

Remco John Wiegerink

List of Publications by Year in descending order

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91
papers

1,960
citations

394421

19
h-index

302126

39
g-index

92
all docs

92
docs citations

92
times ranked

1255
citing authors

#	ARTICLE	IF	CITATIONS
1	Generalized translinear circuit principle. IEEE Journal of Solid-State Circuits, 1991, 26, 1098-1102.	5.4	201
2	MEMS based hair flow-sensors as model systems for acoustic perception studies. Nanotechnology, 2006, 17, S84-S89.	2.6	138
3	Artificial sensory hairs based on the flow sensitive receptor hairs of crickets. Journal of Micromechanics and Microengineering, 2005, 15, S132-S138.	2.6	128
4	BSM 7: RIE lag in high aspect ratio trench etching of silicon. Microelectronic Engineering, 1997, 35, 45-50.	2.4	125
5	A capacitive RF power sensor based on MEMS technology. Journal of Micromechanics and Microengineering, 2006, 16, 1099-1107.	2.6	102
6	Analysis and Synthesis of MOS Translinear Circuits. , 1993, , .		91
7	CMOS low-voltage operational amplifiers with constant-gm rail-to-rail input stage. Analog Integrated Circuits and Signal Processing, 1994, 5, 135-146.	1.4	87
8	Miniaturized thermal flow sensor with planar-integrated sensor structures on semicircular surface channels. Sensors and Actuators A: Physical, 2008, 143, 1-6.	4.1	73
9	Micromachined structures for thermal measurements of fluid and flow parameters. Journal of Micromechanics and Microengineering, 2001, 11, 311-318.	2.6	62
10	Modeling, design, fabrication and characterization of a micro Coriolis mass flow sensor. Journal of Micromechanics and Microengineering, 2010, 20, 125001.	2.6	62
11	Radiative ballistic phonon transport in silicon-nitride membranes at low temperatures. Applied Physics Letters, 2005, 86, 251903.	3.3	56
12	Dipole-source localization using biomimetic flow-sensor arrays positioned as lateral-line system. Sensors and Actuators A: Physical, 2010, 162, 355-360.	4.1	53
13	A versatile surface channel concept for microfluidic applications. Journal of Micromechanics and Microengineering, 2007, 17, 1971-1977.	2.6	51
14	Imaging dipole flow sources using an artificial lateral-line system made of biomimetic hair flow sensors. Journal of the Royal Society Interface, 2013, 10, 20130162.	3.4	46
15	Rail-to-rail constant-g m input stage and class AB output stage for low-voltage CMOS op amps. Analog Integrated Circuits and Signal Processing, 1994, 6, 121-133.	1.4	34
16	3D force sensor for biomechanical applications. Sensors and Actuators A: Physical, 2012, 182, 28-33.	4.1	31
17	A MEMS-based gravity gradiometer for future planetary missions. Cryogenics, 2009, 49, 665-668.	1.7	28
18	Compact Mass Flow Meter Based on a Micro Coriolis Flow Sensor. Micromachines, 2013, 4, 22-33.	2.9	28

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19	Differential capacitive sensing circuit for a multi-electrode capacitive force sensor. <i>Sensors and Actuators A: Physical</i> , 2015, 234, 168-179.	4.1	28
20	Cricket Inspired Flow-Sensor Arrays. , 2007, , .		25
21	2D-finite-element simulations for long-range capacitive position sensor. <i>Journal of Micromechanics and Microengineering</i> , 2003, 13, S183-S189.	2.6	21
22	Offset cancelling circuit. <i>IEEE Journal of Solid-State Circuits</i> , 1989, 24, 651-658.	5.4	18
23	A versatile technology platform for microfluidic handling systems, partÂ: fabrication and functionalization. <i>Microfluidics and Nanofluidics</i> , 2017, 21, 1.	2.2	18
24	A micromachined capacitive incremental position sensor: part 1. Analysis and simulations. <i>Journal of Micromechanics and Microengineering</i> , 2006, 16, S116-S124.	2.6	17
25	Biomimetic micromechanical adaptive flow-sensor arrays. , 2007, , .		17
26	A micromachined capacitive incremental position sensor: part 2. Experimental assessment. <i>Journal of Micromechanics and Microengineering</i> , 2006, 16, S125-S134.	2.6	16
27	A complete three-dimensional sound intensity sensor integrated on a single chip. <i>Journal of Micromechanics and Microengineering</i> , 2008, 18, 115004.	2.6	16
28	Integrated Pressure Sensing Using Capacitive Coriolis Mass Flow Sensors. <i>Journal of Microelectromechanical Systems</i> , 2017, 26, 653-661.	2.5	15
29	An HTS quasi-one junction SQUID-based periodic threshold comparator for a 4-bit superconductive flash A/D converter. <i>IEEE Transactions on Applied Superconductivity</i> , 1995, 5, 3452-3458.	1.7	13
30	Quasi-monolithic silicon load cell for loads up to 1000 kg with insensitivity to non-homogeneous load distributions. <i>Sensors and Actuators A: Physical</i> , 2000, 80, 189-196.	4.1	13
31	Development of an array of transition edge sensors for application in X-ray astronomy. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2004, 520, 443-445.	1.6	13
32	Analysis of a three-dimensional particle velocity sensor for design optimization. <i>Journal of Micromechanics and Microengineering</i> , 2007, 17, S137-S146.	2.6	13
33	Integrated Thermal and Microcoriolis Flow Sensing System with a Dynamic Flow Range of More Than Five Decades. <i>Micromachines</i> , 2012, 3, 194-203.	2.9	13
34	A 2D Particle Velocity Sensor With Minimal Flow Disturbance. <i>IEEE Sensors Journal</i> , 2016, 16, 8706-8714.	4.7	13
35	Parametric excitation of a micro Coriolis mass flow sensor. <i>Applied Physics Letters</i> , 2012, 101, 223511.	3.3	12
36	Thermal and Coriolis type micro flow sensors based on surface channel technology. <i>Procedia Chemistry</i> , 2009, 1, 1455-1458.	0.7	11

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37	First results of PRECISE“Development of a MEMS-based monopropellant micro chemical propulsion system. Acta Astronautica, 2014, 93, 77-83.	3.2	11
38	Multi Parameter Flow Meter for On-Line Measurement of Gas Mixture Composition. Micromachines, 2015, 6, 452-461.	2.9	11
39	SU“8“micro coriolis mass flow sensor. Sensors and Actuators B: Chemical, 2017, 241, 744-749.	7.8	11
40	Disposable DNA Amplification Chips with Integrated Low-Cost Heaters €. Micromachines, 2020, 11, 238.	2.9	11
41	Optimization of a micro Coriolis mass flow sensor using Lorentz force actuation. Sensors and Actuators A: Physical, 2012, 186, 48-53.	4.1	10
42	Design Considerations for a Micromachined Proportional Control Valve. Micromachines, 2012, 3, 396-412.	2.9	10
43	Experimental analysis of thermomechanical noise in micro Coriolis mass flow sensors. Sensors and Actuators A: Physical, 2018, 271, 212-216.	4.1	10
44	¼-Coriolis Mass Flow Sensor with Resistive Readout. Micromachines, 2020, 11, 184.	2.9	10
45	Thermal Flow-Sensor Drift Reduction by Thermopile Voltage Cancellation via Power Feedback Control. Journal of Microelectromechanical Systems, 2014, 23, 908-917.	2.5	9
46	Towards nanogram per second Coriolis mass flow sensing. , 2016, , .		9
47	A versatile technology platform for microfluidic handling systems, part II: channel design and technology. Microfluidics and Nanofluidics, 2017, 21, 1.	2.2	9
48	Three-axial force sensor with capacitive read-out using a differential relaxation oscillator. , 2013, , .		8
49	Three-axis force-torque sensor with fully differential capacitive readout. , 2016, , .		8
50	Computer aided analysis and design of MOS translinear circuits operating in strong inversion. Analog Integrated Circuits and Signal Processing, 1996, 9, 181-187.	1.4	7
51	Low-cost piezoresistive silicon load cell independent of force distribution. Journal of Micromechanics and Microengineering, 2000, 10, 200-203.	2.6	7
52	Biomimetic Flow-Sensor Arrays Based on the Filiform Hairs on the Cerci of Crickets. , 2007, , .		7
53	A 2D acoustic particle velocity sensor with perfectly orthogonal sensitivity directions. Sensors and Actuators A: Physical, 2016, 246, 28-34.	4.1	7
54	Improved capacitive detection method for Coriolis mass flow sensors enabling range/sensitivity tuning. Microelectronic Engineering, 2016, 159, 1-5.	2.4	7

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55	On Frequency-Based Interface Circuits for Capacitive MEMS Accelerometers. <i>Micromachines</i> , 2018, 9, 488.	2.9	7
56	Development of arrays of transition edge sensors for application in X-ray astronomy. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2003, 513, 143-146.	1.6	6
57	A piezoelectric micro control valve with integrated capacitive sensing for ambulant blood pressure waveform monitoring. <i>Journal of Micromechanics and Microengineering</i> , 2014, 24, 125020.	2.6	6
58	Parametric amplification in a micro Coriolis mass flow sensor. <i>Journal of Applied Physics</i> , 2014, 115, 194503.	2.5	6
59	Miniature proportional control valve with top-mounted piezo bimorph actuator with millisecond response time. <i>Journal of Micromechanics and Microengineering</i> , 2015, 25, 105008.	2.6	6
60	Design, Fabrication, and Characterization of a Micro Coriolis Mass Flow Sensor Driven by PZT Thin Film Actuators. <i>Journal of Microelectromechanical Systems</i> , 2021, 30, 885-896.	2.5	6
61	Low creep and hysteresis load cell based on a force-to-fluid pressure transformation. <i>Sensors and Actuators A: Physical</i> , 1999, 78, 74-80.	4.1	5
62	Analysis of the performance of a particle velocity sensor between two cylindrical obstructions. <i>Journal of the Acoustical Society of America</i> , 2007, 121, 2711-2722.	1.1	5
63	Free Suspended Thin-Walled Nickel Electroplated Tubes for Microfluidic Density and Mass Flow Sensors. <i>Journal of Microelectromechanical Systems</i> , 2022, 31, 408-414.	2.5	5
64	Dipole source localisation using bio-mimetic flow-sensor arrays. <i>Procedia Chemistry</i> , 2009, 1, 891-894.	0.7	4
65	PRECISE - Development of a MEMS-based monopropellant micro Chemical Propulsion System. , 2012, , .		4
66	Nano-slit electrospray emitters fabricated by a micro- to nanofluidic via technology. <i>Microfluidics and Nanofluidics</i> , 2012, 13, 29-35.	2.2	4
67	Proportional Control Valves Integrated in Silicon Nitride Surface Channel Technology. <i>Journal of Microelectromechanical Systems</i> , 2015, 24, 1759-1767.	2.5	4
68	Theoretical and experimental research on the in-plane comb-shaped capacitor for MEMS coriolis mass flow sensor. <i>Microsystem Technologies</i> , 2016, 22, 747-755.	2.0	4
69	Magnetic field strength improvement for Lorentz actuation of a $\hat{1}/4$ -Coriolis mass flow sensor. <i>Microelectronic Engineering</i> , 2020, 224, 111236.	2.4	4
70	Towards a Casimir Force Measurement between Micromachined Parallel Plate Structures. <i>Challenges</i> , 2012, 3, 261-277.	1.7	3
71	A novel two dimensional particle velocity sensor. <i>Proceedings of Meetings on Acoustics</i> , 2013, , .	0.3	3
72	Single-chip mass flow controller with integrated coriolis flow sensor and proportional control valve. , 2016, , .		3

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73	Heavily-Doped Bulk Silicon Sidewall Electrodes Embedded between Free-Hanging Microfluidic Channels by Modified Surface Channel Technology. <i>Micromachines</i> , 2020, 11, 561.	2.9	3
74	$\frac{1}{4}$ -Coriolis Mass Flow Sensor With Differential Capacitive Readout. <i>IEEE Sensors Journal</i> , 2021, 21, 5886-5894.	4.7	3
75	Variable-gamma circuit for colour television based on the MOS voltage-translinear principle. <i>Analog Integrated Circuits and Signal Processing</i> , 1996, 9, 189-195.	1.4	2
76	A cryogenic imaging x-ray spectrometer for XEUS readout by frequency-division SQUID multiplexers. , 2004, , .		2
77	Artificial lateral-line system for imaging dipole sources using beamforming techniques. <i>Procedia Engineering</i> , 2011, 25, 779-782.	1.2	2
78	Parametric amplification in a micro Coriolis mass flow sensor: Reduction of power dissipation without loss of sensitivity. , 2013, , .		2
79	PRECISE - preliminary results of the MEMS-based $\hat{\mu}$ CPS. , 2013, , .		2
80	5.7 A MEMS Coriolis Mass Flow Sensor with 300 $\frac{1}{4}$ g/h/ $\hat{\alpha}$ Hz Resolution and $\hat{\Delta}$ \pm 0.8mg/h Zero Stability. , 2021, , .		2
81	Some Design Aspects of a Two-Stage Rail-to-Rail CMOS Op Amp. <i>Analog Integrated Circuits and Signal Processing</i> , 1999, 21, 143-152.	1.4	1
82	Fabrication of thick silicon nitride blocks embedded in low-resistivity silicon substrates for radio frequency applications. <i>Journal of Micromechanics and Microengineering</i> , 2006, 16, 862-868.	2.6	1
83	Optimization of a micro Coriolis mass flow sensor. <i>Procedia Engineering</i> , 2011, 25, 783-786.	1.2	1
84	Fully Integrated Micro Coriolis Mass Flow Sensor Operating at Atmospheric Pressure. <i>TM Technisches Messen</i> , 2012, 79, 4-9.	0.7	1
85	Inline relative permittivity sensing using silicon electrodes realized in surface channel technology. , 2018, , .		1
86	A Flow-Through Microfluidic Relative Permittivity Sensor. <i>Micromachines</i> , 2020, 11, 325.	2.9	1
87	Thin-Walled Cylindrical Nickel Electroplated Tubes for Application in Microfluidic Density and Mass Flow Sensors. , 2021, , .		1
88	High Power Si Sidewall Heaters for Fluidic Applications Fabricated by Trench-Assisted Surface Channel Technology. , 2019, , .		0
89	High Capacity Silicon Load Cells. , 2001, , 71-76.		0
90	Air Damping Analysis of a Micro-Coriolis Mass Flow Sensor. <i>Sensors</i> , 2022, 22, 673.	3.8	0

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91	Micro Coriolis Mass Flow Sensor with Piezoelectric Transducers for Both Actuation and Readout. , 2022, , .		0