

# Ilkka Laakso

## List of Publications by Citations

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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.

95  
papers

2,060  
citations

25  
h-index

42  
g-index

107  
ext. papers

2,640  
ext. citations

2.9  
avg, IF

5.5  
L-index

#	Paper	IF	Citations
95	Inter-subject Variability in Electric Fields of Motor Cortical tDCS. <i>Brain Stimulation</i> , <b>2015</b> , 8, 906-13	5.1	200
94	Effects of coil orientation on the electric field induced by TMS over the hand motor area. <i>Physics in Medicine and Biology</i> , <b>2014</b> , 59, 203-18	3.8	107
93	Fast multigrid-based computation of the induced electric field for transcranial magnetic stimulation. <i>Physics in Medicine and Biology</i> , <b>2012</b> , 57, 7753-65	3.8	103
92	Reducing the staircasing error in computational dosimetry of low-frequency electromagnetic fields. <i>Physics in Medicine and Biology</i> , <b>2012</b> , 57, N25-34	3.8	82
91	Electric fields of motor and frontal tDCS in a standard brain space: A computer simulation study. <i>NeuroImage</i> , <b>2016</b> , 137, 140-151	7.9	76
90	Computational analysis shows why transcranial alternating current stimulation induces retinal phosphenes. <i>Journal of Neural Engineering</i> , <b>2013</b> , 10, 046009	5	67
89	Can electric fields explain inter-individual variability in transcranial direct current stimulation of the motor cortex?. <i>Scientific Reports</i> , <b>2019</b> , 9, 626	4.9	65
88	Where and what TMS activates: Experiments and modeling. <i>Brain Stimulation</i> , <b>2018</b> , 11, 166-174	5.1	60
87	Confirmation of quasi-static approximation in SAR evaluation for a wireless power transfer system. <i>Physics in Medicine and Biology</i> , <b>2013</b> , 58, N241-9	3.8	59
86	Dominant factors affecting temperature rise in simulations of human thermoregulation during RF exposure. <i>Physics in Medicine and Biology</i> , <b>2011</b> , 56, 7449-71	3.8	59
85	Evaluation of the induced electric field and compliance procedure for a wireless power transfer system in an electrical vehicle. <i>Physics in Medicine and Biology</i> , <b>2013</b> , 58, 7583-93	3.8	57
84	Evaluation of SAR in a human body model due to wireless power transmission in the 10 MHz band. <i>Physics in Medicine and Biology</i> , <b>2012</b> , 57, 4991-5002	3.8	52
83	On the averaging area for incident power density for human exposure limits at frequencies over 6 GHz. <i>Physics in Medicine and Biology</i> , <b>2017</b> , 62, 3124-3138	3.8	47
82	In-situ electric field in human body model in different postures for wireless power transfer system in an electrical vehicle. <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 163-73	3.8	39
81	Atlas of optimal coil orientation and position for TMS: A computational study. <i>Brain Stimulation</i> , <b>2018</b> , 11, 839-848	5.1	35
80	. <i>IEEE Transactions on Electromagnetic Compatibility</i> , <b>2018</b> , 60, 589-597	2	34
79	Relationship between peak spatial-averaged specific absorption rate and peak temperature elevation in human head in frequency range of 1-30 GHz. <i>Physics in Medicine and Biology</i> , <b>2016</b> , 61, 5406-5425	3.8	34

78	An equivalent skin conductivity model for low-frequency magnetic field dosimetry. <i>Biomedical Physics and Engineering Express</i> , <b>2015</b> , 1, 015201	1.5	32
77	Cost of focality in TDCS: Interindividual variability in electric fields. <i>Brain Stimulation</i> , <b>2020</b> , 13, 117-124	5.1	32
76	Time constants for temperature elevation in human models exposed to dipole antennas and beams in the frequency range from 1 to 30 GHz. <i>Physics in Medicine and Biology</i> , <b>2017</b> , 62, 1676-1699	3.8	29
75	TMS Motor Thresholds Correlate With TDCS Electric Field Strengths in Hand Motor Area. <i>Frontiers in Neuroscience</i> , <b>2018</b> , 12, 426	5.1	29
74	Human exposure to pulsed fields in the frequency range from 6 to 100 GHz. <i>Physics in Medicine and Biology</i> , <b>2017</b> , 62, 6980-6992	3.8	29
73	The relationship between specific absorption rate and temperature elevation in anatomically based human body models for plane wave exposure from 30 MHz to 6 GHz. <i>Physics in Medicine and Biology</i> , <b>2013</b> , 58, 903-21	3.8	27
72	Assessment of the Induced Electric Fields in a Carbon-Fiber Electrical Vehicle Equipped with a Wireless Power Transfer System. <i>Energies</i> , <b>2018</b> , 11, 684	3.1	26
71	Assessment of the computational uncertainty of temperature rise and SAR in the eyes and brain under far-field exposure from 1 to 10 GHz. <i>Physics in Medicine and Biology</i> , <b>2009</b> , 54, 3393-404	3.8	26
70	Computational dosimetry of induced electric fields during realistic movements in the vicinity of a 3 T MRI scanner. <i>Physics in Medicine and Biology</i> , <b>2013</b> , 58, 2625-40	3.8	25
69	Performance of convolutional PML absorbing boundary conditions in finite-difference time-domain SAR calculations. <i>Physics in Medicine and Biology</i> , <b>2007</b> , 52, 7183-92	3.8	25
68	Computational estimation of body temperature and sweating in the aged during passive heat exposure. <i>International Journal of Thermal Sciences</i> , <b>2015</b> , 89, 154-163	4.1	24
67	A high-resolution computational localization method for transcranial magnetic stimulation mapping. <i>NeuroImage</i> , <b>2018</b> , 172, 85-93	7.9	24
66	Efficiently searching through large tACS parameter spaces using closed-loop Bayesian optimization. <i>Brain Stimulation</i> , <b>2019</b> , 12, 1484-1489	5.1	22
65	Analysis of in situ electric field and specific absorption rate in human models for wireless power transfer system with induction coupling. <i>Physics in Medicine and Biology</i> , <b>2014</b> , 59, 3721-35	3.8	22
64	. <i>IEEE Transactions on Electromagnetic Compatibility</i> , <b>2017</b> , 59, 677-685	2	21
63	Evaluation of nonuniform field exposures with coupling factors. <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 8129-40	3.8	21
62	Multi-scale simulations predict responses to non-invasive nerve root stimulation. <i>Journal of Neural Engineering</i> , <b>2014</b> , 11, 056013	5	21
61	Computational estimation of magnetically induced electric fields in a rotating head. <i>Physics in Medicine and Biology</i> , <b>2009</b> , 54, 341-51	3.8	21

60	Group-level and functional-region analysis of electric-field shape during cerebellar transcranial direct current stimulation with different electrode montages. <i>Journal of Neural Engineering</i> , <b>2019</b> , 16, 036001	5	19
59	. <i>IEEE Transactions on Electromagnetic Compatibility</i> , <b>2018</b> , 60, 328-337	2	18
58	Assessment of Human Exposure to Electromagnetic Fields: Review and Future Directions. <i>IEEE Transactions on Electromagnetic Compatibility</i> , <b>2021</b> , 63, 1619-1630	2	17
57	Comparison of SAR calculation algorithms for the finite-difference time-domain method. <i>Physics in Medicine and Biology</i> , <b>2010</b> , 55, N421-31	3.8	16
56	Why intra-epidermal electrical stimulation achieves stimulation of small fibres selectively: a simulation study. <i>Physics in Medicine and Biology</i> , <b>2016</b> , 61, 4479-90	3.8	16
55	Computational dosimetry for grounded and ungrounded human models due to contact current. <i>Physics in Medicine and Biology</i> , <b>2013</b> , 58, 5153-72	3.8	15
54	Computational estimation of decline in sweating in the elderly from measured body temperatures and sweating for passive heat exposure. <i>Physiological Measurement</i> , <b>2012</b> , 33, N51-60	2.9	15
53	. <i>IEEE Access</i> , <b>2018</b> , 6, 70964-70973	3.5	15
52	A multi-scale computational approach based on TMS experiments for the assessment of electro-stimulation thresholds of the brain at intermediate frequencies. <i>Physics in Medicine and Biology</i> , <b>2018</b> , 63, 225006	3.8	15
51	Effect of microscopic modeling of skin in electrical and thermal analysis of transcranial direct current stimulation. <i>Physics in Medicine and Biology</i> , <b>2016</b> , 61, 8825-8838	3.8	14
50	Estimation of the whole-body averaged SAR of grounded human models for plane wave exposure at respective resonance frequencies. <i>Physics in Medicine and Biology</i> , <b>2012</b> , 57, 8427-42	3.8	13
49	Real-time estimation of electric fields induced by transcranial magnetic stimulation with deep neural networks. <i>Brain Stimulation</i> , <b>2019</b> , 12, 1500-1507	5.1	12
48	Human exposure to radiofrequency energy above 6 GHz: review of computational dosimetry studies. <i>Physics in Medicine and Biology</i> , <b>2021</b> , 66,	3.8	12
47	Evaluation method for in situ electric field in standardized human brain for different transcranial magnetic stimulation coils. <i>Physics in Medicine and Biology</i> , <b>2017</b> , 62, 2224-2238	3.8	11
46	Risk Management of Heatstroke Based on Fast Computation of Temperature and Water Loss Using Weather Data for Exposure to Ambient Heat and Solar Radiation. <i>IEEE Access</i> , <b>2018</b> , 6, 3774-3785	3.5	11
45	Computational analysis of thresholds for magnetophosphenes. <i>Physics in Medicine and Biology</i> , <b>2012</b> , 57, 6147-65	3.8	11
44	On the issues related to compliance of LF pulsed exposures with safety standards and guidelines. <i>Physics in Medicine and Biology</i> , <b>2013</b> , 58, 8597-607	3.8	11
43	. <i>IEEE Transactions on Electromagnetic Compatibility</i> , <b>2017</b> , 59, 739-746	2	10

42	Computation of induced electric field for the sacral nerve activation. <i>Physics in Medicine and Biology</i> , <b>2013</b> , 58, 7745-55	3.8	10
41	Coil model comparison for cerebellar transcranial magnetic stimulation. <i>Biomedical Physics and Engineering Express</i> , <b>2018</b> , 5, 015020	1.5	10
40	Modelling of induced electric fields based on incompletely known magnetic fields. <i>Physics in Medicine and Biology</i> , <b>2017</b> , 62, 6567-6578	3.8	8
39	Effects of posture on electric fields of non-invasive brain stimulation. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 065019	3.8	8
38	TMS activation site estimation using multiscale realistic head models. <i>Journal of Neural Engineering</i> , <b>2020</b> , 17, 036004	5	8
37	Computational errors of the induced electric field in voxelized and tetrahedral anatomical head models exposed to spatially uniform and localized magnetic fields. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 015001	3.8	8
36	. <i>IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology</i> , <b>2018</b> , 2, 302-309	2.8	8
35	SAR evaluation in models of an adult and a child for magnetic field from wireless power transfer systems at 6.78 MHz. <i>Biomedical Physics and Engineering Express</i> , <b>2016</b> , 2, 027001	1.5	7
34	FDTD analysis of temperature elevation in the lens of human and rabbit models due to near-field and far-field exposures at 2.45 GHz. <i>Radiation Protection Dosimetry</i> , <b>2013</b> , 155, 284-91	0.9	7
33	Quasistatic Approximation for Exposure Assessment of Wireless Power Transfer. <i>IEICE Transactions on Communications</i> , <b>2015</b> , E98.B, 1156-1163	0.5	7
32	. <i>IEEE Access</i> , <b>2018</b> , 1-1	3.5	7
31	The Effect of Dual-Hemisphere Transcranial Direct Current Stimulation Over the Parietal Operculum on Tactile Orientation Discrimination. <i>Frontiers in Behavioral Neuroscience</i> , <b>2017</b> , 11, 173	3.5	6
30	Group-level analysis of induced electric field in deep brain regions by different TMS coils. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 025007	3.8	6
29	Effect of Incidence Angle on the Spatial-Average of Incident Power Density Definition to Correlate Skin Temperature Rise for Millimeter Wave Exposures. <i>IEEE Transactions on Electromagnetic Compatibility</i> , <b>2021</b> , 1-16	2	6
28	Comparison of Numerical Techniques for the Evaluation of Human Exposure From Measurement Data. <i>IEEE Transactions on Magnetics</i> , <b>2019</b> , 55, 1-4	2	5
27	Variability in TDCS electric fields: Effects of electrode size and configuration <b>2017</b> ,		5
26	DOMINANT FACTORS AFFECTING TEMPERATURE ELEVATION IN ADULT AND CHILD MODELS EXPOSED TO SOLAR RADIATION IN HOT ENVIRONMENT. <i>Progress in Electromagnetics Research B</i> , <b>2011</b> , 34, 47-61	0.7	5
25	Computational dosimetry for child and adult human models due to contact current from 10 Hz to 110 MHz. <i>Radiation Protection Dosimetry</i> , <b>2015</b> , 167, 642-52	0.9	4

24	FDTD computation of temperature elevation in the elderly for far-field RF exposures. <i>Radiation Protection Dosimetry</i> , <b>2014</b> , 158, 497-500	0.9	4
23	Numerical specific absorption rate analysis and measurement of a small indoor base station antenna. <i>Microwave and Optical Technology Letters</i> , <b>2008</b> , 50, 2516-2521	1.2	4
22	Review on biophysical modelling and simulation studies for transcranial magnetic stimulation. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 24TR03	3.8	4
21	EMF EXPOSURE ANALYSIS FOR A COMPACT MULTI-BAND 5G ANTENNA. <i>Progress in Electromagnetics Research M</i> , <b>2018</b> , 68, 193-201	0.6	4
20	NUMERICAL MODELING OF ELECTROMAGNETIC FIELD EXPOSURE FROM 5G MOBILE COMMUNICATIONS AT 10 GHZ. <i>Progress in Electromagnetics Research M</i> , <b>2018</b> , 72, 61-67	0.6	4
19	Computation of Temperature Elevation in a Fetus Exposed to Ambient Heat and Radio Frequency Fields. <i>Numerical Heat Transfer; Part A: Applications</i> , <b>2014</b> , 65, 1176-1186	2.3	3
18	Improving the computational speed and reducing the staircasing error for simulations of human exposure to low frequency magnetic fields <b>2012</b> ,		3
17	Combined Simulation of Bioelectromagnetics and Nerve Activation and its Application. <i>IEEJ Transactions on Fundamentals and Materials</i> , <b>2018</b> , 138, 265-270	0.2	3
16	Electric field dependent effects of motor cortical TDCS		3
15	Assessing tACS-induced phosphene perception using closed-loop Bayesian optimization		2
14	Effect of Electrical Conductivity Uncertainty in the Assessment of the Electric Fields Induced in the Brain by Exposure to Uniform Magnetic Fields at 50 Hz. <i>IEEE Access</i> , <b>2020</b> , 8, 222297-222309	3.5	2
13	Alternative approach for modeling material interfaces in FDTD. <i>Microwave and Optical Technology Letters</i> , <b>2008</b> , 50, 1211-1214	1.2	1
12	Risk Evaluation of Heat Stroke with Multiphysics Computation and its Application. <i>IEEJ Transactions on Fundamentals and Materials</i> , <b>2018</b> , 138, 288-294	0.2	1
11	Inter-individual variations in electric fields induced in the brain by exposure to uniform magnetic fields at 50 Hz. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 215006	3.8	1
10	Dielectric polarization transients in biological tissue moving in a static magnetic field. <i>Bioelectromagnetics</i> , <b>2016</b> , 37, 409-22	1.6	1
9	Thresholds of central nervous system stimulation at intermediate frequencies <b>2016</b> ,		1
8	Evaluation method for in-situ electric field of different TMS coils in human brain <b>2016</b> ,		1
7	Nonuniform Exposure to the Cornea from Millimeter Waves. <i>Health Physics</i> , <b>2021</b> , 120, 525-531	2.3	1

6	<b>2018,</b>			1
5	A probabilistic transcranial magnetic stimulation localization method. <i>Journal of Neural Engineering</i> , <b>2021</b> , 18,		5	1
4	Computation of temperature elevation in fetus due to radio-frequency exposure with a new thermal modeling. <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>2013</b> , 2013, 3753-6		0.9	0
3	The Effect of Inter-pulse Interval on TMS Motor Evoked Potentials in Active Muscles.. <i>Frontiers in Human Neuroscience</i> , <b>2022</b> , 16, 845476		3.3	0
2	Sub-voxel refinement method for tissue boundary conductivities in volume conductor models. <i>URSI Radio Science Bulletin</i> , <b>2017</b> , 2017, 13-18		0.1	
1	A 50 Hz magnetic field affects hemodynamics, ECG and vascular endothelial function in healthy adults: A pilot randomized controlled trial. <i>PLoS ONE</i> , <b>2021</b> , 16, e0255242		3.7	