstitial ultrasound hyperthermia using superposition and surrogate models of temperature distributions. Proceedings of SPIE, 2011, , .	0.8	0
96	Development of a fast 3D treatment planning platform for clinical interstitial microwave hyperthermia within free-hand obliquely implanted HDR catheters. , 2015, , .		0
97	Evaluation of the Effect of Uterine Fibroids on Microwave Endometrial Ablation Profiles. , 2018, 2018, 3236-3239.		0
98	Reducing Sparse Motion Artifacts in MR-Thermometry Using Robust Principal Component Analysis. , 2020, , .		0
99	Effect of position on transdiaphragmatic pressure and hemodynamic variables in anesthetized horses. Canadian Journal of Veterinary Research, 2020, 84, 205-211.	0.2	0
100	A Non-Invasive Hydration Monitoring Technique Using Microwave Transmission and Data-Driven Approaches. Sensors, 2022, 22, 2536.	3.8	0