GiosuÃ¨ Caliano

List of Publications by Year
in descending order

91 papers	1,756 citations	394286 19 h-index	330025 37 g-index
94 all docs	94 docs citations	94 times ranked	1045 citing authors

#	ARTICLE	IF	CITATIONS
1	PICUS: A Pocket-Sized System for Simple and Fast Non-Destructive Evaluation of the Detachments in Ancient Artifacts. Applied Sciences (Switzerland), 2021, 11, 3382.	1.3	3
2	An innovative method for in situ monitoring of the detachments in architectural coverings of ancient structures. Journal of Cultural Heritage, 2020, 42, 139-146.	1.5	5
3	A 120+ 120- Element Crisscross CMUT Probe's with Real-Time Switchable Electronic and Fresnel Focusing Capabilities. , 2018, , .		2
4	An Ultrasonic Flextensional Array for Acoustic Emission Techniques on Concrete Structures. , 2018, , .		0
5	A 256-Element Spiral CMUT Array with Integrated Analog Front End and Transmit Beamforming Circuits. , 2018, , .		5
6	Depth-of-field enhancement in Filtered-Delay Multiply and Sum beamformed images using Synthetic Aperture Focusing. Ultrasonics, 2017, 75, 216-225.	2.1	39
7	A Comparative Analysis of CMUT Receiving Architectures for the Design Optimization of Integrated Transceiver Front Ends. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2017, 64, 826-838.	1.7	33
8	Quantitative comparison of PZT and CMUT probes for photoacoustic imaging: Experimental validation. Photoacoustics, 2017, 8, 48-58.	4.4	46
9	Biasing of Capacitive Micromachined Ultrasonic Transducers. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2017, 64, 402-413.	1.7	4
10	Acoustic reflectivity minimization in Capacitive Micromachined Ultrasonic Transducers (CMUTs). Ultrasonics, 2017, 73, 130-139.	2.1	15
11	Optimization of the efficiency and reliability of reverse-fabricated CMUT arrays. , 2017, , .		1
12	Accurate evaluation of the electro-mechanical and parasitic parameters of CMUTs through electrical impedance characterization. , 2017, , .		0
13	Optimization of the efficiency and reliability of reverse-fabricated CMUT arrays. , 2017, , .		2
14	A 3D packaging technology for acoustically optimized integration of 2D CMUT arrays and front end circuits. , 2017, , .		2
15	A 3D packaging technology for acoustically optimized integration of 2D CMUT arrays and front end circuits. , 2017, , .		1
16	Accurate evaluation of the electro-mechanical and parasitic parameters of CMUTs through electrical impedance characterization. , 2017, , .		1
17	A Low Frequency Broadband Flextensional Ultrasonic Transducer Array. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 128-138.	1.7	12
18	Ultrasound plane-wave imaging with delay multiply and sum beamforming and coherent compounding. , 2016, 2016, 3223-3226.		34

#	Article	IF	Citations
19	Nonlinear ultrasound imaging experiments using a CMUT probe. , 2016, , .		3
20	Advancements on Silicon Ultrasound Probes (CMUT) for Medical Imaging Applications. Lecture Notes in Electrical Engineering, 2016, , 51-57.	0.3	0
21	A resonant sensor for liquid density measurement based on a piezoelectric bimorph. , 2015, , .		1
22	Design and performance of an active acoustic back cover based on piezoelectric elements. , 2015, , .		0
23	A resonant sensor for liquid density measurement based on a piezoelectric bimorph. , 2015, , .		4
24	Second-harmonic reduction in CMUTs using unipolar pulsers. , 2015, , .		11
25	Reverberation Reduction in Capacitive Micromachined Ultrasonic Transducers (CMUTs) by Front-face Reflectivity Minimization. Physics Procedia, 2015, 70, 941-944.	1.2	6
26	Ultrasound Synthetic Aperture Focusing with the Delay Multiply and sum beamforming algorithm. , 2015, 2015, 137-40.		9
27	PECVD low stress silicon nitride analysis and optimization for the fabrication of CMUT devices. Journal of Micromechanics and Microengineering, 2015, 25, 015012.	1.5	40
28	ACUPAD: A track-pad device based on a piezoelectric bimorph. Sensors and Actuators A: Physical, 2015, 222, 130-139.	2.0	7
29	The Delay Multiply and Sum Beamforming Algorithm in Ultrasound B-Mode Medical Imaging. IEEE Transactions on Medical Imaging, 2015, 34, 940-949.	5.4	352
30	Improved array beam steering by compensation of inter-element cross-talk. , 2015, , .		2
31	A CMUT transceiver front-end with 100-V TX driver and 1-mW low-noise capacitive feedback RX amplifier in BCD-SOI technology. , 2014, , .		34
32	A volumetric CMUT-based ultrasound imaging system simulator with integrated reception and μ-beamforming electronics models. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 792-804.	1.7	44
33	An active acoustic back cover based on piezoelectric elements. , 2014, , .		1
34	An ultra-low-power fully integrated ultrasound imaging CMUT transceiver featuring a high-voltage unipolar pulser and a low-noise charge amplifier. , 2014, , .		9
35	Improved lateral resolution and contrast in ultrasound imaging using a sidelobe masking technique. , 2014, , .		5
36	A low frequency broadband flexural mode ultrasonic transducer for immersion applications. , 2014, , .		3

#	Article	IF	Citations
37	A volumetric CMUT-based ultrasound imaging system simulator with integrated reception and Î¼-beamforming electronics models. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 792-804.	1.7	13
38	An ultrasound technique for 3D palmprint extraction. Sensors and Actuators A: Physical, 2014, 212, 18-24.	2.0	26
39	MEMS-based Transducers (CMUT) For Medical Ultrasound Imaging. , 2014, , 445-464.		3
40	A vibrating stylus as two-dimensional PC input device. , 2013, , .		0
41	3D locating system for Augmented Reality glasses using coded ultrasound. , 2013, , .		1
42	Phase shift micro-beamforming of CMUT arrays using the spring-softening effect. , 2013, , .		1
43	An enhanced ultrasound technique for 3D palmprint recognition. , 2013, , .		23
44	Fluid film force control in lubricated journal bearings by means of a travelling wave generated with a piezoelectric actuators' system. , 2012, , .		0
45	An ultrasound system simulation tool for advanced front-end electronics design. , 2012, , .		2
46	3D Ultrasound palm vein pattern for biometric recognition. , 2012, , .		27
47	An automatic compact Schlieren imaging system for ultrasound transducer testing. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2012, 59, 2102-10.	1.7	12
48	A CMUT probe for medical ultrasonography: from microfabrication to system integration. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2012, 59, 1127-1138.	1.7	116
49	Performance optimization of a high frequency CMUT probe for medical imaging. , 2011, , .		23
50	A high frequency cMUT probe for ultrasound imaging of fingerprints. Sensors and Actuators A: Physical, 2011, 172, 561-569.	2.0	51
51	Capacitive micro-fabricated ultrasonic transducers for biometric applications. Microelectronic Engineering, 2011, 88, 2278-2280.	1.1	29
52	A track-pad device based on a piezoelectric bimorph. , 2011, , .		3
53	cMUT sensor for applications as a wide-band acoustic receiver in the MHz range. , 2010, , .		10
54	Design and fabrication of a cMUT probe for ultrasound imaging of fingerprints. , 2010, , .		22

#	Article	IF	Citations
55	3D Ultrasonic imaging of the human hand for biometric purposes. , 2010, , .		3
56	Experimental evaluation of the moving linear array technique applied to livescan biometrics. , 2009, , .		4
57	Element shape design of 2-D CMUT arrays for reducing grating lobes. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2008, 55, 308-318.	1.7	18
58	Curvilinear capacitive micromachined ultrasonic transducer (CMUT) array fabricated using a reverse process. , 2008, , .		9
59	Micromachined Ultrasonic Transducers. , 2008, , 453-478.		23
60	P2B-4 Crisscross 2D cMUT Array: Beamforming Strategy and Synthetic 3D Imaging Results. Proceedings IEEE Ultrasonics Symposium, 2007, , .	0.0	24
61	Building CMUTs for imaging applications from top to bottom. Microelectronic Engineering, 2007, 84, 1312-1315.	1.1	8
62	Flexible acoustic fiber ultrasound motor modeling using impedance and transmission matrices. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2006, 53, 1381-1386.	1.7	1
63	Capacitive micromachined ultrasonic transducer (CMUT) arrays for medical imaging. Microelectronics Journal, 2006, 37, 770-777.	1.1	92
64	Capacitive micromachined ultrasonic transducer with an open-cells structure. Sensors and Actuators A: Physical, 2005, 121, 382-387.	2.0	4
65	Fast scanning probe for ophthalmic echography using an ultrasound motor. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2005, 52, 2039-2046.	1.7	8
66	Design, fabrication and characterization of a capacitive micromachined ultrasonic probe for medical imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2005, 52, 2259-2269.	1.7	57
67	Acoustic coupling in capacitive microfabricated ultrasonic transducers: modeling and experiments. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2005, 52, 2220-2234.	1.7	59
68	Langevin flexural piezoelectric motor based on stator precessional motion. Sensors and Actuators A: Physical, 2004, 113, 189-197.	2.0	6
69	The effects of membrane metallization in capacitive microfabricated ultrasonic transducers. Journal of the Acoustical Society of America, 2004, 115, 651-657.	0.5	12
70	Resolution Enhancement of Experimental Echographic Images Using Luminance Extrapolation. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2004, 51, 364-367.	1.7	0
71	Improvements towards a reliable fabrication process for cMUT. Microelectronic Engineering, 2003, 67-68, 602-608.	1.1	12
72	A power transducer system for the ultrasonic lubrication of the continuous steel casting. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2003, 50, 1501-1508.	1.7	9

#	Article	IF	Citations
73	Vibration maps of capacitive micromachined ultrasonic transducers by laser interferometry. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2002, 49, 289-292.	1.7	23
74	An accurate model for capacitive micromachined ultrasonic transducers. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2002, 49, 159-168.	1.7	91
75	A New Technique for the Design of Acoustic Matching Layers for Piezocomposite Transducers. , 2002, , 505-515.		0
76	Micromachined capacitive ultrasonic transducers fabricated using silicon on insulator wafers. Microelectronic Engineering, 2002, 61-62, 1025-1029.	1.1	17
77	Fabrication of capacitive micromechanical ultrasonic transducers by low-temperature process. Sensors and Actuators A: Physical, 2002, 99, 85-91.	2.0	24
78	PSpice modeling of capacitive microfabricated ultrasonic transducers. Ultrasonics, 2002, 40, 449-455.	2.1	8
79	Fabrication of capacitive ultrasonic transducers by a low temperature and fully surface-micromachined process. Precision Engineering, 2002, 26, 347-354.	1.8	15
80	<title>Development of silicon ultrasonic transducer using micromachining</title>. , 2000, 4176, 244.		2
81	A silicon microfabricated electrostatic transducer: 1 MHz transmission in air and in water. Microelectronic Engineering, 2000, 53, 573-576.	1.1	14
82	Flexible piezoelectric motor based on an acoustic fiber. Applied Physics Letters, 2000, 77, 1905.	1.5	9
83	A new approach for the design of ultrasono-therapy transducers. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 1997, 44, 77-84.	1.7	23
84	A piezoelectric bimorph static pressure sensor. Sensors and Actuators A: Physical, 1995, 46, 176-178.	2.0	34
85	An acoustic fiber based piezoelectric motor. , 0, , .		0
86	An energetic definition of the electromechanical coupling coefficient for CMUTs. , 0, , .		1
87	A low-noise, wideband electronic system for pulse-echo ultrasound imaging with CMUT arrays. , 0, , .		4
88	A method for the measurement of the k factor in lossy piezoelectric materials: fem and experimental results. , 0, , .		0
89	Capacitive micromachined ultrasonic transducer (cMUT) made by a novel "reverse fabrication process". , 0, , .		17
90	Calibrated tomographic schlieren system for characterization of medical probes. , 0, , .		1

#	Article	IF	Citations
91	Enhanced echographic images obtained improving the membrane structural layer of the cMUT probe. , 0, , .		19