

Riviste internazionali

- [IJ1] G. Caliano, N. Lamberti, A. Iula, M. Pappalardo: "A Piezoelectric Bimorph Static Pressure Sensor"; Sensors and Actuators, A. Physical vol. 46, No. 1-3, pp. 176-178, 1995.
- [IJ2] N. Lamberti, G. Caliano, A. Iula, M. Pappalardo: "A New Approach for the Design of Ultrasonic Therapy Transducers"; IEEE Trans. on Ultrasonics, Ferroelectrics and Frequency Control, Vol. 44, No. 1, Jan. 1997, pp. 77-84
- [IJ3] G. Caliano, V. Foglietti, E. Cianci, M. Pappalardo: "A Silicon Microfabricated Ultrasonic Transducer: 1 MHz Transmission in Air and in Water"; Microelectronic Engineering 53 (2000), pp. 573-576, Elsevier Science
- [IJ4] R. Carotenuto, A. Iula, G. Caliano, N. Lamberti: "Flexible piezoelectric motor based on an acoustic fiber"; Applied Physics Letters - September 2000 – Vol. 77, Issue 12, pp. 1905-1907
- [IJ5] A. Caronti, A. Iula, G. Caliano, M. Pappalardo: "An accurate model for capacitive micromachined ultrasonic transducers"; IEEE Trans. on Ultrasonics, Ferroelectrics and Frequency Control, vol.49 (2) 2002, pp. 159-168
- [IJ6] A. Caronti, H. Majjad, S. Ballandras, G. Caliano, R. Carotenuto, A. Iula, V. Foglietti and M. Pappalardo: "Vibration Maps of Capacitive Micromachined Ultrasonic Transducers by Laser Interferometry"; IEEE Trans. On Ultrasonics, Ferroelectrics and Frequency Control, vol. 49 (3) 2002, pp. 289-292
- [IJ7] D. Memmi, V. Foglietti, E. Cianci, G. Caliano, M. Pappalardo: "Fabrication of capacitive micromechanical ultrasonic transducers by low temperature process"; Sensors and Actuators A: Physical, Volume: 99, Issue: 1-2, April 30, 2002, pp. 85-91
- [IJ8] G. Caliano, A. Caronti, M. Baruzzi, A. Rubini, A. Iula, R. Carotenuto, M. Pappalardo: "P Spice modeling of capacitive microfabricated ultrasonic transducers"; Ultrasonics, Vol. 40, Issue 1-8, pp. 449-455, Elsevier Science
- [IJ9] E. Cianci, V. Foglietti, D. Memmi, G. Caliano, A. Caronti, M. Pappalardo: "Fabrication of capacitive ultrasonic transducers by a low-temperature and fully surface-micromachined process", Precision Engineering, Volume: 26, Issue: 4, October, 2002, pp. 347-354
- [IJ10] E. Cianci, V. Foglietti, G. Caliano, M. Pappalardo: "Micromachined capacitive ultrasonic transducers fabricated using silicon on insulator wafers", Microelectronic Engineering, Volume: 61-62, July, 2002, pp. 1025-1029
- [IJ11] N. Lamberti, A. Iula, R. Carotenuto, G. Caliano, M. Pappalardo: "The electromechanical coupling factor for longitudinal and transverse propagation modes"; Revista de Acustica, Vol. XXXIII, num. 3-4 (2002) ISSN: 0210-3680
- [IJ12] R. Carotenuto, G. Caliano, A. Caronti, and M. Pappalardo, "Resolution enhancement of experimental echographic images using luminance extrapolation", IEEE Trans. on Ultrasonics, Ferroelectrics and Frequency Control, vol. 51 (3) 2004, pp. 364-367

- [IJ13] E. Cianci, L. Visigalli, V. Foglietti, G. Caliano, M. Pappalardo, "Improvements towards a reliable fabrication process for cMUT", *Microelectronic Engineering* 67-68 (2003) pp. 602-608
- [IJ14] A. Caronti, R. Carotenuto, G. Caliano, M. Pappalardo, "The effects of membrane metallization in capacitive microfabricated ultrasonic transducers," *J. Acoust. Soc. Am.* 115 (2) Feb. 2004, pp.651-657
- [IJ15] A. Iula, G. Caliano, A. Caronti, M. Pappalardo: "A Power Transducer System for the Ultrasonic Lubrication of the Continuous Steel Casting"; *IEEE Trans. on Ultrasonics, Ferroelectrics and Frequency Control*, vol. 50 (11), 2003, pp. 1501-1508
- [IJ16] E. Cianci, A. Minotti, V. Foglietti, G. Caliano, M. Pappalardo: "One-dimensional capacitive micromachined ultrasonic transducer arrays for echographic probes", *Microelectronic Engineering* 73-74 (2004) pp. 502-507
- [IJ17] R. Carotenuto, G. Caliano, A. Iula, M. Pappalardo, "Langevin Flexural Piezoelectric Motor Based on Stator Precessional Motion" *Sensor & Actuators*, vol. 113, no. 2, pp. 189-197, 2004.
- [IJ18] G. Caliano, R. Carotenuto, E. Cianci, V. Foglietti, A. Caronti, A. Iula, M. Pappalardo: "Design, fabrication and characterization of a capacitive micromachined ultrasonic probe for medical imaging", *IEEE Trans. On Ultrasonic, Ferroelectrics and Frequency Control*, vol. 52 (12), pag. 2259-2269, 2005
- [IJ19] G. Caliano, A. Savoia, A. Caronti, V. Foglietti, E. Cianci, and M. Pappalardo, "Capacitive micromachined ultrasonic transducer with an open-cells structure" *Sensors&Actuators A: Physical*, Volume 121, Issue 2, 30 June 2005, Pages 382-387
- [IJ20] R. Carotenuto, G. Caliano, A. Caronti, A. Savoia, and M. Pappalardo: "Fast Scanning Probe for Ophthalmic Echography Using an Ultrasound Motor" *IEEE Trans. On Ultrasonic, Ferroelectrics and Frequency Control*, vol. 52 (11), pag. 2039-2046, 2005
- [IJ21] A. Caronti, A. Savoia, G. Caliano, and M. Pappalardo: "Acoustic Coupling in Capacitive Microfabricated Ultrasonic Transducers: Modeling and Experiments" *IEEE Trans. On Ultrasonic, Ferroelectrics and Frequency Control*, vol. 52 (12), pag. 2220-2234, 2005
- [IJ22] A. Caronti, G. Caliano, R. Carotenuto, A. Savoia, M. Pappalardo, E. Cianci and V. Foglietti: "Capacitive micromachined ultrasonic transducer (CMUT) arrays for medical imaging" *Microelectronics Journal*, Vol. 37, Issue 8, August, 2006, pp. 770-777
- [IJ23] R. Carotenuto, G. Caliano, A. Caronti, A. Savoia, M. Pappalardo: "Flexible acoustic fiber ultrasound motor modeling using impedance and transmission matrices" *IEEE Trans. On Ultrasonic, Ferroelectrics and Frequency Control*, Vol. 53 (7), pag: 1381-1386, 2006
- [IJ24] A. Coppa, E. Cianci, V. Foglietti, G. Caliano, M. Pappalardo: "Building CMUTs for imaging applications from top to bottom" *Microelectronic Engineering* 84 (2007) 1312-1315
- [IJ25] Caliano G; Savoia A; Caronti A; Longo C; Gatta P; Pappalardo M: "Echographic Images Improvements with a CMUT Probe" *Revista de Acustica*, ISSN: 0210-3680, vol. 38, num. 3-4, (2007) Art. Num: PACS: 43.38.Gy
- [IJ26] V. Bavaro, G. Caliano, M. Pappalardo: "Element shape design of 2-D CMUT arrays for reducing grating lobes" *IEEE Trans. On Ultrasonic, Ferroelectrics and Frequency Control*, Vol. 55 (2), pag. 308-318, 2008

- [IJ27] A. Iula, A. Savoia, G. Caliano, “Capacitive Microfabricated Ultrasonic Transducers for Biometric Applications”; *Microelectronic Engineering*, Vol. 88, Issue 8, 2011, pp. 2278-2280
- [IJ28] N. Lamberti, A. Savoia, G. Caliano, A. Iula, “A High Frequency cMUT probe for Ultrasound Imaging of Fingerprints”; *Sensors&Actuators A* 172-2, December 2011; pp. 561-569
- [IJ29] A.S. Savoia, G. Caliano, M. Pappalardo, “A CMUT Probe for Medical Ultrasonography: from Microfabrication to System Integration”; *IEEE Trans. On Ultrasonic, Ferroelectrics and Frequency Control*, Vol. 59, No. 6, June 2012, pp. 1127-1138
- [IJ30] G. Caliano, A.S. Savoia, A. Iula, “An Automatic Compact Schlieren Imaging System for Ultrasound Transducers Testing”; *IEEE Trans. On Ultrasonic, Ferroelectrics and Frequency Control*, Vol. 59, No. 9, September 2012, pp. 2102-2110
- [IJ31] A. Iula, A. S. Savoia, G. Caliano, “An ultrasound technique for 3D palmprint extraction”; *Sensors&Actuators A* 212, June 2014; pp. 18-24
- [IJ32] G. Matrone, A.S. Savoia, M. Terenzi, G. Caliano, F. Quaglia, G. Magenes, “A Volumetric CMUT-Based Ultrasound Imaging System Simulator with Integrated Reception and μ -Beamforming Electronics Models”; *IEEE Trans. On Ultrasonic, Ferroelectrics and Frequency Control*, Vol. 61, No. 5, May 2014, pp. 792-804
- [IJ33] N. Lamberti, G. Caliano, A. S. Savoia, “ACUPAD: a Track-pad Device Based on a Piezoelectric Bimorph”; *Sensors and Actuators A: Physical*, Volume 222, 1 February 2015, Pages 130-139, ISSN 0924-4247, <http://dx.doi.org/10.1016/j.sna.2014.10.031>.
- [IJ34] G. Matrone, A.S. Savoia, G. Caliano, G. Magenes, “The Delay Multiply and Sum Beamforming Algorithm in Ultrasound B-Mode Medical Imaging”; *IEEE TRANSACTIONS ON MEDICAL IMAGING*, Volume: 34 Issue: 4 Pages: 940-949, DOI: 10.1109/TMI.2014.2371235 Published: APR 2015
- [IJ35] A. Bagolini, A. S. Savoia, A. Picciotto, M. Boscardin, P. Bellutti, N. Lamberti, and G. Caliano, “PECVD Low Stress Silicon Nitride Analysis and Optimization for the Fabrication of CMUT Devices” *J. Micromech. Microeng.* 25 (2015) 015012 (12pp), doi:10.1088/0960-1317/25/1/015012
- [IJ36] A. S. Savoia, M. La Mura, B. Mauti, N. Lamberti, G. Caliano, “Reverberation Reduction in Capacitive Micromachined Ultrasonic Transducers (CMUTs) by Front-face Reflectivity Minimization”, *Physics Procedia*, Vol. 70, 2015, Pages 941-944.
- [IJ37] A.S. Savoia, B. L. Mauti, G. Caliano, “A low frequency broadband flexensional ultrasonic transducer array”, *IEEE Trans. On Ultrasonic, Ferroelectrics and Frequency Control*, Vol. 63, No. 1, January 2016, Pages 128-138
- [IJ38] M. La Mura, N. Lamberti, B. L. Mauti, G. Caliano, A. S. Savoia, “Acoustic Reflectivity Minimization in Capacitive Micromachined Ultrasonic Transducers (CMUTs)”, *Ultrasonics*, Volume 73, January 2017, Pages 130–139
- [IJ39] G. Caliano, G. Matrone, A.S. Savoia, “Biasing of Capacitive Micromachined Ultrasonic Transducers”, *IEEE Trans. On Ultrasonic, Ferroelectrics and Frequency Control*, Vol. 64 , No. 2, February 2017, Pages 402-413, doi: 10.1109/TUFFC.2016.2623221

- [IJ40] G. Matrone, A. S. Savoia, G. Caliano, G. Magenes, “Depth-of-field enhancement in Filtered-Delay Multiply and Sum beamformed images using Synthetic Aperture Focusing”, *Ultrasonics*, Vol. 75, March 2017, Pages 216-225, doi: 10.1016/j.ultras.2016.11.022
- [IJ41] M. Sautto, A.S. Savoia, F. Quaglia, G. Caliano, A. Mazzanti, “A Comparative Analysis of CMUT Receiving Architectures for Design Optimization of Integrated Transceiver Front-Ends”, *IEEE Trans. On Ultrasonic, Ferroelectrics and Frequency Control*, Vol. 64 , No. 5, May 2017, Pages 826-838, DOI: 10.1109/TUFFC.2017.2668769
- [IJ42] M. Vallet, F. Varray, J. Boutet, J. Dinten, G. Caliano, A. S. Savoia, D. Vray, “Quantitative comparison of PZT and CMUT probes for photoacoustic imaging: Experimental validation”, *Photoacoustics*, Vol. 8, December 2017, Pages 48-58, DOI: 10.1016/j.pacs.2017.09.001
- [IJ43] F. Mariani, A. S. Savoia, G. Caliano, “An innovative method for in situ monitoring of the detachments in architectural coverings of ancient structures”, *Journal of Cultural Heritage*, vol. 42, pp. 139-146, March- April 2020, DOI: 10.1016/j.culher.2019.07.013
- [IJ44] G. Caliano, F. Mariani, P. Calicchia, “PICUS: A Pocket-Sized System for Simple and Fast Non-Destructive Evaluation of the Detachments in Ancient Artifacts”, *Applied Sciences*, vol. 11, num. 8, DOI: 10.3390/app11083382

Capitoli di libri:

- [B1] Iula, N Lamberti, G. Caliano, M. Pappalardo: "A New Three-Dimensional Model for Circular Piezoelectric Transducers" *Acoustical Imaging*, vol XXI, ed. J.P. Jones, Plenum Press, New York, pp. 139-144. ISBN: 978-0-306-45009-9, 1995
- [B2] N. Lamberti, F. Montero de Espinosa, G. Caliano, R. Carotenuto: “A New Technique for the Design of Acoustic Matching Layers for Piezocomposite Transducers”; in *Theoretical and Computational Acoustics 2001*, Ed. by Er-Chang Shang, Qihu Li & T F Gao, World Scientific USA, ISBN: 978-981-277-736-2, 2002
- [B3] M. Pappalardo, G. Caliano, V. Foglietti, A. Caronti, E. Cianci: “A new approach to ultrasound generation: the capacitive micromachined transducers” in *New Acoustics – selected topics*, Eds. C. Ranz-Guerra, J.A. Gallego-Juarez, pp.87-103, ISBN: 84-00-08111-0, Madrid, Spain, 2002
- [B4] E. Cianci, V. Foglietti, A. Minotti, A. Caronti, G. Caliano, and M. Pappalardo, “Fabrication techniques in micromachined capacitive ultrasonic transducers and their applications,” in C. T. Leondes (Ed.), *MEMS / NEMS Handbook*, Vol. 2, Springer, pp. 19-48, ISBN: 978-0-387-24520-1, 2006.
- [B5] M. Pappalardo, G. Caliano, A. Savoia, and A. Caronti, “Micromachined ultrasonic transducers,” in *Piezoelectric and Acoustic Materials for Transducer Applications*, Eds. A. Safari, E. K. Akdogan, pp. 453-478, ISBN: 978-0-387-76538-9, 2009.
- [B6] A.S. Savoia and G. Caliano, “MEMS-based transducers (CMUT) for medical ultrasound imaging” in *Frontiers of Medical Imaging*, edited by C.H. Chen, publisher: World Scientific Publishing, Singapore; pp. 445-464, ISBN: 978-9-814-61109-1, 2014

- [B7] Caliano G, Savoia A S, “Advancements on Silicon Ultrasound Probes (CMUT) for Medical Imaging Applications”. In: (a cura di De Gloria A), Applications in Electronics Pervading Industry, Environment and Society. LECTURE NOTES IN ELECTRICAL ENGINEERING, Volume 351, 2016, Pages 51-57
- [B8] A.S. Savoia, G. Caliano, “MEMS-Based Transducers (CMUT) and Integrated Electronics for Medical Ultrasound Imaging”, in: Andò B., Baldini F., Di Natale C., Marrazza G., Siciliano P. (eds) Sensors. CNS 2016. Lecture Notes in Electrical Engineering, vol 431. Springer, Cham. DOI: 10.1007/978-3-319-55077-0_53; ISBN: 978-3-319-55077-0
- [B9] A. S. Savoia, B. Mauti, G. Caliano, “Integration of Two-Dimensional MEMS Ultrasonic Transducer Arrays with Front-End Electronics for Medical Ultrasound Imaging.” Lecture Notes in Electrical Engineering vol. 629, pp.177-182. ISBN:978-3-030-37557-7. DOI:10.1007/978-3-030-37558-4_26

Conferenze internazionali

- [IC1] Iula, N. Lamberti, G. Caliano, M. Pappalardo: "A Matrix Model of the Thin Piezoceramic Ring"; 1994 IEEE International Ultrasonics Symposium Proc., vol 2, pp. 921-924.
- [IC2] N. Lamberti, P. Gori, A. Iula, G. Caliano, R. Carotenuto, M. Pappalardo: "Radiation Pattern Distorsion caused by Interelement Coupling in Linear Array"; atti del 1999 IEEE International Ultrasonics Symposium; Lake Tahoe (USA), Ottobre 1999, pp. 1071
- [IC3] G. Caliano, F. Galanello, V. Foglietti, E. Cianci, A. Caronti, A. Iula: "Development of silicon ultrasonic transducer using micromachining"; Proc. of SPIE 2000, 4176, 244 (2000), Symposium on Micromachining and Microfabrication, Santa Clara (USA)
- [IC4] G. Caliano, V. Foglietti, F. Galanello, A. Caronti, N. Lamberti, R. Carotenuto, M. Pappalardo: "Micromachined ultrasonics transducers using silicon nitride membrane fabricated in PECVD technology"; 2000 IEEE International Ultrasonics Symposium; Puerto Rico (USA), Ottobre 2000, pp 963
- [IC5] N. Lamberti, G. Caliano, P. Gori, A. Iula, R. Carotenuto, M. Pappalardo: "Radiation Pattern Distortion Caused by the Interelement Coupling via the Backing and the Matching Layers in Linear Array Transducers"; 2000 IEEE International Ultrasonics Symposium; Puerto Rico (USA), Ottobre 2000, pp. 1173
- [IC6] V. Foglietti, G. Caliano, E. Cianci, F. Galanello, M. Pappalardo: "Fabrication of micromechanical capacitive ultrasonic transducers by surface micromachining"; Proc. of MICRO.tec 2000, VDE World Micro-technologies Congress 1, p. 79, Sept. 2000, Hannover (Germany)
- [IC7] A. Caronti, G. Caliano, A. Iula, and M. Pappalardo: "Electrical impedance mismatch in capacitive micromachined ultrasonic transducers"; 2000 IEEE International Ultrasonics Symposium; Puerto Rico (USA), Ottobre 2000.
- [IC8] V. Foglietti, E. Cianci, D. Memmi, G. Caliano, M. Pappalardo: "Fabrication of capacitive ultrasonic transducers by a low-temperature and fully surface-micromachined process", Proc. 2th International Conf. of Euspen 2001, 1, pag 46
- [IC9] N. Lamberti, A. Caronti, G. Caliano, A. Iula, R. Carotenuto, M. Pappalardo: "An energetic definition of the electromechanical coupling coefficient for CMUTs"; 2001 IEEE International Ultrasonic Symposium; Atlanta (USA), Ottobre 2001, pp. 895
- [IC10] R. Carotenuto, A. Iula, G. Caliano, N. Lamberti, M. Pappalardo: "An Acoustic Fiber based Piezoelectric Motor; 2001 IEEE International Ultrasonic Symposium; Atlanta (USA), Ottobre 2001, pp. 501
- [IC11] M. Pappalardo, A. Caronti, G. Caliano, R. Carotenuto, V. Foglietti: "A new alternative to piezoelectric transducer for NDE and medical applications: the capacitive ultrasonic micromachined transducer (cMUT)"; invited paper in 8th ECNDT (European Conference on NDT), Barcellona, Spain, June 2002
- [IC12] E. Cianci, L. Visigalli, V. Foglietti, G. Caliano, M. Pappalardo: "Improvements towards a reliable fabrication process for cMUT"; MNE 2002, Micro- and Nanoengineering International Conference, Lugano (Switzerland), September 2002

- [IC13] G. Caliano, R. Carotenuto, A. Caronti, M. Pappalardo, V. Foglietti, E. Cianci, L. Visigalli, I. Persi: "cMUT Echographic Probes: Design and Fabrication Process"; 2002 IEEE International Ultrasonic Symposium; Munich (Germany), October 2002, pp. 1067
- [IC14] A. Caronti, R. Carotenuto, G. Caliano, M. Pappalardo, E. Cianci: "A Finite Element Study of Cross Coupling in 1-D Capacitive Micromachined Ultrasonic Transducer Arrays"; 2002 IEEE International Ultrasonic Symposium; Munich (Germany), October 2002, pp. 1059
- [IC15] A. Caronti, L. D'Ambrosio, L. Visigalli, G. Caliano, and M. Pappalardo, "Finite element models for cross coupling analysis in capacitive micromachined ultrasonic transducers," presented at 2nd International Workshop on Micromachined Ultrasonic Transducers, Besançon (France), June 27-28, 2002.
- [IC16] L. Visigalli, V. Foglietti, E. Cianci, A. Caronti, G. Caliano, and M. Pappalardo, "The technology of capacitive micromachined ultrasonic transducers with low parasitic capacitance," presented at 2nd International Workshop on Micromachined Ultrasonic Transducers, Besançon (France), June 27-28, 2002.
- [IC17] A. Caronti, D. Fiasca, G. Caliano, and M. Pappalardo, "An experimental study of cross-coupling and acoustic interactions in 1-D capacitive micromachined ultrasonic transducer arrays," 2003 U.S. Navy Workshop on Acoustic Transduction Materials and Devices, State College, Pennsylvania, May 06-08, 2003.
- [IC18] A. Caronti, R. Carotenuto, G. Caliano, and M. Pappalardo, "The electromechanical coupling factor and transformation factor of capacitive micromachined ultrasonic transducers," invited in 3rd International Workshop on Micromachined Ultrasonic Transducers, Lausanne (Switzerland), June 26-27, 2003.
- [IC19] A. Caronti, D. Fiasca, G. Caliano, E. Cianci, and M. Pappalardo, "Experimental study of acoustic coupling in capacitive micromachined ultrasonic transducer arrays by optical interferometry," 2003 IEEE Ultrasonics Symposium, Honolulu (Hawaii), Oct. 5-8, 2003, pp. 1960
- [IC20] M. Pappalardo, G. Caliano, A. Caronti, F. D'Alessio, C. Cucco, E. Cianci, V. Foglietti, "Capacitive Ultrasonic Transducers with a New Vibrating Structure" presented at 2003 IEEE Ultrasonics Symposium, Honolulu (Hawaii), Oct. 5-8, 2003, pp. 1955
- [IC21] G. Caliano, R. Carotenuto, E. Cianci, V. Foglietti, A. Caronti, and M. Pappalardo, "Echographic Images Generated by a Capacitive Micromachined Ultrasonic Probe" 2004 U.S. Navy Workshop on Acoustic Transduction Materials and Devices, State College, Pennsylvania, May 10-13, 2004.
- [IC22] G. Caliano, R. Carotenuto, E. Cianci, V. Foglietti, A. Caronti, and M. Pappalardo, "A cMUT Linear Array Used as Echographic Probe: Fabrication, Characterization, and Images" presented at 2004 IEEE Ultrasonics Symposium, Montreal (Canada), Aug. 24-27, 2004, pp. 395
- [IC23] A. Caronti, G. Caliano, A. Savoia, R. carotenuto, M. Pappalardo, "A Low-Noise, Wideband Electronic System for Pulse-Echo Ultrasound Imaging with CMUT Arrays" presented at 2004 IEEE Ultrasonics Symposium, Montreal (Canada), Aug. 24-27, 2004, pp. 2219
- [IC24] R. Carotenuto, G. Caliano, A. Caronti, A. Savoia, M. Pappalardo, "Very Fast Scanning Probe for Ophthalmic Echography Using an Ultrasound Motor" presented at 2004 IEEE Ultrasonics Symposium, Montreal (Canada), Aug. 24-27, 2004, pp. 2039-2046

- [IC25] A. Caronti, A. Savoia, G. Caliano, R. Carotenuto, C. Longo, P. Gatta, and M. Pappalardo, "FEM modeling of CMUT arrays for medical imaging and experimental validation" invited lecture in 7th Annual Ultrasonic Transducer Conference Marina Del Rey, CA, USA - March 16-18, 2005.
- [IC26] A. Savoia, A. Caronti, G. Caliano, M. Pappalardo, "Echographic images obtained with an open-cell capacitive micromachined ultrasonic transducer (mamMUT)" 2005 U.S. Navy Workshop on Acoustic Transduction Materials and Devices, State College, Pennsylvania, May 10-12, 2005.
- [IC27] N. Lamberti, G. Caliano, A. Iula, and M. Pappalardo, "A Method for the Measurement of the k Factor in Lossy Piezoelectric Materials: FEM and Experimental Results" 2005 IEEE Ultrasonics Symposium, Rotterdam (Holland), Sep. 19-21, 2005, pp. 357
- [IC28] G. Caliano, A. Caronti, A. Savoia, C. Longo, E. Cianci, V. Foglietti, and M. Pappalardo "Capacitive Micromachined Ultrasonic Transducer (cMUT) Made by a Novel "Reverse" Fabrication Process" 2005 IEEE Ultrasonics Symposium, Rotterdam (Holland), Sep. 19-21, 2005, pp. 479
- [IC29] A. Savoia, G. Caliano, R. Carotenuto, C. Longo, P. Gatta, A. Caronti, E. Cianci, V. Foglietti, and M. Pappalardo "Enhanced Echographic Images Obtained Improving the Structural Membrane Layer of the cMUT Probe" 2005 IEEE Ultrasonics Symposium, Rotterdam (Holland), Sep. 19-21, 2005, pp. 1960
- [IC30] J. Le Floc'h, P. Gatta, G. Caliano, R. Carotenuto, and M. Pappalardo "Calibrated Tomographic Schlieren System for Characterization of Medical Probes" 2005 IEEE Ultrasonics Symposium, Rotterdam (Holland), Sep. 19-21, 2005, pp. 661
- [IC31] A. Savoia, G. Caliano, A. Caronti, R. Carotenuto, P. Gatta, C. Longo, and M. Pappalardo "Multilayer cMUT Structure for Improved Sensitivity and Bandwidth" 2006 IEEE Ultrasonics Symposium, Vancouver (Canada), Oct. 3-6, 2006, pp. 1939
- [IC32] A. Caronti, C. Longo, A. Savoia, P. Gatta, G. Caliano, and M. Pappalardo "Analysis of Acoustic Interaction Effects and Crosstalk in cMUT Linear Arrays for Medical Imaging" 2006 IEEE Ultrasonics Symposium, Vancouver (Canada), Oct. 3-6, 2006, pp. 582
- [IC33] A. Savoia, V. Bavaro, G. Caliano, A. Caronti, R. Carotenuto, P. Gatta, C. Longo and M. Pappalardo "Crisscross 2D cMUT Array: Beamforming Strategy and Synthetic 3D Imaging Results" 2007 IEEE Ultrasonics Symposium, New York (USA), Oct. 28-31, 2007, pp. 1514
- [IC34] A. Caronti, A. Coppa, A. Savoia, C. Longo, P. Gatta, B. Mauti, A. Corbo, B. Calabrese, G. Bollino, A. Paz, G. Caliano, and M. Pappalardo, "Curvilinear capacitive micromachined ultrasonic transducer (CMUT) array fabricated using a reverse process," 2008 IEEE Ultrasonics Symposium, Pechino (Cina), 2008, pp. 2092
- [IC35] A. Caronti, G. Caliano, P. Gatta, C. Longo, A. Savoia, and M. Pappalardo, "A finite element tool for the analysis and the design of capacitive micromachined ultrasonic transducer (cMUT) arrays for medical imaging," Acoustics2008, Paris (France), invited talk; published on J. Acoust. Soc. Am., 123, 5, pp. 3375, 2008
- [IC36] A. Iula, M. De Santis, G. Caliano, M. Pappalardo, "Experimental evaluation of the moving linear array technique applied to livescan biometrics", 2009 IEEE Ultrasonics Symposium, Roma (Italy), 2009

- [IC37] G. Caliano, A. Savoia, C. Longo, A. Caronti, S. Rothmann, A. Iula, M. Pappalardo, "cMUT Sensor for Applications as a Wide-band Acoustic Receiver in the MHz Range", 2010 IEEE Ultrasonics Symposium, San Diego (USA), 2010, ISBN 978-1-4577-0380-5, pagg. 1869-1872
- [IC38] A. Iula, A. Savoia, C. Longo, A. Caronti, G. Caliano, M. Pappalardo, "3D Ultrasonic Imaging of the human hand for biometric purposes", 2010 IEEE Ultrasonics Symposium, San Diego (USA), 2010, ISBN 978-1-4577-0380-5, pagg. 37-40
- [IC39] A. Savoia, G. Caliano, A. Iula, C. Longo, A. Caronti, R. Carotenuto, M. Pappalardo, "Design and fabrication of a cMUT probe for ultrasound imaging of fingerprints," 2010 IEEE International Ultrasonics Symposium, San Diego, CA, 2010, pp. 1877-1880. doi: 10.1109/ULTSYM.2010.5935836
- [IC40] A. Iula, A. Savoia, G. Caliano, M. Pappalardo, "Capacitive Microfabricated Ultrasonic Transducers for Biometric Applications", MNE 2010 – 36th International Conference on Micro&Nano Engineering, Genoa (Italy), 19-22 September 2010
- [IC41] A. Iula, N. Lamberti, A. Savoia, G. Caliano " Fluid film force control in lubricated journal bearings by means of a travelling wave generated with a piezoelectric actuators' system", ICU 2011 International Congress on Ultrasonics, Gdansk (Poland), 5-8 September 2011, AIP Conf. Proc. 1433, 697 (2012); doi: 10.1063/1.3703278
- [IC42] A. Savoia, G. Caliano, B. Mauti, M. Pappalardo, "Performance Optimization of a High Frequency CMUT Probe for Medical Imaging", 2011 IEEE Ultrasonics Symposium, Orlando (USA), 2011; ISBN 978-1-4577-1251-7, pp. 600-603
- [IC43] G. Caliano, N. Lamberti, A. Savoia, A. Iula, "A Track-pad Device Based on a Piezoelectric Bimorph", 2011 IEEE Ultrasonics Symposium, Orlando (USA), 2011; ISBN 978-1-4577-1251-7, pp. 1676-1679
- [IC44] A. Savoia, G. Caliano, M. Pappalardo: "Ultrasound Probes Fabricated on Silicon for Medical Imaging"; NanotechItaly 2011 International Conference, 23-25 November, Venice, Italy; p. 349-350
- [IC45] P. Bellutti, M. Boscardin, A. Bagolini, A.S. Savoia, G. Caliano: "Capacitive Ultrasonic Transducers for medical applications: technological optimization at FBK"; NanotechItaly 2011 International Conference, 23-25 November, Venice, Italy; pp.305-306
- [IC46] G. Matrone, G. Magenes, A. Savoia, G. Caliano, M. Terenzi, D. Ronchi, F. Quaglia: "An Ultrasound System Simulation Tool for Advanced Front-End Electronics Design" In: Proceedings of 2012 IEEE International Ultrasonics Symposium. p. 627-639, Piscataway (NJ):IEEE, ISBN: 978-1-4673-4561-3, Dresden (Germany), 7-10 October 2012, doi: 10.1109/ULTSYM.2012.0156
- [IC47] A. Iula, A. Savoia, G. Caliano: "3D Ultrasound palm vein pattern for biometric recognition" In: Proceedings of 2012 IEEE International Ultrasonics Symposium. p. 1-4, Piscataway (NJ):IEEE, ISBN: 978-1-4673-4561-3, Dresden (Germany), 7-10 October 2012, doi: 10.1109/ULTSYM.2012.0611.
- [IC48] A. S. Savoia, G. Caliano, G. Matrone, G. Magenes, N. Lamberti,: "Phase shift micro-beamforming of CMUT arrays using the spring-softening effect" IEEE International Ultrasonics Symposium. p. 1424-1427, ISBN: 978-1-4673-5686-2, Prague (Czech Republic), 21-25 July 2013; doi: 10.1109/ULTSYM.2013.0361

- [IC49] R. Carotenuto, G. Caliano, N. Lamberti, A. S. Savoia, A. Iula: "A vibrating stylus as two-dimensional PC input device" IEEE International Ultrasonics Symposium. p. 461-464, ISBN: 978-1-4673-5686-2, Prague (Czech Republic), 21-25 July 2013; doi: 10.1109/ULTSYM.2013.0119
- [IC50] R. Carotenuto, G. Caliano, A. S. Savoia: "3D Locating system for Augmented Reality glasses using coded ultrasound" IEEE International Ultrasonics Symposium. p. 441-444, ISBN: 978-1-4673-5686-2, Prague (Czech Republic), 21-25 July 2013; doi: 10.1109/ULTSYM.2013.0114
- [IC51] A. Iula, G. E. Hine, A. Ramalli, F. Guidi, E. Boni, A. S. Savoia, G. Caliano: "An enhanced Ultrasound technique for 3D Palmprint Recognition" IEEE International Ultrasonics Symposium. p. 978-981, ISBN: 978-1-4673-5686-2, Prague (Czech Republic), 21-25 July 2013; doi: 10.1109/ULTSYM.2013.0251
- [IC52] Sautto, M. ; Leone, D. ; Savoia, A. ; Ghisu, D. ; Quaglia, F. ; Caliano, G. ; Mazzanti, A. "A CMUT transceiver front-end with 100-V TX driver and 1-mW low-noise capacitive feedback RX amplifier in BCD-SOI technology"; European Solid State Circuits Conference (ESSCIRC), ESSCIRC 2014 - 40th; DOI: 10.1109/ESSCIRC.2014.6942108; Venice (Italy), 2014
- [IC53] A. S. Savoia, G. Caliano, B. Mauti, N. Lamberti: "A Low Frequency Broadband Flexural Mode Ultrasonic Transducer for Immersion Applications", 2014 IEEE INTERNATIONAL ULTRASONICS SYMPOSIUM (IUS), Pages: 2591-2594, DOI: 10.1109/ULTSYM.2014.0647
- [IC54] A.S. Savoia, G. Caliano, M. Sautto, A. Mazzanti, D. Leoni, D. Ghisu, F. Quaglia: "An Ultra-Low-Power Fully Integrated Ultrasound Imaging CMUT Transceiver Featuring a High-Voltage Unipolar Pulser and a Low-Noise Charge Amplifier", 2014 IEEE INTERNATIONAL ULTRASONICS SYMPOSIUM (IUS), Pages: 2568-2571, DOI: 10.1109/ULTSYM.2014.0641
- [IC55] A.S. Savoia, G. Matrone, A. Ramalli, E. Boni, G. Caliano, G. Magenes, P. Tortoli: "Improved Lateral Resolution and Contrast in Ultrasound Imaging Using a Sidelobe Masking Technique", 2014 IEEE INTERNATIONAL ULTRASONICS SYMPOSIUM (IUS), Pages: 1682-1685, DOI: 10.1109/ULTSYM.2014.0417
- [IC56] N. Lamberti, G. Caliano, A. S. Savoia: "An Active Acoustic Back Cover Based on Piezoelectric Elements", 2014 IEEE INTERNATIONAL ULTRASONICS SYMPOSIUM (IUS), Pages: 2458-2461, DOI: 10.1109/ULTSYM.2014.0613
- [IC57] A.S. Savoia, G. Scaglione, G. Caliano, A. Mazzanti, M. Sautto, F. Quaglia: "Second-Harmonic Reduction in CMUTs Using Unipolar Pulsers", 2015 IEEE INTERNATIONAL ULTRASONICS SYMPOSIUM (IUS), Pages:1-4, DOI: 10.1109/ULTSYM.2015.0230
- [IC58] N. Lamberti, M. La Mura, G. Caliano, A.S. Savoia: "Design and Performance of an Active Acoustic Back Cover Based on Piezoelectric Elements", 2015 IEEE INTERNATIONAL ULTRASONICS SYMPOSIUM (IUS), Pages:1-4, DOI: 10.1109/ULTSYM.2015.0248
- [IC59] N. Lamberti, M. La Mura, V. Apuzzo, P. D'Uva, A. Casella, G. Caliano, A.S. Savoia: "A Resonant Sensor for Liquid Density Measurement Based on a Piezoelectric Bimorph", 2015 IEEE INTERNATIONAL ULTRASONICS SYMPOSIUM (IUS), Pages:1-4, DOI: 10.1109/ULTSYM.2015.0536
- [IC60] G. Matrone, A. S. Savoia, G. Caliano and G. Magenes, "Ultrasound Synthetic Aperture Focusing with the Delay Multiply and sum beamforming algorithm," 2015 37th Annual International

- Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Milan, 2015, pp. 137-140. doi: 10.1109/EMBC.2015.7318319
- [IC61] A. Ramalli, P. Tortoli, A.S. Savoia, G. Caliano, “Improved Array Beam Steering by Compensation of Inter-element Cross-talk”, 2015 IEEE INTERNATIONAL ULTRASONICS SYMPOSIUM (IUS), Pages:1-4, (DOI: 10.1109/ULTSYM.2015.0175)
- [IC62] N. Lamberti, M. La Mura, V. Apuzzo, A. Casella, P. D’Uva, G. Caliano, A.S. Savoia: “A Resonant Sensor for Liquid Density Measurement Based on a Piezoelectric Bimorph”, Advances in Sensors and Interfaces (IWASI), 2015 6th IEEE International Workshop on, Year: 2015, Pages: 293 - 296, DOI: 10.1109/IWASI.2015.7184935
- [IC63] G. Matrone, A. S. Savoia, G. Caliano and G. Magenes, "Ultrasound Synthetic Aperture Focusing with the Delay Multiply and sum beamforming algorithm," 2015 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Milan, 2015, pp. 137-140. doi: 10.1109/EMBC.2015.7318319
- [IC64] A. S. Savoia, E. Boni, A. Ramalli, G. Matrone, P. Tortoli, G. Caliano: “Nonlinear ultrasound imaging experiments using a CMUT probe”, 2016 IEEE INTERNATIONAL ULTRASONICS SYMPOSIUM (IUS), Pages:1-4, DOI: 10.1109/ULTSYM.2016.7728699
- [IC65] G. Matrone; A. S. Savoia; G. Caliano; G. Magenes: “Ultrasound plane-wave imaging with delay multiply and sum beamforming and coherent compounding”, 2016 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Pages: 3223 - 3226, DOI: 10.1109/EMBC.2016.7591415
- [IC66] A.S. Savoia, B. Mauti, G. Caliano: “Accurate Evaluation of the Electro-Mechanical and Parasitic Parameters of CMUTs through Electrical Impedance Characterization”. 2017 IEEE INTERNATIONAL ULTRASONICS SYMPOSIUM (IUS), Pages:1-4, DOI:
- [IC67] A.S. Savoia, B. Mauti, G. Caliano, L. Maiolo, A. Pecora, A. Minotti, G. Fortunato, A. Bagolini, P. Bellutti: “Optimization of the Efficiency and Reliability of Reverse-Fabricated CMUT Arrays”. 2017 IEEE INTERNATIONAL ULTRASONICS SYMPOSIUM (IUS), Pages:1-4, DOI:
- [IC68] A.S. Savoia, B. Mauti, G. Caliano, R. Bardelli, F. Toia, F. Quaglia: “A 3D Packaging Technology for Acoustically Optimized Integration of 2D CMUT Arrays and Front End Circuits”. 2017 IEEE INTERNATIONAL ULTRASONICS SYMPOSIUM (IUS), Pages:1-4, DOI:
- [IC69] A.S. Savoia, B. Mauti, L. Fanni, G. Caliano, E. Boni, M. Scaringella, P. Tortoli: “A 120+120-Element Crisscross CMUT Probe with Real-Time Switchable Electronic and Fresnel Focusing Capabilities”. 2018 IEEE International Ultrasonics Symposium (IUS), Kobe, 2018, pp. 1-4. doi: 10.1109/ULTSYM.2018.8580084
- [IC70] A.S. Savoia, B. Mauti, L. Fanni, A. Bagolini, E. Boni, A. Ramalli, F. Guanziroli, S. Passi, G. Matrone, R. Bardelli, P. Bellutti, F. Quaglia, G. Caliano, A. Mazzanti, P. Tortoli: “A 256-Element Spiral CMUT Array with Integrated Analog Front End and Transmit Beamforming Circuits”. 2018 IEEE International Ultrasonics Symposium (IUS), Kobe, 2018, pp. 206-212. doi: 10.1109/ULTSYM.2018.8579867

[IC71] M. La Mura, N. A. Lamberti, G. Caliano, A.S. Savoia: “An ultrasonic flextensional array for acoustic emission techniques on concrete structures”. 2018 IEEE International Ultrasonics Symposium (IUS), Kobe, 2018, pp. 1-4. doi: 10.1109/ULTSYM.2018.8580178

[IC72] G. Caliano: “A contact-less method for monitoring the detachments in the architectural coverings of ancient structures by using Ultraino”, 2020 IEEE International Ultrasonics Symposium (IUS), Las Vegas, NV, USA, 2020, pp. 1-4, doi: 10.1109/IUS46767.2020.9251712

Riviste nazionali

- [NJ1] G. Caliano: "I trasduttori ad ultrasuoni sfruttano i progressi della microfabbricazione su silicio"; *Elettronica Oggi*, n. 290, maggio 2000
- [NJ2] M. Pappalardo, G. Caliano, "Ecografia 3D in tempo reale"; *annuario CASPUR 2009*, pagg. 113-119
- [NJ3] G. Caliano: "Smart-Sensor connesso a Blynk"; *ElettronicaIn*, n. 252, pagg. 31-43, marzo 2021

Conferenze nazionali

- [NC1] G. Caliano, N. Lamberti, A. Iula, M. Pappalardo: "Un Metodo per la Misura del Fattore di Accoppiamento Elettromeccanico dei Materiali Piezoelettrici". *atti del XXII° Convegno AIA*; Lecce, aprile 1994, pag. 21-26.
- [NC2] Iula, N Lamberti, G. Caliano, M. Pappalardo: "Un Modello Matematico di Ceramiche Piezoelettriche Circolari", *atti del XXII° Convegno AIA*; Lecce, aprile 1994, pag. 51-56.
- [NC3] G. Caliano, N. Lamberti, A. Iula, M. Pappalardo: "Una Nuova Metodologia per l'Individuazione e la Decodifica del Codice a Barre in una Scena Bidimensionale"; *atti del 3° Convegno Nazionale 'Strumentazione e metodi di misura elettroottici'*; Pavia, Maggio 1994, pag. 403-407.
- [NC4] F. Galanello, G. Caliano, M. Pappalardo, E. Cianci, V. Foglietti, A. Notargiacomo: "Fabrication and characterization of micromechanical ultrasonic transducers"; *SILICON WORKSHOP Genova*, 2-4 Febbraio 2000, INFM.
- [NC5] F. Galanello, G. Caliano, M. Pappalardo, E. Cianci, V. Foglietti, A. Notargiacomo: "Fabrication and characterization of micromechanical ultrasonic transducers"; *Proc. 5th Conf. of Sensor and Microsystems AISEM 2000*, p. 376, World Scientific ed. (2000).
- [NC6] V. Foglietti, D. Memmi, E. Cianci, G. Caliano, M. Pappalardo: "Capacitive Ultrasonic Transducers Fabricated by a Low Temperature Surface-Micromachined Process"; to be published on *Proc. 6th Conf. of Sensor and Microsystems AISEM 2001*, World Scientific ed.
- [NC7] G. Caliano, A.S. Savoia, M. Pappalardo: "Pioneering activities of Roma Tre Aculab-group in the field of silicon micromachined sensors (cMUT) for application in high frequency ultrasound for medical imaging"; *43° Riunione Annuale del Gruppo Elettronica, GE2011, Trani 6-8 luglio 2011*, ISBN 978-88-95612-85-0, pagg. 53-54
- [NC8] G. Matrone, A.S. Savoia, G. Caliano and G. Magenes, "High-quality ultrasound B-mode imaging using the DMAS beamformer," in *Proc. GNB2014, June 25th-27th 2014, Pavia, Italy*
- [NC9] F. Mariani, A.S. Savoia, G. Caliano: "An Innovative Method for in Situ Monitoring of the Detachments in Architectural Coverings of Ancient Structures". *XX AISEM 2019, Napoli 11-13 Febbraio 2019*; to be published.
- [NC10] A. S. Savoia, B. Mauti, G. Caliano: "Integration of two dimensional Mems ultrasonic transducer arrays with front-end electronics for medical ultrasound imaging". *XX AISEM 2019, Napoli 11-13 Febbraio 2019*; to be published

Brevetti

[PT1]

SURFACE MICROMECHANICAL PROCESS FOR MANUFACTURING MICROMACHINED CAPACITIVE ULTRA-ACOUSTIC TRANSDUCERS AND RELEVANT MICROMACHINED CAPACITIVE ULTRA-ACOUSTIC TRANSDUCER

Publication number: US2008212407 (A1)

Publication date: 2008-09-04

Inventor(s): CALIANO GIOSUE [IT]; CARONTI ALESSANDRO [IT]; PAPPALARDO MASSIMO [IT]; CIANCI ELENA [IT]; FOGLIETTI VITTORIO [IT]; MINOTTI ANTONIO [IT]; NENCIONI ALESSANDRO [IT]

Applicant(s): CONSIGLIO NAZIONALE RICERCHE [IT]; ESAOTE SPA [IT]; CALIANO GIOSUE [IT]; SAVOIA ALESSANDRO STUART [IT]; GATTA PHILIPP [IT]; PAPPALARDO MASSIMO [IT]; LONGO CRISTINA [IT]; CARONTI ALESSANDRO [IT]

Classification: - international: B06B1/00; B81B3/00; B06B1/00; B81B3/00 - European: B06B1/02E

Application number: AT20060728466T 20060302

Priority number(s): IT2005RM00093 20050304; WO2006IT00126 20060302

[PT2]

BIDIMENSIONAL ULTRASONIC ARRAY FOR VOLUMETRIC IMAGING

Publication number: US2010137718 (A1)

Publication date: 2010-06-03

Inventor(s): PAPPALARDO MASSIMO [IT]; CALIANO GIOSUE [IT]; CARONTI ALESSANDRO [IT]; SAVOIA ALESSANDRO STUART [IT]; GATTA PHILIPP [IT]; LONGO CRISTINA [IT]; BAVARO VITO [IT]

Classification: - international: A61B8/14; A61B8/14 - European: B06B1/02E

Application number: US20070522734 20071123

Priority number(s): EP20070100503 20070112; WO2007EP62773 20071123

[PT3]

TRASDUTTORE ULTRACUSTICO CAPACITIVO MICROLAVORATO (CMUT) AVENTE ELEMENTI A SCHIERA (ARRAY) BIDIMENSIONALE (2-D).

Publication number: ITRM20070572 (A1)

Publication date: 2009-04-30

Inventor(s): BAVARO VITO; CALIANO GIOSUE; PAPPALARDO MASSIMO

Applicant(s): CALIANO GIOSUE; PAPPALARDO MASSIMO

Application number: IT2007RM00572 20071029

Priority number(s): IT2007RM00572 20071029

[PT4]

MULTI-LEVEL CAPACITIVE ULTRASONIC TRANSDUCER

Publication number: US2007258332 (A1)

Publication date: 2007-11-08

Inventor(s): STUART SAVOIA ALESSANDRO [IT]; CALIANO GIOSUE [IT]; CARONTI ALESSANDRO [IT]; LONGO CRISTINA [IT]; PAPPALARDO MASSIMO [IT] ± Applicant(s): ESAOTE SPA [IT]

Classification: - international: H04R19/00; H04R19/00 - European: H04R19/00

Application number: US20070743371 20070502

Priority number(s): IT2006RM00238 20060503

[PT5]

Microfabricated capacitive ultrasonic transducer for high frequency applications

Publication number: US2007059858 (A1)
Publication date: 2007-03-15
Inventor(s): CARONTI ALESSANDRO [IT]; CALIANO GIOSUE [IT]; SAVOIA ALESSANDRO S [IT]; GATTA PHILIPP [IT]; PAPPALARDO MASSIMO [IT]
Applicant(s): ESAOTE SPA
Classification: - international: H01L21/00; H01L21/00 - European: B06B1/02E
Application number: US20060520145 20060913
Priority number(s): EP20050425642 20050914

[PT6]

Interdigitated geometry transducer for optimizing the irradiated acoustic beam

Publication number: US2006007045 (A1)
Publication date: 2006-01-12
Inventor(s): FIASCA DANILO [IT]; CALIANO GIOSUE [IT]; CARONTI ALESSANDRO [IT]; FOGLIETTI VITTORIO [IT]; CIANCI ELENA [IT]; PAPPALARDO MASSIMO [IT]
Applicant(s): ESAOTE SPA [IT]
Classification: - international: H01Q1/26; H01Q1/22 - European: [G01S15/89D1F](#); [G01S7/52S4A](#)
Application number: US20050154577 20050617
Priority number(s): IT2004RM00300 20040618

[PT7]

Microfabricated capacitive ultrasonic transducer and related surface micromechanical process of fabrication

Publication number: US2005018536 (A1)
Publication date: 2005-01-27
Inventor(s): CALIANO GIOSUE [IT]; CARONTI ALESSANDRO [IT]; CAROTENUTO RICCARDO [IT]; PAPPALARDO MASSIMO [IT]
Applicant(s): CALIANO GIOSUE, ; CARONTI ALESSANDRO, ; CAROTENUTO RICCARDO, ; PAPPALARDO MASSIMO
Classification: - international: B06B1/02; B06B1/02; (IPC1-7): A61B8/02; A61B8/06; A61B8/12; C23F1/00; G03B42/06; H01L21/00 - European: B06B1/02E
Application number: US20040877128 20040625
Priority number(s): IT2003RM00318 20030625

[PT8]

Surface micromachining process for manufacturing electro-acoustic transducers, particularly ultrasonic transducers, obtained transducers and intermediate products

Publication number: US2004180466 (A1)
Publication date: 2004-09-16
Inventor(s): FOGLIETTI VITTORIO [IT]; CIANCI ELENA [IT]; MEMMI DANIELE [IT]; CALIANO GIOSUE [IT]; PAPPALARDO MASSIMO [IT]
Applicant(s): FOGLIETTI VITTORIO, ; CIANCI ELENA, ; MEMMI DANIELE, ; CALIANO GIOSUE, ; PAPPALARDO MASSIMO, ; UNIVERSITA' DEGLI STUDI-ROMA TRE
Classification: - international: H04R19/00; H04R19/00; (IPC1-7): H01L21/00 - European: H04R19/00
Application number: US20040476254 20040507
Priority number(s): IT2001RM00243 20010509; WO2002IT00308 20020509

[PT9]

PROCEDIMENTO PER LA FABBRICAZIONE DI TRASDUTTORI ELETTRO-ACUSTICI, IN PARTICOLARE TRASDUTTORI AD ULTRASUONI E PRODOTTO INTERMEDIO

Publication number: ITSV20010014 (A1)
Publication date: 2002-11-08

Inventor(s): FOGLIETTI VITTORIO; CIANCI ELENA; MEMMI DANIELE; CALIANO GIOSUE;
PAPPALARDO MASSIMO
Applicant(s): ESAOTE SPA [IT]; CNR CONSIGLIO NAZ DELLE RICER; UNI DEGLI STUDI ROMA
3
Application number: IT2001SV00014 20010508
Priority number(s): IT2001SV00014 20010508

[PT10]

System for two-dimensional reading and decoding of bar codes

Publication number: IT1272986 (B)

Publication date: 1997-07-01

Inventor(s): CALIANO GIOUSE; LAMBERTI NICOLA; PAPPALARDO MASSIMO

Applicant(s): IMAPO SRL

Classification: - international: G06K; (IPC1-7): G06K - European: Application number:
IT1994RM00309 19940518

Priority number(s): IT1994RM00309 19940518

[PT11]

Multi-Cell Transducer

Publication number: US2016/0013394 A1

Publication date: 14 Jan. 2016

Inventor(s): SAVOIA ALESSANDRO STUART; CALIANO GIOUSE; TAMMAM ERIC S.;
MELAMUD ALEXANDER

Applicant(s): Microtech Medical Technologies Ltd., Tel Aviv (IL)

Application number: 14/796063 20150710

[PT12]

**METODO E DISPOSITIVO PER DIAGNOSI DEI DISTACCHI DEI RIVESTIMENTI DI
STRUTTURE ARCHITETTONICHE IN SITU**

Publication number: 102018000009696

Publication date: 23 Oct. 2018

Inventor(s): MARIANI FRANCESCA; CALIANO GIOUSE; SAVOIA ALESSANDRO STUART;

Applicant(s): MARIANI FRANCESCA, Roma, Italy

Ai sensi dell'art.10 della legge 675/96 autorizzo il trattamento dei miei dati personali.

Roma, 9 Aprile 2021

Dott. Ing. Giosuè Caliano

