Jukka O Lekkala

List of Publications by Year
in descending order

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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	A comparison of online methods for change point detection in ion-mobility spectrometry data. Array, 2022, 14, 100151.	4.0	1
2	Corrosion and Protection of Silicon Nitride Insulators in Microelectrode Array Applications. IEEE Sensors Journal, 2022, 22, 12504-12514.	4.7	1
3	A modular brain-on-a-chip for modelling epileptic seizures with functionally connected human neuronal networks. Biosensors and Bioelectronics, 2020, 168, 112553.	10.1	43
4	Assessment of PIV performance in validating CFD models from nasal cavity CBCT scans. Respiratory Physiology and Neurobiology, 2020, 282, 103508.	1.6	7
5	Transparent Microelectrode Arrays Fabricated by Ion Beam Assisted Deposition for Neuronal Cell In Vitro Recordings. Micromachines, 2020, 11, 497.	2.9	9
6	Covalent immobilization of luminescent oxygen indicators reduces cytotoxicity. Biomedical Microdevices, 2020, 22, 41.	2.8	5
7	Materials and Orthopedic Applications for Bioresorbable Inductively Coupled Resonance Sensors. ACS Applied Materials & Interfaces, 2020, 12, 31148-31161.	8.0	17
8	Cardiomyocytes: Analysis of Temperature Response and Signal Propagation Between Dissociated Clusters Using Novel Video-Based Movement Analysis Software. IEEE Access, 2020, 8, 109275-109288.	4.2	2
9	Three-Dimensional Printing of the Nasal Cavities for Clinical Experiments. Scientific Reports, 2020, 10, 502.	3.3	24
10	Transferring scents over a communication network. , 2020, , .		1
11	Fabrication and Characterization of a Wireless Bioresorbable Pressure Sensor. Advanced Materials Technologies, 2019, 4, 1900428.	5.8	22
12	Facial muscle reanimation by transcutaneous electrical stimulation for peripheral facial nerve palsy. Journal of Medical Engineering and Technology, 2019, 43, 155-164.	1.4	14
13	Microelectrode Array With Transparent ALD TiN Electrodes. Frontiers in Neuroscience, 2019, 13, 226.	2.8	20
14	Online Scent Classification by Ion-Mobility Spectrometry Sequences. Frontiers in Applied Mathematics and Statistics, 2019, 5, .	1.3	5
15	Scent classification by K nearest neighbors using ion-mobility spectrometry measurements. Expert Systems With Applications, 2019, 115, 593-606.	7.6	29
16	Bioresorbable Conductive Wire with Minimal Metal Content. ACS Biomaterials Science and Engineering, 2019, 5, 1134-1140.	5.2	5
17	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
18	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

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19	Areas under peripheral pulse waves: a potential marker of atherosclerotic changes. Physiological Measurement, 2018, 39, 025003.	2.1	3
20	Tissue Identification in a Porcine Model by Differential Ion Mobility Spectrometry Analysis of Surgical Smoke. Annals of Biomedical Engineering, 2018, 46, 1091-1100.	2.5	16
21	Indirect Temperature Measurement and Control Method for Cell Culture Devices. IEEE Transactions on Automation Science and Engineering, 2018, 15, 420-429.	5.2	8
22	Parameters Extracted From Arterial Pulse Waves as Markers of Atherosclerotic Changes: Performance and Repeatability. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 750-757.	6.3	19
23	Ion Beam Assisted E-Beam Deposited TiN Microelectrodesâ€"Applied to Neuronal Cell Culture Medium Evaluation. Frontiers in Neuroscience, 2018, 12, 882.	2.8	18
24	Simulation of the Readout Methods for Inductively Coupled High-Frequency Resonance Sensors. Proceedings (mdpi), 2018, 2, 923.	0.2	0
25	An Inductively Coupled Biodegradable Capacitive Pressure Sensor. Proceedings (mdpi), 2018, 2, .	0.2	3
26	Microelectrode array for noninvasive analysis of cardiomyocytes at the single-cell level. Japanese Journal of Applied Physics, 2018, 57, 117001.	1.5	13
27	A compact olfactometer for IMS measurements and testing human perception. International Journal for Ion Mobility Spectrometry, 2018, 21, 71-80.	1.4	2
28	The characterization of surgical smoke from various tissues and its implications for occupational safety. PLoS ONE, 2018, 13, e0195274.	2.5	64
29	A Portable Microscale Cell Culture System with Indirect Temperature Control. SLAS Technology, 2018, 23, 566-579.	1.9	17
30	Artificial Eye Blink Pacemaker - A First Investigation into the Blink Production Using Constant-Interval Electrical Stimulation. IFMBE Proceedings, 2018, , 522-525.	0.3	2
31	Low-latency EMG Onset and Termination Detection for Facial Pacing. IFMBE Proceedings, 2018, , 1016-1019.	0.3	2
32	Short-term stability of combined finger and toe photoplethysmogram analysis. IFMBE Proceedings, 2018, , 342-345.	0.3	0
33	Temperature effect on the baseline noise in MEA measurements. IFMBE Proceedings, 2018, , 5-8.	0.3	0
34	Age Dependence of Arterial Pulse Wave Parameters Extracted From Dynamic Blood Pressure and Blood Volume Pulse Waves. IEEE Journal of Biomedical and Health Informatics, 2017, 21, 142-149.	6.3	24
35	Combining finger and toe photoplethysmograms for the detection of atherosclerosis. Physiological Measurement, 2017, 38, 139-154.	2.1	12
36	Fluorimetric oxygen sensor with an efficient optical read-out for in vitro cell models. Sensors and Actuators B: Chemical, 2017, 249, 738-746.	7.8	18

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37	Non-destructive and wireless monitoring of biodegradable polymers. Sensors and Actuators B: Chemical, 2017, 251, 1018-1025.	7.8	9
38	Monitoring pH, temperature and humidity in long-term stem cell culture in CO<inf>2</inf> incubator. , 2017, , .		9
39	Indoor localisation using aroma fingerprints: A first sniff. , 2017, , .		4
40	Smile to save it. , 2017, , .		2
41	Designing, Manufacturing and Testing of a Piezoelectric Polymer Film In-Sole Sensor for Plantar Pressure Distribution Measurements. IEEE Sensors Journal, 2017, 17, 6798-6805.	4.7	29
42	Design and simulation of a thermal flow sensor for gravity-driven microfluidic applications. , 2016, , .		0
43	Measurement of sensitivity distribution map of a ferroelectret polymer film. IEEE Sensors Journal, 2016, , 1-1.	4.7	6
44	Optical non-contact pH measurement in cell culture with sterilizable, modular parts. Talanta, 2016, 161, 755-761.	5.5	15
45	A survey on the feasibility of surface EMG in facial pacing. , 2016, 2016, 1688-1691.		9
46	Pointing and Selecting with Facial Activity. Interacting With Computers, 2016, 28, 1-12.	1.5	7
47	Emotional Reactions to Point-Light Display Animations. Interacting With Computers, 2016, 28, 521-531.	1.5	2
48	CytoSpectre: a tool for spectral analysis of oriented structures on cellular and subcellular levels. BMC Bioinformatics, 2015, 16, 344.	2.6	54
49	Passive resonance sensor based method for monitoring particle suspensions. Sensors and Actuators B: Chemical, 2015, 219, 324-330.	7.8	11
50	PVDF microforce sensor for the measurement of Z-directional strength in paper fiber bonds. Sensors and Actuators A: Physical, 2015, 222, 194-203.	4.1	19
51	Effects of sensor type and sensor location on signal quality in bed mounted ballistocardiographic heart rate and respiration monitoring. , 2015, 2015, 4383-6.		11
52	Integration of inkjet and RF SoC technologies to fabricate wireless physiological monitoring system. , 2014, , .		7
53	Monitoring Arterial Pulse Waves With Synchronous Body Sensor Network. IEEE Journal of Biomedical and Health Informatics, 2014, 18, 1781-1787.	6.3	17
54	Measuring resistivity of silicon nanowire using pseudo-random binary sequence injection. Microelectronics Journal, 2014, 45, 976-980.	2.0	1

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55	Detection of Prostate Cancer by an Electronic Nose: A Proof of Principle Study. Journal of Urology, 2014, 192, 230-235.	0.4	72
56	Plantar shear stress measurements â€" A review. Clinical Biomechanics, 2014, 29, 475-483.	1.2	41
57	Rapid and Accurate Detection of Urinary Pathogens by Mobile IMS-Based Electronic Nose: A Proof-of-Principle Study. PLoS ONE, 2014, 9, e114279.	2.5	35
58	Capacitive Measurement of Facial Activity Intensity. IEEE Sensors Journal, 2013, 13, 4329-4338.	4.7	20
59	Novel method for intensity correction using a simple maskless lithography device. Sensors and Actuators A: Physical, 2013, 194, 40-46.	4.1	4
60	Correlation approach for the detection of the heartbeat intervals using force sensors placed under the bed posts. Journal of Medical Engineering and Technology, 2013, 37, 327-333.	1.4	25
61	Combining the Information of Unconstrained Electrocardiography and Ballistography in the Detection of Night-Time Heart Rate and Respiration Rate. International Journal of Monitoring and Surveillance Technologies Research, 2013, 1, 52-67.	0.3	0
62	Text Entry by Gazing and Smiling. Advances in Human-Computer Interaction, 2013, 2013, 1-13.	2.8	14
63	The effect of clicking by smiling on the accuracy of head-mounted gaze tracking. , 2012, , .		9
64	Biodegradable encapsulation for inductively measured resonance circuit. , 2012, , .		4
65	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
66	Combining unobtrusive electrocardiography and ballistography for more accurate monitoring of sleep. , 2012, , .		2
67	Detection of smell print differences between nonmalignant and malignant prostate cells with an electronic nose. Future Oncology, 2012, 8, 1157-1165.	2.4	13
68	Film-Type Sensor Materials PVDF and EMFi in Measurement of Cardiorespiratory Signalsâ€" A Review. IEEE Sensors Journal, 2012, 12, 439-446.	4.7	83
69	Characterizing leakage current in silicon nanowire-based field-effect transistors by applying pseudo-random sequences. , 2012, , .		2
70	Wireless Face Interface: Using voluntary gaze direction and facial muscle activations for humanâ€"computer interaction. Interacting With Computers, 2012, 24, 1-9.	1.5	26
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	Wearable System for EKG Monitoring - Evaluation of Night-Time Performance. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2012, , 119-126.	0.3	1

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73	All Titanium Microelectrode Array for Field Potential Measurements from Neurons and Cardiomyocytesâ€"A Feasibility Study. Micromachines, 2011, 2, 394-409.	2.9	7
74	Readout methods for an inductively coupled resonance sensor used in pressure garment application. Sensors and Actuators A: Physical, 2011, 172, 109-116.	4.1	31
75	A Wearable, Wireless Gaze Tracker with Integrated Selection Command Source for Humanâ€Computer Interaction. IEEE Transactions on Information Technology in Biomedicine, 2011, 15, 795-801.	3.2	36
76	Gazing and Frowning to Computers Can Be Enjoyable. , 2011, , .		4
77	A maskless exposure device for rapid photolithographic prototyping of sensor and microstructure layouts. Procedia Engineering, 2010, 5, 331-334.	1.2	10
78	Capacitive facial movement detection for humanâ€"computer interaction to click by frowning and lifting eyebrows. Medical and Biological Engineering and Computing, 2010, 48, 39-47.	2.8	32
79	Wireless interrogation techniques for sensors utilizing inductively coupled resonance circuits. Procedia Engineering, 2010, 5, 216-219.	1.2	18
80	A capillary pH electrode for evaluating long term culturing of neural cell populations. Procedia Engineering, 2010, 5, 544-547.	1.2	1
81	PVDF and EMFi sensor materials â€" A comparative study. Procedia Engineering, 2010, 5, 862-865.	1.2	26
82	Simple inductively coupled resonance sensor for ECG and heart rate monitoring. Procedia Engineering, 2010, 5, 1438-1441.	1.2	2
83	Totally passive wireless biopotential measurement sensor by utilizing inductively coupled resonance circuits. Sensors and Actuators A: Physical, 2010, 157, 313-321.	4.1	48
84	EMFi material as wearable heart rate sensor for night time recordings. , 2010, , .		3
85	Low cost miniaturization of an implantable prototype. Circuit World, 2009, 35, 34-40.	0.9	4
86	Development of a piezoelectric polymer film sensor for plantar normal and shear stress measurements. Sensors and Actuators A: Physical, 2009, 154, 57-64.	4.1	66
87	Utilization of wireless sensor network for health monitoring in home environment. , 2009, , .		14
88	Development of a Lower Extremity Rehabilitation Aid Utilizing an Insole-Integrated Load Sensor Matrix and a Sole-Embedded Measurement Node. , 2009, , .		4
89	Film-type transducer materials PVDF and EMFi in the measurement of heart and respiration rates. , 2008, 2008, 530-3.		22
90	Embedded capacitive sensor system for hip surgery rehabilitation: Online measurements and long-term stability. , 2008, 2008, 935-8.		7

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91	System for ECG and heart rate monitoring during group training. , 2008, 2008, 4832-5.		8
92	Capacitive Insole Sensor for Hip Surgery Rehabilitation. , 2008, , .		4
93	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
94	A resource optimized physical movement monitoring scheme for environmental and on-body sensor networks. , 2007, , .		5
95	Backside Detection of Photoresist Development Endpoint Using Surface Plasmon Resonance. , 2007, , .		0
96	Measurement of heart sounds with EMFi transducer. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1683-6.	0.5	22
97	Wireless and inductively powered implant for measuring electrocardiogram. Medical and Biological Engineering and Computing, 2007, 45, 1163-1174.	2.8	36
98	Miniature Wireless Measurement Node for ECG Signal Transmission in Home Area Network. , 2006, 2006, 2049-52.		9
99	Modeling and Simulation of Magnetic Nanoparticle Sensor. , 2005, 2005, 1256-9.		7
100	Wireless Head Cap for EOG and Facial EMG Measurements. , 2005, 2005, 5865-8.		26
101	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
102	Piezo- and pyroelectricity of a polymer-foam space-charge electret. Journal of Applied Physics, 2001, 89, 4503-4511.	2.5	129
103	Electromechanical modeling and properties of the electret film EMFI. IEEE Transactions on Dielectrics and Electrical Insulation, 2001, 8, 629-636.	2.9	83
104	ElectroMechanical Film (EMFi) â€” a new multipurpose electret material. Sensors and Actuators A: Physical, 2000, 84, 95-102.	4.1	255
105	Monitoring of biofilm growth with thickness-shear mode quartz resonators in different flow and nutrition conditions. Sensors and Actuators B: Chemical, 2000, 71, 47-54.	7.8	19
106	Modelling the electromechanical film (EMFi). Journal of Electrostatics, 2000, 48, 193-204.	1.9	102
107	Large and broadband piezoelectricity in smart polymer-foam space-charge electrets. Applied Physics Letters, 2000, 77, 3827-3829.	3.3	162
108	Determination of the actuator sensitivity of electromechanical polypropylene films by atomic force microscopy. Journal of Applied Physics, 2000, 88, 4789.	2.5	30

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109	Design of novel molecular wires for realizing long-distance electron transfer. Bioelectrochemistry, 1997, 42, 25-33.	1.0	23
110	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
111	<title>Fiber optic liquid crystal displays</title>. , 1993, , .		0
112	Biosensors based on surface plasmons excited in non-noble metals. Biosensors and Bioelectronics, 1991, 6, 439-444.	10.1	34
113	Improvement of the properties of an eddy current magnetic shield with active compensation. Journal of Physics E: Scientific Instruments, 1987, 20, 151-164.	0.7	29
114	Corrected Unipositional Lead System for Vector Magnetocardiography. IEEE Transactions on Biomedical Engineering, 1987, BME-34, 81-90.	4.2	5
115	Comparative study of the normal vector magnetocardiogram and vector electrocardiogram. Journal of Electrocardiology, 1986, 19, 275-290.	0.9	16
116	Optimization of a squid vector gradiometer. Cryogenics, 1985, 25, 291-303.	1.7	3
117	Multiplexed SQUID vectormagnetometer for biomagnetic research. Journal of Physics E: Scientific Instruments, 1984, 17, 504-512.	0.7	9
118	Accurate digital synthesiser for simulating vectorcardiogram. Medical and Biological Engineering and Computing, 1981, 19, 250-254.	2.8	0
119	Noise reduction using a matching input transformer (magnetic field measurement system). Journal of Physics E: Scientific Instruments, 1981, 14, 939-942.	0.7	8
120	Properties of a thick-walled conducting enclosure in low-frequency magnetic shielding. Journal of Physics E: Scientific Instruments, 1980, 13, 569-570.	0.7	16
121	Implantable Measurement System for Dairy-Cattle Monitoring with Long Recording Time. Advances in Science and Technology, 0, , .	0.2	2