

# Jukka O Lekkala

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2056585/publications.pdf>

Version: 2024-02-01

121  
papers

2,437  
citations

236925

25  
h-index

254184

43  
g-index

123  
all docs

123  
docs citations

123  
times ranked

2363  
citing authors

#	ARTICLE	IF	CITATIONS
1	ElectroMechanical Film (EMFi) – a new multipurpose electret material. <i>Sensors and Actuators A: Physical</i> , 2000, 84, 95-102.	4.1	255
2	Large and broadband piezoelectricity in smart polymer-foam space-charge electrets. <i>Applied Physics Letters</i> , 2000, 77, 3827-3829.	3.3	162
3	Piezo- and pyroelectricity of a polymer-foam space-charge electret. <i>Journal of Applied Physics</i> , 2001, 89, 4503-4511.	2.5	129
4	Modelling the electromechanical film (EMFi). <i>Journal of Electrostatics</i> , 2000, 48, 193-204.	1.9	102
5	Electromechanical modeling and properties of the electret film EMFi. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2001, 8, 629-636.	2.9	83
6	Film-Type Sensor Materials PVDF and EMFi in Measurement of Cardiorespiratory Signals – A Review. <i>IEEE Sensors Journal</i> , 2012, 12, 439-446.	4.7	83
7	Detection of Prostate Cancer by an Electronic Nose: A Proof of Principle Study. <i>Journal of Urology</i> , 2014, 192, 230-235.	0.4	72
8	Development of a piezoelectric polymer film sensor for plantar normal and shear stress measurements. <i>Sensors and Actuators A: Physical</i> , 2009, 154, 57-64.	4.1	66
9	The characterization of surgical smoke from various tissues and its implications for occupational safety. <i>PLoS ONE</i> , 2018, 13, e0195274.	2.5	64
10	CytoSpectre: a tool for spectral analysis of oriented structures on cellular and subcellular levels. <i>BMC Bioinformatics</i> , 2015, 16, 344.	2.6	54
11	Totally passive wireless biopotential measurement sensor by utilizing inductively coupled resonance circuits. <i>Sensors and Actuators A: Physical</i> , 2010, 157, 313-321.	4.1	48
12	A modular brain-on-a-chip for modelling epileptic seizures with functionally connected human neuronal networks. <i>Biosensors and Bioelectronics</i> , 2020, 168, 112553.	10.1	43
13	Plantar shear stress measurements – A review. <i>Clinical Biomechanics</i> , 2014, 29, 475-483.	1.2	41
14	Wireless and inductively powered implant for measuring electrocardiogram. <i>Medical and Biological Engineering and Computing</i> , 2007, 45, 1163-1174.	2.8	36
15	A Wearable, Wireless Gaze Tracker with Integrated Selection Command Source for Human-Computer Interaction. <i>IEEE Transactions on Information Technology in Biomedicine</i> , 2011, 15, 795-801.	3.2	36
16	Rapid and Accurate Detection of Urinary Pathogens by Mobile IMS-Based Electronic Nose: A Proof-of-Principle Study. <i>PLoS ONE</i> , 2014, 9, e114279.	2.5	35
17	Biosensors based on surface plasmons excited in non-noble metals. <i>Biosensors and Bioelectronics</i> , 1991, 6, 439-444.	10.1	34
18	Capacitive facial movement detection for human-computer interaction to click by frowning and lifting eyebrows. <i>Medical and Biological Engineering and Computing</i> , 2010, 48, 39-47.	2.8	32

#	ARTICLE	IF	CITATIONS
19	Readout methods for an inductively coupled resonance sensor used in pressure garment application. <i>Sensors and Actuators A: Physical</i> , 2011, 172, 109-116.	4.1	31
20	Determination of the actuator sensitivity of electromechanical polypropylene films by atomic force microscopy. <i>Journal of Applied Physics</i> , 2000, 88, 4789.	2.5	30
21	Improvement of the properties of an eddy current magnetic shield with active compensation. <i>Journal of Physics E: Scientific Instruments</i> , 1987, 20, 151-164.	0.7	29
22	Scent classification by K nearest neighbors using ion-mobility spectrometry measurements. <i>Expert Systems With Applications</i> , 2019, 115, 593-606.	7.6	29
23	Designing, Manufacturing and Testing of a Piezoelectric Polymer Film In-Sole Sensor for Plantar Pressure Distribution Measurements. <i>IEEE Sensors Journal</i> , 2017, 17, 6798-6805.	4.7	29
24	Wireless Head Cap for EOG and Facial EMG Measurements. , 2005, 2005, 5865-8.		26
25	PVDF and EMFi sensor materials – A comparative study. <i>Procedia Engineering</i> , 2010, 5, 862-865.	1.2	26
26	Wireless Face Interface: Using voluntary gaze direction and facial muscle activations for human-computer interaction. <i>Interacting With Computers</i> , 2012, 24, 1-9.	1.5	26
27	Correlation approach for the detection of the heartbeat intervals using force sensors placed under the bed posts. <i>Journal of Medical Engineering and Technology</i> , 2013, 37, 327-333.	1.4	25
28	Age Dependence of Arterial Pulse Wave Parameters Extracted From Dynamic Blood Pressure and Blood Volume Pulse Waves. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2017, 21, 142-149.	6.3	24
29	Three-Dimensional Printing of the Nasal Cavities for Clinical Experiments. <i>Scientific Reports</i> , 2020, 10, 502.	3.3	24
30	Design of novel molecular wires for realizing long-distance electron transfer. <i>Bioelectrochemistry</i> , 1997, 42, 25-33.	1.0	23
31	Measurement of heart sounds with EMFi transducer. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2007, 2007, 1683-6.	0.5	22
32	Film-type transducer materials PVDF and EMFi in the measurement of heart and respiration rates. , 2008, 2008, 530-3.		22
33	Fabrication and Characterization of a Wireless Bioresorbable Pressure Sensor. <i>Advanced Materials Technologies</i> , 2019, 4, 1900428.	5.8	22
34	Capacitive Measurement of Facial Activity Intensity. <i>IEEE Sensors Journal</i> , 2013, 13, 4329-4338.	4.7	20
35	Microelectrode Array With Transparent ALD TiN Electrodes. <i>Frontiers in Neuroscience</i> , 2019, 13, 226.	2.8	20
36	Monitoring of biofilm growth with thickness-shear mode quartz resonators in different flow and nutrition conditions. <i>Sensors and Actuators B: Chemical</i> , 2000, 71, 47-54.	7.8	19

#	ARTICLE	IF	CITATIONS
37	PVDF microforce sensor for the measurement of Z-directional strength in paper fiber bonds. <i>Sensors and Actuators A: Physical</i> , 2015, 222, 194-203.	4.1	19
38	Parameters Extracted From Arterial Pulse Waves as Markers of Atherosclerotic Changes: Performance and Repeatability. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2018, 22, 750-757.	6.3	19
39	Wireless interrogation techniques for sensors utilizing inductively coupled resonance circuits. <i>Procedia Engineering</i> , 2010, 5, 216-219.	1.2	18
40	Fluorimetric oxygen sensor with an efficient optical read-out for in vitro cell models. <i>Sensors and Actuators B: Chemical</i> , 2017, 249, 738-746.	7.8	18
41	Ion Beam Assisted E-Beam Deposited TiN Microelectrodes Applied to Neuronal Cell Culture Medium Evaluation. <i>Frontiers in Neuroscience</i> , 2018, 12, 882.	2.8	18
42	Monitoring Arterial Pulse Waves With Synchronous Body Sensor Network. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2014, 18, 1781-1787.	6.3	17
43	A Portable Microscale Cell Culture System with Indirect Temperature Control. <i>SLAS Technology</i> , 2018, 23, 566-579.	1.9	17
44	Materials and Orthopedic Applications for Bioresorbable Inductively Coupled Resonance Sensors. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 31148-31161.	8.0	17
45	Properties of a thick-walled conducting enclosure in low-frequency magnetic shielding. <i>Journal of Physics E: Scientific Instruments</i> , 1980, 13, 569-570.	0.7	16
46	Comparative study of the normal vector magnetocardiogram and vector electrocardiogram. <i>Journal of Electrocardiology</i> , 1986, 19, 275-290.	0.9	16
47	Tissue Identification in a Porcine Model by Differential Ion Mobility Spectrometry Analysis of Surgical Smoke. <i>Annals of Biomedical Engineering</i> , 2018, 46, 1091-1100.	2.5	16
48	Optical non-contact pH measurement in cell culture with sterilizable, modular parts. <i>Talanta</i> , 2016, 161, 755-761.	5.5	15
49	Utilization of wireless sensor network for health monitoring in home environment. , 2009, , .		14
50	Text Entry by Gazing and Smiling. <i>Advances in Human-Computer Interaction</i> , 2013, 2013, 1-13.	2.8	14
51	Facial muscle reanimation by transcutaneous electrical stimulation for peripheral facial nerve palsy. <i>Journal of Medical Engineering and Technology</i> , 2019, 43, 155-164.	1.4	14
52	Detection of smell print differences between nonmalignant and malignant prostate cells with an electronic nose. <i>Future Oncology</i> , 2012, 8, 1157-1165.	2.4	13
53	Microelectrode array for noninvasive analysis of cardiomyocytes at the single-cell level. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 117001.	1.5	13
54	Combining finger and toe photoplethysmograms for the detection of atherosclerosis. <i>Physiological Measurement</i> , 2017, 38, 139-154.	2.1	12

#	ARTICLE	IF	CITATIONS
55	Atomic layer deposited iridium oxide thin film as microelectrode coating in stem cell applications. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	2.1	11
56	Passive resonance sensor based method for monitoring particle suspensions. Sensors and Actuators B: Chemical, 2015, 219, 324-330.	7.8	11
57	Effects of sensor type and sensor location on signal quality in bed mounted ballistocardiographic heart rate and respiration monitoring. , 2015, 2015, 4383-6.		11
58	A Portable Live-Cell Imaging System With an Invert-Upright-Convertible Architecture and a Mini-Bioreactor for Long-Term Simultaneous Cell Imaging, Chemical Sensing, and Electrophysiological Recording. IEEE Access, 2018, 6, 11063-11075.	4.2	11
59	A maskless exposure device for rapid photolithographic prototyping of sensor and microstructure layouts. Procedia Engineering, 2010, 5, 331-334.	1.2	10
60	Multiplexed SQUID vectormagnetometer for biomagnetic research. Journal of Physics E: Scientific Instruments, 1984, 17, 504-512.	0.7	9
61	Prediction ability of a lumped-element equivalent-circuit model for thickness-shear mode resonators in liquids. Sensors and Actuators A: Physical, 1997, 60, 80-85.	4.1	9
62	Miniature Wireless Measurement Node for ECG Signal Transmission in Home Area Network. , 2006, 2006, 2049-52.		9
63	The effect of clicking by smiling on the accuracy of head-mounted gaze tracking. , 2012, , .		9
64	A survey on the feasibility of surface EMG in facial pacing. , 2016, 2016, 1688-1691.		9
65	Non-destructive and wireless monitoring of biodegradable polymers. Sensors and Actuators B: Chemical, 2017, 251, 1018-1025.	7.8	9
66	Monitoring pH, temperature and humidity in long-term stem cell culture in CO <sub>2</sub> incubator. , 2017, , .		9
67	Transparent Microelectrode Arrays Fabricated by Ion Beam Assisted Deposition for Neuronal Cell In Vitro Recordings. Micromachines, 2020, 11, 497.	2.9	9
68	Noise reduction using a matching input transformer (magnetic field measurement system). Journal of Physics E: Scientific Instruments, 1981, 14, 939-942.	0.7	8
69	Evaluation of an implantable ECG monitoring device in vitro and in vivo. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 5704-7.	0.5	8
70	System for ECG and heart rate monitoring during group training. , 2008, 2008, 4832-5.		8
71	A lumped-parameter transducer model for piezoelectric and ferroelectret polymers. Measurement: Journal of the International Measurement Confederation, 2012, 45, 453-458.	5.0	8
72	The effect of percutaneous transluminal angioplasty of superficial femoral artery on pulse wave features. Computers in Biology and Medicine, 2018, 96, 274-282.	7.0	8

#	ARTICLE	IF	CITATIONS
73	Indirect Temperature Measurement and Control Method for Cell Culture Devices. IEEE Transactions on Automation Science and Engineering, 2018, 15, 420-429.	5.2	8
74	Comparing a 10 MHz thicknessâ€“shear mode quartz resonator with a commercial process viscometer in monitoring resol manufacture process. Sensors and Actuators B: Chemical, 2002, 81, 133-140.	7.8	7
75	Modeling and Simulation of Magnetic Nanoparticle Sensor. , 2005, 2005, 1256-9.		7
76	Embedded capacitive sensor system for hip surgery rehabilitation: Online measurements and long-term stability. , 2008, 2008, 935-8.		7
77	All Titanium Microelectrode Array for Field Potential Measurements from Neurons and Cardiomyocytesâ€“A Feasibility Study. Micromachines, 2011, 2, 394-409.	2.9	7
78	Integration of inkjet and RF SoC technologies to fabricate wireless physiological monitoring system. , 2014, , .		7
79	Pointing and Selecting with Facial Activity. Interacting With Computers, 2016, 28, 1-12.	1.5	7
80	Assessment of PIV performance in validating CFD models from nasal cavity CBCT scans. Respiratory Physiology and Neurobiology, 2020, 282, 103508.	1.6	7
81	Measurement of sensitivity distribution map of a ferroelectret polymer film. IEEE Sensors Journal, 2016, , 1-1.	4.7	6
82	Corrected Unipositional Lead System for Vector Magnetocardiography. IEEE Transactions on Biomedical Engineering, 1987, BME-34, 81-90.	4.2	5
83	A resource optimized physical movement monitoring scheme for environmental and on-body sensor networks. , 2007, , .		5
84	Online Scent Classification by Ion-Mobility Spectrometry Sequences. Frontiers in Applied Mathematics and Statistics, 2019, 5, .	1.3	5
85	Bioresorbable Conductive Wire with Minimal Metal Content. ACS Biomaterials Science and Engineering, 2019, 5, 1134-1140.	5.2	5
86	Covalent immobilization of luminescent oxygen indicators reduces cytotoxicity. Biomedical Microdevices, 2020, 22, 41.	2.8	5
87	Low cost miniaturization of an implantable prototype. Circuit World, 2009, 35, 34-40.	0.9	4
88	Development of a Lower Extremity Rehabilitation Aid Utilizing an Insole-Integrated Load Sensor Matrix and a Sole-Embedded Measurement Node. , 2009, , .		4
89	Gazing and Frowning to Computers Can Be Enjoyable. , 2011, , .		4
90	Biodegradable encapsulation for inductively measured resonance circuit. , 2012, , .		4

#	ARTICLE	IF	CITATIONS
91	Novel method for intensity correction using a simple maskless lithography device. <i>Sensors and Actuators A: Physical</i> , 2013, 194, 40-46.	4.1	4
92	Indoor localisation using aroma fingerprints: A first sniff. , 2017, , .		4
93	Capacitive Insole Sensor for Hip Surgery Rehabilitation. , 2008, , .		4
94	Optimization of a squid vector gradiometer. <i>Cryogenics</i> , 1985, 25, 291-303.	1.7	3
95	EMFi material as wearable heart rate sensor for night time recordings. , 2010, , .		3
96	Areas under peripheral pulse waves: a potential marker of atherosclerotic changes. <i>Physiological Measurement</i> , 2018, 39, 025003.	2.1	3
97	An Inductively Coupled Biodegradable Capacitive Pressure Sensor. <i>Proceedings (mdpi)</i> , 2018, 2, .	0.2	3
98	Simple inductively coupled resonance sensor for ECG and heart rate monitoring. <i>Procedia Engineering</i> , 2010, 5, 1438-1441.	1.2	2
99	Implantable Measurement System for Dairy-Cattle Monitoring with Long Recording Time. <i>Advances in Science and Technology</i> , 0, , .	0.2	2
100	Combining unobtrusive electrocardiography and ballistography for more accurate monitoring of sleep. , 2012, , .		2
101	Characterizing leakage current in silicon nanowire-based field-effect transistors by applying pseudo-random sequences. , 2012, , .		2
102	Emotional Reactions to Point-Light Display Animations. <i>Interacting With Computers</i> , 2016, 28, 521-531.	1.5	2
103	Smile to save it. , 2017, , .		2
104	A compact olfactometer for IMS measurements and testing human perception. <i>International Journal for Ion Mobility Spectrometry</i> , 2018, 21, 71-80.	1.4	2
105	Cardiomyocytes: Analysis of Temperature Response and Signal Propagation Between Dissociated Clusters Using Novel Video-Based Movement Analysis Software. <i>IEEE Access</i> , 2020, 8, 109275-109288.	4.2	2
106	Artificial Eye Blink Pacemaker - A First Investigation into the Blink Production Using Constant-Interval Electrical Stimulation. <i>IFMBE Proceedings</i> , 2018, , 522-525.	0.3	2
107	Low-latency EMG Onset and Termination Detection for Facial Pacing. <i>IFMBE Proceedings</i> , 2018, , 1016-1019.	0.3	2
108	A capillary pH electrode for evaluating long term culturing of neural cell populations. <i>Procedia Engineering</i> , 2010, 5, 544-547.	1.2	1

#	ARTICLE	IF	CITATIONS
109	Measuring resistivity of silicon nanowire using pseudo-random binary sequence injection. <i>Microelectronics Journal</i> , 2014, 45, 976-980.	2.0	1
110	Transferring scents over a communication network. , 2020, , .		1
111	Wearable System for EKG Monitoring - Evaluation of Night-Time Performance. <i>Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering</i> , 2012, , 119-126.	0.3	1
112	A comparison of online methods for change point detection in ion-mobility spectrometry data. <i>Array</i> , 2022, 14, 100151.	4.0	1
113	Corrosion and Protection of Silicon Nitride Insulators in Microelectrode Array Applications. <i>IEEE Sensors Journal</i> , 2022, 22, 12504-12514.	4.7	1
114	Accurate digital synthesiser for simulating vectorcardiogram. <i>Medical and Biological Engineering and Computing</i> , 1981, 19, 250-254.	2.8	0
115	<title>Fiber optic liquid crystal displays</title>. , 1993, , .		0
116	Backside Detection of Photoresist Development Endpoint Using Surface Plasmon Resonance. , 2007, , .		0
117	Combining the Information of Unconstrained Electrocardiography and Ballistography in the Detection of Night-Time Heart Rate and Respiration Rate. <i>International Journal of Monitoring and Surveillance Technologies Research</i> , 2013, 1, 52-67.	0.3	0
118	Design and simulation of a thermal flow sensor for gravity-driven microfluidic applications. , 2016, , .		0
119	Simulation of the Readout Methods for Inductively Coupled High-Frequency Resonance Sensors. <i>Proceedings (mdpi)</i> , 2018, 2, 923.	0.2	0
120	Short-term stability of combined finger and toe photoplethysmogram analysis. <i>IFMBE Proceedings</i> , 2018, , 342-345.	0.3	0
121	Temperature effect on the baseline noise in MEA measurements. <i>IFMBE Proceedings</i> , 2018, , 5-8.	0.3	0