

# Esra Neufeld

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

66

papers

2,902

citations

18

h-index

53

g-index

74

ext. papers

3,819

ext. citations

4.7

avg, IF

4.72

L-index

#	Paper	IF	Citations
66	Activity-dependent spinal cord neuromodulation rapidly restores trunk and leg motor functions after complete paralysis.. <i>Nature Medicine</i> , <b>2022</b> ,	50.5	12
65	Rapid SAR optimization for hyperthermic oncology: combining multi-goal optimization and time-multiplexed steering for hotspot suppression. <i>International Journal of Hyperthermia</i> , <b>2022</b> , 39, 758-771	3.7	11
64	The impact of CT image parameters and skull heterogeneity modeling on the accuracy of transcranial focused ultrasound simulations. <i>Journal of Neural Engineering</i> , <b>2021</b> , 18,	5	2
63	The SPARC DRC: Building a Resource for the Autonomic Nervous System Community. <i>Frontiers in Physiology</i> , <b>2021</b> , 12, 693735	4.6	8
62	ESHO benchmarks for computational modeling and optimization in hyperthermia therapy. <i>International Journal of Hyperthermia</i> , <b>2021</b> , 38, 1425-1442	3.7	10
61	MorphoSONIC: A morphologically structured intramembrane cavitation model reveals fiber-specific neuromodulation by ultrasound. <i>IScience</i> , <b>2021</b> , 24, 103085	6.1	0
60	Transducer modeling for accurate acoustic simulations of transcranial focused ultrasound stimulation. <i>Journal of Neural Engineering</i> , <b>2020</b> , 17, 046010	5	11
59	Limitations of Incident Power Density as a Proxy for Induced Electromagnetic Fields. <i>Bioelectromagnetics</i> , <b>2020</b> , 41, 348-359	1.6	8
58	Modeling intracranial aneurysm stability and growth: an integrative mechanobiological framework for clinical cases. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2020</b> , 19, 2413-2431	3.8	2
57	Response to EndersSComment on "Discussion on Spatial and Time Averaging Restrictions Within the Electromagnetic Exposure Safety Framework in the Frequency Range Above 6 GHz for Pulsed and Localized Exposures". <i>Bioelectromagnetics</i> , <b>2020</b> , 41, 483-484	1.6	1
56	RF-INDUCED TEMPERATURE INCREASE IN A STRATIFIED MODEL OF THE SKIN FOR PLANE-WAVE EXPOSURE AT 6-100 GHZ. <i>Radiation Protection Dosimetry</i> , <b>2020</b> , 188, 350-360	0.9	14
55	TRANSMISSION COEFFICIENT OF POWER DENSITY INTO SKIN TISSUE BETWEEN 6 AND 300 GHZ. <i>Radiation Protection Dosimetry</i> , <b>2020</b> , 192, 113-118	0.9	1
54	SPARC: Development of Human and Rodent Neuro-Functionalized Computational Anatomical Models with Detailed Mapping of Peripheral Nervous System. <i>FASEB Journal</i> , <b>2020</b> , 34, 1-1	0.9	
53	Discussion on Spatial and Time Averaging Restrictions Within the Electromagnetic Exposure Safety Framework in the Frequency Range Above 6 GHz for Pulsed and Localized Exposures. <i>Bioelectromagnetics</i> , <b>2020</b> , 41, 164-168	1.6	7
52	Forward Transformation from Reactive Near-Field to Near and Far-Field at Millimeter-Wave Frequencies. <i>Applied Sciences (Switzerland)</i> , <b>2020</b> , 10, 4780	2.6	3
51	Quantification of clinically applicable stimulation parameters for precision near-organ neuromodulation of human splenic nerves. <i>Communications Biology</i> , <b>2020</b> , 3, 577	6.7	4
50	. <i>IEEE Transactions on Electromagnetic Compatibility</i> , <b>2020</b> , 62, 1323-1332	2	1

49	Feasibility and relevance of discrete vasculature modeling in routine hyperthermia treatment planning. <i>International Journal of Hyperthermia</i> , <b>2019</b> , 36, 801-811	3.7	12
48	Understanding ultrasound neuromodulation using a computationally efficient and interpretable model of intramembrane cavitation. <i>Journal of Neural Engineering</i> , <b>2019</b> , 16, 046007	5	14
47	. <i>IEEE Transactions on Electromagnetic Compatibility</i> , <b>2019</b> , 61, 476-486	2	18
46	Efficient and Reliable Assessment of the Maximum Local Tissue Temperature Increase at the Electrodes of Medical Implants under MRI Exposure. <i>Bioelectromagnetics</i> , <b>2019</b> , 40, 422-433	1.6	3
45	Accurate anatomical head segmentations: a data set for biomedical simulations. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2019</b> , 2019, 6118-6123	0.9	3
44	Response to Professor Foster's Comments. <i>Health Physics</i> , <b>2019</b> , 117, 70-71	2.3	3
43	Advances in Computational Human Phantoms and Their Applications in Biomedical Engineering - A Topical Review. <i>IEEE Transactions on Radiation and Plasma Medical Sciences</i> , <b>2019</b> , 3, 1-23	4.2	31
42	. <i>IEEE Transactions on Electromagnetic Compatibility</i> , <b>2018</b> , 60, 328-337	2	18
41	Novel hyperthermia applicator system allows adaptive treatment planning: Preliminary clinical results in tumour-bearing animals. <i>Veterinary and Comparative Oncology</i> , <b>2018</b> , 16, 202-213	2.5	6
40	Functionalized Anatomical Models for Computational Life Sciences. <i>Frontiers in Physiology</i> , <b>2018</b> , 9, 1594	4.6	13
39	Systematic Derivation of Safety Limits for Time-Varying 5G Radiofrequency Exposure Based on Analytical Models and Thermal Dose. <i>Health Physics</i> , <b>2018</b> , 115, 705-711	2.3	24
38	Theoretical and numerical assessment of maximally allowable power-density averaging area for conservative electromagnetic exposure assessment above 6 GHz. <i>Bioelectromagnetics</i> , <b>2018</b> , 39, 617-630	1.6	14
37	Novel mechanistic model and computational approximation for electromagnetic safety evaluations of electrically short implants. <i>Physics in Medicine and Biology</i> , <b>2018</b> , 63, 225015	3.8	4
36	Targeted neurotechnology restores walking in humans with spinal cord injury. <i>Nature</i> , <b>2018</b> , 563, 65-71	50.4	386
35	Pregnant women models analyzed for RF exposure and temperature increase in 3T RF shimmed birdcages. <i>Magnetic Resonance in Medicine</i> , <b>2017</b> , 77, 2048-2056	4.4	34
34	Parallel smoothing pressure correction solver for biomedical flow problems: convergence criteria, preconditioning, scalability. <i>Progress in Computational Fluid Dynamics</i> , <b>2016</b> , 16, 201	0.7	1
33	Covering Population Variability: Morphing of Computation Anatomical Models. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 13-22	0.9	3
32	From Image-Based Modeling to the Modeling of Imaging with the Virtual Population. <i>Lecture Notes in Computer Science</i> , <b>2016</b> , 45-54	0.9	1

31	Approach to Validate Simulation-Based Distribution Predictions Combining the Gamma-Method and Uncertainty Assessment: Application to Focused Ultrasound. <i>Journal of Verification, Validation and Uncertainty Quantification</i> , <b>2016</b> , 1,	0.9	5
30	Virtual population-based assessment of the impact of 3 Tesla radiofrequency shimming and thermoregulation on safety and B1 + uniformity. <i>Magnetic Resonance in Medicine</i> , <b>2016</b> , 76, 986-97	4.4	32
29	Functionalized anatomical models for EM-neuron Interaction modeling. <i>Physics in Medicine and Biology</i> , <b>2016</b> , 61, 4390-401	3.8	17
28	Investigation of assumptions underlying current safety guidelines on EM-induced nerve stimulation. <i>Physics in Medicine and Biology</i> , <b>2016</b> , 61, 4466-78	3.8	11
27	Magnetic nanoparticle-induced hyperthermia with appropriate payloads: Paul Ehrlich's "magic (nano)bullet" for cancer theranostics?. <i>Cancer Treatment Reviews</i> , <b>2016</b> , 50, 217-227	14.4	67
26	Full-wave acoustic and thermal modeling of transcranial ultrasound propagation and investigation of skull-induced aberration correction techniques: a feasibility study. <i>Journal of Therapeutic Ultrasound</i> , <b>2015</b> , 3, 11		30
25	Rapid method for thermal dose-based safety supervision during MR scans. <i>Bioelectromagnetics</i> , <b>2015</b> , 36, 398-407	1.6	16
24	MIDA: A Multimodal Imaging-Based Detailed Anatomical Model of the Human Head and Neck. <i>PLoS ONE</i> , <b>2015</b> , 10, e0124126	3.7	127
23	Heating and Safety Concerns of the Radio-Frequency Field in MRI. <i>Current Radiology Reports</i> , <b>2015</b> , 3, 1	0.5	18
22	Modeling of EEG electrode artifacts and thermal ripples in human radiofrequency exposure studies. <i>Bioelectromagnetics</i> , <b>2014</b> , 35, 273-83	1.6	9
21	A computational model for bipolar deep brain stimulation of the subthalamic nucleus. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2014</b> , 2014, 6258-61	0.9	4
20	Whole-body and local RF absorption in human models as a function of anatomy and position within 1.5T MR body coil. <i>Magnetic Resonance in Medicine</i> , <b>2014</b> , 71, 839-45	4.4	43
19	Computational platform combining detailed and precise functionalized anatomical phantoms with EM-Neuron interaction modeling <b>2014</b> ,		4
18	A review of numerical and experimental compensation techniques for skull-induced phase aberrations in transcranial focused ultrasound. <i>International Journal of Hyperthermia</i> , <b>2014</b> , 30, 36-46	3.7	69
17	Thermal tissue damage model analyzed for different whole-body SAR and scan durations for standard MR body coils. <i>Magnetic Resonance in Medicine</i> , <b>2014</b> , 71, 421-31	4.4	61
16	Development of a new generation of high-resolution anatomical models for medical device evaluation: the Virtual Population 3.0. <i>Physics in Medicine and Biology</i> , <b>2014</b> , 59, 5287-303	3.8	221
15	Antenna design and tissue parameters considerations for an improved modelling of microwave ablation in the liver. <i>Physics in Medicine and Biology</i> , <b>2013</b> , 58, 3191-206	3.8	14
14	CEM43°C thermal dose thresholds: a potential guide for magnetic resonance radiofrequency exposure levels?. <i>European Radiology</i> , <b>2013</b> , 23, 2215-27	8	147

13	Heating characteristics of antenna arrays used in microwave ablation: A theoretical parametric study. <i>Computers in Biology and Medicine</i> , <b>2013</b> , 43, 1321-7	7	15
12	Simulation techniques in hyperthermia treatment planning. <i>International Journal of Hyperthermia</i> , <b>2013</b> , 29, 346-57	3.7	133
11	A novel medical image data-based multi-physics simulation platform for computational life sciences. <i>Interface Focus</i> , <b>2013</b> , 3, 20120058	3.9	14
10	Local tissue temperature increase of a generic implant compared to the basic restrictions defined in safety guidelines. <i>Bioelectromagnetics</i> , <b>2012</b> , 33, 366-74	1.6	16
9	Patient-specific simulations and measurements of the magneto-hemodynamic effect in human primary vessels. <i>Physiological Measurement</i> , <b>2012</b> , 33, 117-30	2.9	18
8	Local SAR enhancements in anatomically correct children and adult models as a function of position within 1.5 T MR body coil. <i>Progress in Biophysics and Molecular Biology</i> , <b>2011</b> , 107, 428-33	4.7	32
7	Analysis of the local worst-case SAR exposure caused by an MRI multi-transmit body coil in anatomical models of the human body. <i>Physics in Medicine and Biology</i> , <b>2011</b> , 56, 4649-59	3.8	31
6	Fast interpolation based morphing of whole body human models <b>2011</b> ,		2
5	The Virtual Family--development of surface-based anatomical models of two adults and two children for dosimetric simulations. <i>Physics in Medicine and Biology</i> , <b>2010</b> , 55, N23-38	3.8	968
4	Unstructured mesh generation from the Virtual Family models for whole body biomedical simulations. <i>Procedia Computer Science</i> , <b>2010</b> , 1, 837-844	1.6	4
3	Winner of the "New Investigator Award" at the European Society of Hyperthermia Oncology Meeting 2007. The HYPERcollar: a novel applicator for hyperthermia in the head and neck. <i>International Journal of Hyperthermia</i> , <b>2007</b> , 23, 567-76	3.7	93
2	SAR distribution in human beings when using body-worn RF transmitters. <i>Radiation Protection Dosimetry</i> , <b>2007</b> , 124, 6-14	0.9	5
1	The SPARC DRC: Building a resource for the autonomic nervous system community		2