

Curriculum vitae et Studiorum

Fabio Antonacci

Personal Data

Name: Fabio Antonacci

Date and place of birth: July 26, 1979, Bari (Italy)

Work address: Dipartimento di Elettronica, Informazione e Bioingegneria, Politecnico di Milano, Piazza L. Da Vinci 32, I-20133 Milano, Italy

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Affiliations

01/2014 - now Assistant Professor (RTD-A) at the Politecnico di Milano

05/2008 – 01/2014 PostDoc research assistant at the Politecnico di Milano

03/2005 – 02/2008 PhD Student with the Doctoral School of the Politecnico di Milano, Dipartimento di Elettronica e Informazione

05/2005 – 07/2005 Visiting scholar at the Sensing laboratory of the Technical University of Berlin

05/2004 – 02/2005 Junior Researcher at the Politecnico di Milano, Dipartimento di Elettronica e Informazione

Education

Feb. 2008: PhD in Information Engineering, Politecnico di Milano, Dipartimento di Elettronica e Informazione. PhD thesis: "Separation of acoustic sources driven by geometric information of reverberant environment"

Apr. 2004: "Laurea" Degree in Telecommunication Engineering, Politecnico di Milano (summa cum laude). MSc thesis "Generalizzazione Del Metodo Del Beam Tracing Per La Simulazione Veloce E Accurata Della Propagazione Acustica In Ambienti Complessi"

Academic Collaborations

- January 2016 to present: assistance in the coordination of the research unit of Politecnico di Milano for the project "WHOLODANCE", funded by the EU.

- September 2013 to present: technical coordinator of the Musical Acoustics Lab at Politecnico di Milano
- January 2013 to present: collaboration with the University of California at Davis, for research activities concerning advanced wave field capturing solutions and the personalization of Head-Related Transfer Functions for binaural rendering.
- January 2009 – December 2011: technical co-coordinator and research activities in the EU-funded SCENIC project (Self-Configuring Environment-aware Intelligent Acoustic Systems). The project was graded as excellent by the panel of reviewers;
- January 2009 – 2013: collaboration with the Speech and Audio Processing group (SAP) at Imperial College; this collaboration led to the co-authoring of several conference papers and one journal paper;
- January 2009 – 2014: collaboration with the Multimedia Communications and Signal Processing Group at University of Erlangen-Nuremberg. This collaboration led to numerous publications on international conferences and one journal paper;
- May 2005 – July 2007: collaboration within the EU-funded VISNET project;
- May to July 2005: visiting PhD student at Technical University of Berlin (TUB), he collaborated in themes concerning the tracking of acoustic sources using particle filtering techniques.

Collaborations with non-academic partners

- September 2016 to January 2017: Coordinator of the project “Mitigazione rumore ambientale impianti O&G” funded da ENI - Ente Nazionale Idrocarburi
- May 2016 to January 2017: technical coordinator of a project with the Fraunhofer Institute in Erlangen. The project is covered by a Non-Disclosure Agreement;
- January 2016 to December 2016: technical coordination of the project “Distretti Culturali Urbani” funded by Distretti Culturali Urbani, fondazione Cariplo.
- April 2014 to June 2015: technical coordinator of the project “Sviluppo di tecniche di elaborazione spazio-temporale, con applicazione al beamshaping dinamico”, funded by B&C Speakers SpA
- September 2013 to June 2015: technical coordinator of the project “Distretto Culturale della Provincia di Cremona” funded by Fondazione Cariplo
- March 2013 to March 2014: technical coordinator of the project “Sviluppo di tecniche di elaborazione spazio-temporale per applicazioni di beamshaping acustico”, funded by B&C Speakers SpA.
- January 2009 to September 2009: Assistance in the coordination of the project “Sviluppo di tecniche di analisi audio per l’individuazione di parole in conversazioni telefoniche”, funded by Area SpA
- May 2008 to December 2008: Support in the coordination of the project “Sviluppo di tecniche di analisi audio-video per applicazioni di monitoraggio e annotazione di contenuti”, funded by Kee Square SRL (spin-off of Politecnico di Milano).

- January 2008 to December 2008: Support in the coordination of the project “Sviluppo di tecniche di analisi audio per l’individuazione del parlatore in conversazioni telefoniche”, funded by Area SpA

Scientific dissemination

He co-authored the following tutorials at international conferences:

- A. Sarti, F. Antonacci, L. Bianchi, “Rethinking Fourier Acoustics”, in 24th European Signal Processing Conference, Aug. 29- Sept. 02 2016, Budapest, Hungary
- A. Sarti, F. Antonacci, “Geometric Space-Time Audio Processing”, in 20th European Signal Processing Conference, Aug. 27-31, 2012, Bucharest, Romania.
- A. Sarti, F. Antonacci, “Wave Field Modeling - part 2: A Primer on Geometrical Acoustics”, in 12th International Conference on Digital Audio Effects (DAFx 2009), Sep. 1-4, 2009, Como, Italy.

Bibliometrics

Google Scholar (updated on Mar. 14, 2017)

Citations: 1002, from 2012: 796

h-index: 17, from 2012: 13

i-10 index: 28, from 2012: 22

Scopus (updated on Mar. 14, 2017)

Documents: 75

Citations: 604 total citations by 370 documents

h-index: 12

Application for the “Abilitazione Scientifica Nazionale” 2016

Prof. Antonacci applied for the “Abilitazione Scientifica Nazionale 2016” on Dec. 2, 2016 in the area 09/F2 (Telecommunications) for the Associate Professor (“Professore di Seconda Fascia”).

Scientific dissemination metrics:

Journal publications in the period 2011-2016: 17 (minimum 9)

Citations in the period 2006-2016: 526 (minimum 200)

h-index relative to publications in the period 2006-2016: 12 (minimum 8)

Research activities

Prof. Antonacci’s research interests cover a wide range of multimedia signal processing topics, with special emphasis on the modeling of acoustic propagation in enclosures; on space-time processing of signals acquired by microphone arrays; and on the rendering of signals using loudspeaker arrays. Even if different, all these research areas share the same theoretical

framework, based on the theory of geometrical acoustics. More specifically, Prof. Antonacci started with devising a modeling engine for an accurate simulation of the propagation of sound field in complex enclosures. This engine is based on a representation of the sound field in terms of superposition of acoustic beams, originated at the location of the source or of its images, obtained by mirroring the source against the walls of the enclosure. A relevant speedup of the computation time is possible using this approach. The generality of this framework enabled, on one side, the modeling of complex propagation phenomena such as diffusion and diffraction, and on the other side its use also in acoustic scene analysis (source and obstacles localization, estimation of the acoustic properties of enclosures) and in acoustic scene synthesis (rendering of acoustic scenes, attenuation of reverberations and virtual surround systems). Prof. Antonacci also works on the analysis of the acoustics and timbre of musical instruments, with particular regard to the problem of timbre, vibroacoustics, and acoustic analysis. These activities are accomplished in the Musical Acoustics Labo of Politecnico di Milano, hosted within the prestigious “Museo del Violino” in Cremona, Italy. Machine Learning techniques are used to perform the analysis in a synergistic fashion.

Service activities

Associate Editor for the journal “EURASIP Journal on Audio Speech and Music Processing since November 2016.

Peer reviewer for the following journals:

- IEEE Transactions on Audio Speech and Language Processing;
- IEEE Transactions on Signal Processing;
- IEEE Transactions on Aerospace and Electronic Systems;
- EURASIP Journal on Advances in Signal Processing.

Services for international societies and conferences:

- Elected Member of the technical committee “Audio and Acoustic Signal Processing” within the IEEE Signal Processing Society, and participation to the Publicity Subcommittee in the same technical committee;
- Founding Member of the EURASIP Special Area Team (SAT) on Acoustic, Speech and Music Signal Processing since September 2015;
- Publication Chair at the 12th Intl. Conference on Digital Audio Effects (DAFx’09);
- Member of the Technical Program Committee of IEEE International Conference on Acoustics Speech and Signal Processing (ICASSP);
- Member of the Technical Program Committee of IEEE International Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA);
- Member of the Technical Program Committee of EURASIP European Signal Processing Conference;
- Member of the Technical Program Committee of IEEE International Statistical Signal Processing Conference.

Academic activities

Prof Antonacci has been the **supervisor** of several (20+) MSc theses. He has been also the **technical coordinator** of the activities of four PhD students within their major or minor research theses (Major theses: Antonio Canclini, Dejan Markovic, Lucio Bianchi; minor thesis: Paolo Bestagini).

He is currently teaching the following courses (as part of his didactic workload):

- "Computer Music", Politecnico di Milano, Milano Leonardo Campus, academic year 2016/2017
- "Computer Music", Politecnico di Milano, Polo Territoriale di Como, academic years 2014/2015 and 2015/2016
- "Reti di Telecomunicazione", Politecnico di Milano, Polo Territoriale di Cremona, academic years 2013/2014, 2014/2015, 2015/2016, 2016/2017

He also taught as an Adjunct Professor ("*professore a contratto*") the following courses of the "V Facoltà di Ingegneria dell'Informazione" of the Politecnico di Milano:

- "Computer Music", academic years 2009/2010, 2010/2011, 2011/2012, 2012/2013;
- "Digital Audio Analysis and Processing", academic year 2006-2007;
- "Digital Sound Processing Project", academic year 2006/2007.

Prof. Antonacci also served as **Teaching Assistant** for the following courses of the "V Facoltà di Ingegneria dell'Informazione" of the Politecnico di Milano:

- Digital Sound Processing Project, academic years 2007/2008 and 2008/2009;
- Fundamentals of Audio/video Signal Processing , academic years 2006/2007, 2007/2008 and 2008/2009;
- Digital Audio Analysis and Processing academic year 2007/2008 and 2008/2009
- Tecniche avanzate per il trattamento dei segnali audio, academic years 2004/2005 up to 2008/2009;
- Fundamentals of acoustics, academic years 2005/2006, 2006/2007, 2007/2008, 2008/2009;
- Elaborazione dei segnali audio/video, academic year 2004/2005.

Publications

Journal papers

[Jr20] F. Setragno, M. Zanoni , F. Antonacci, A. Sarti, M. Malagodi, T. Rovetta, C. Invernizzi, "Feature-based analysis of the impact of ground coat and varnish on violin tone qualities", Acta Acustica united with Acustica, Volume 103, Issue 1, January-February 2017, Pages 80-93

[Jr19] M. Compagnoni, R. Notari, , A.A. Ruggiu, F. Antonacci, A. Sarti, "The Algebro-geometric Study of Range Maps", Journal of Nonlinear Science, pp. 1-59, January 2017

[Jr18] D. Marković, F. Antonacci, L. Bianchi, S. Tubaro and A. Sarti, "Extraction of Acoustic Sources Through the Processing of Sound Field Maps in the Ray Space," in IEEE/ACM Transactions on

Audio, Speech, and Language Processing, vol. 24, no. 12, pp. 2481-2494, Dec. 2016. doi: 10.1109/TASLP.2016.2615242

[Jr17] L. L. Bianchi, F. Antonacci, A. Sarti and S. Tubaro, "The Ray Space Transform: A New Framework for Wave Field Processing," in *IEEE Transactions on Signal Processing*, vol. 64, no. 21, pp. 5696-5706, Nov. 1, 2016. doi: 10.1109/TSP.2016.2591500

[Jr16] M. Compagnoni, A. Canclini, P. Bestagini, F. Antonacci, A. Sarti, S. Tubaro, "Source localization and denoising: a perspective from the TDOA space", *Multidimensional Systems and Signal Processing*, 2016, pp. 1-26, doi 10.1007/s11045-016-0400-9

[Jr15] L. Bianchi, F. Antonacci, A. Sarti, S. Tubaro, "Model-Based Acoustic Rendering based on Plane Wave Decomposition", *Applied Acoustics* 104 (2016) Elsevier , pp. 127-134, doi: 10.1016/j.apacoust.2015.10.010

[Jr14] D. Markovic, F. Antonacci, A. Sarti, S. Tubaro, "3D Beam Tracing based on Visibility Lookup for Interactive Acoustic Modeling," accepted for publication in *IEEE Transactions on Visualization and Computer Graphics* , doi: 10.1109/TVCG.2016.2515612

[Jr13] D. Markovic, F. Antonacci, A. Sarti, S. Tubaro, "Multiview Soundfield Imaging in the Projective Ray Space," *IEEE/ACM Transactions on Audio, Speech, and Language Processing* , vol.23, no.6, pp.1054,1067, June 2015 doi: 10.1109/TASLP.2015.2419076

[Jr12] A. Canclini, P. Bestagini, F. Antonacci, M. Compagnoni, A. Sarti, S. Tubaro, "A Robust and Low-Complexity Source Localization Algorithm for Asynchronous Distributed Microphone Networks," *IEEE/ACM Transactions on Audio, Speech, and Language Processing* , vol.23, no.10, pp.1563--1575, Oct. 2015 doi: 10.1109/TASLP.2015.2439040

[Jr11] A. CANCLINI, D. MARKOVIC, L. BIANCHI, F. ANTONACCI, A. SARTI, S. TUBARO, "A robust geometric approach to room compensation for sound field rendering", accepted for publication on *IEICE Transactions on Fundamentals of Signal Processing*

[Jr10] M. COMPAGNONI, R. NOTARI, F. ANTONACCI, A. SARTI, "A comprehensive analysis of the geometry of TDOA maps in localisation problems", *Inverse Problems*, IOP Science, volume 30, pages 1-49

[Jr9] D. MARKOVIC, K. KOWALCZYK, F. ANTONACCI, C. HOFMANN, A. SARTI, W. KELLERMANN, "Estimation of acoustic reflection coefficients from pseudospectrum matching", *IEEE/ACM Transactions on Audio Speech and Language Processing*, volume 22, issue 1

[Jr8] D. MARKOVIC, F. ANTONACCI, A. SARTI, S. TUBARO (2013), "Soundfield imaging in the ray space", to appear on *IEEE Transactions on Audio, Speech and Language Processing*, 2013, doi: 10.1109/TASL.2013.2274697.

[Jr7] P. BESTAGINI , M. COMPAGNONI, F. ANTONACCI, A. SARTI, S. TUBARO (2013), "TDOA-Based Acoustic Source Localization in the Space-Range Reference Frame", *Multidimensional Systems and Signal Processing*, Springer, March 2013, doi 10.1007/s11045-013-0233-8

[Jr6] A.CANCLINI, F.ANTONACCI, A.SARTI, S.TUBARO (2013), "Acoustic Source Localization with Distributed Asynchronous Microphone Networks", IEEE Transactions on Audio, Speech and Language Processing, volume 21, issue 2, pgs. 439-443, Feb. 2013

[Jr5] F. ANTONACCI, J. FILOS, M. R. P. THOMAS, E. A. P. HABETS, A. SARTI, P. A. NAYLOR and S. TUBARO (2012), "Inference of Room Geometry from Acoustic Impulse Responses," IEEE Transactions on Audio, Speech and Language Processing, volume 20, issue 10, pgs. 2683-2695, Dec. 2012

[Jr4] M.COMPAGNONI, P.BESTAGINI, F. ANTONACCI, A.SARTI, S.TUBARO (2012), "Localization of Acoustic Sources through the Fitting of Propagation Cones using Multiple Independent Arrays", IEEE Transactions on Audio, Speech and Language Processing, volume 20, issue 7, pgs. 1964-1975, Sep. 2012

[Jr3] L.AN, P.WANG, A. SARTI, F.ANTONACCI, J.SHI (2011), "Hyperbolic boiler tube leak location based on quaternary acoustic array", Elsevier J. of Applied Thermal Engineering, volume 31, issue 16, pgs. 3428-3436, June 2011

[Jr2] F.ANTONACCI, A.SARTI, S.TUBARO (2010), "Two-dimensional beam-tracing from Visibility Diagrams for Real-Time Acoustic Rendering", EURASIP Journal on Advances in Signal Processing, volume 2010, pgs. 1-18, Feb. 2010

[Jr1] F. ANTONACCI, SARTI A, TUBARO S (2008). "Fast Tracing of Acoustic Beams and Paths through Visibility Lookup", IEEE Transactions on Audio, Speech, and Language Processing, vol. 16, issue 4, pgs. 812-824, May 2008

Conference papers

[Co59] F. Borra, L. Bianchi, F. Antonacci, A. Sarti, S. Tubaro, "Extraction of acoustic sources for multiple arrays based on the Ray Space Transform", in proceedings of IEEE Workshop on Hands-Free Speech Communications with Microphone Arrays, HSCMA 2017, Mar. 1-3, 2017, San Francisco, CA, USA

[Co58] A. Canclini, M. Varini, F. Antonacci, A. Sarti, "Dictionary-Based Equivalent Source Method For Near-Field Acoustic Holography", 2017 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Mar. 5-9, 2017, New Orleans, LA, USA

[Co57] D. Marković, J. Popat, F. Antonacci, A. Sarti, T. K. Kumar, "An informed separation algorithm based on sound field mapping for speech recognition systems", IWAENC 2016, Sept. 13-16 2016, Xi'An, China

[Co56] F. Borra, L. Bianchi, F. Antonacci, A. Sarti, S. Tubaro, "A robust data-independent near-field beamformer for linear microphone arrays", IWAENC 2016, Sept. 13-16 2016, Xi'An, China

[Co 55] L. BONACINA, A. CANALINI, F. ANTONACCI, M. MARCON, A. SARTI AND S. TUBARO, "A low-cost solution to 3D pinna modeling for HRTF prediction," 2016 IEEE International Conference on

Acoustics, Speech and Signal Processing (ICASSP), Shanghai, 2016, pp. 301-305. doi: 10.1109/ICASSP.2016.7471685

[Co54] L. BIANCHI, V. B. ANASTASIO, D. MARKOVIĆ, F. ANTONACCI, A. SARTI AND S. TUBARO, "A linear operator for the computation of soundfield maps," *2016 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Shanghai, 2016, pp. 410-414. doi: 10.1109/ICASSP.2016.7471707

[Co 53] F. D'AMELIO, L. BIANCHI, F. ANTONACCI, A. SARTI, S. TUBARO, "A Plenacoustic Approach to acoustic signal extraction", *in proceedings of IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA), 2015*, NY, Oct. 2015, pages 1-5

[Co 52] L. BIANCHI, M. VERDI, F. ANTONACCI, A. SARTI, S. TUBARO, "High Resolution Imaging of acoustic reflections with Spherical Microphone Array", *in proceedings of IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA), 2015*, NY, Oct. 2015, pages 1-5

[Co 51] D. MARKOVIĆ, F. ANTONACCI, A. SARTI, S. TUBARO, "Resolution issues in Soundfield Imaging: a multiresolution approach to sound source localization, *in proceedings of IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA), 2015*, NY, Oct. 2015, pages 1-5

[Co 50] A. CANCLINI, L. MUCCI, F. ANTONACCI, A. SARTI AND S. TUBARO, "A methodology for Estimating the Radiation Pattern of a violin during the Performance", *in proceedings of 2015 23rd European Signal Processing Conference, Nice, France, Aug. 2015*, pp. 1546-1550

[Co49] M. Buccoli, M. Zanoni, F. Setragno, F. Antonacci And A. Sarti, "An unsupervised approach to the semantic description of the sound quality of violins", *in proceedings of 2015 23rd European Signal Processing Conference, Nice, France, Aug. 2015*, pp. 2004-2008

[Co48] M. Mascia, A. Canclini, F. Antonacci, M. Tagliasacchi, A. Sarti And S. Tubaro, "Forensic and anti-forensic analysis of indoor/outdoor classifiers based on acoustic clues", *in proceedings of 2015 23rd European Signal Processing Conference, Nice, France, Aug. 2015*, pp. 2072-2076

[Co47] A. Canclini, L. Mucci, F. Antonacci, A. Sarti, S. Tubaro, "Estimation of the Radiation Pattern of a Violin During the Performance Using Plenacoustic Methods", *in proceedings of the 138th AES International Convention, Warsaw, Poland, May 7-10 2015*

[Co46] M. Zanoni, F. Setragno, F. Antonacci, A. Sarti, G. Fazekas, M. B. Sandler, "Training-Based Semantic Descriptors Modeling for Violin Quality Sound Characterization", *in proceedings of the 138th AES International Convention, Warsaw, Poland, May 7-10 2015*

[Co45] A. Canclini, D. Marković, L. Bianchi, F. Antonacci, A. Sarti, S. Tubaro, "A Geometrical Approach to Room Compensation for Sound Field Rendering Applications", *in proc. of 2014 European Signal Processing Conference (EUSIPCO 2014)*, Lisbon, Sep. 1-5, 2014

- [Co44] L.Bianchi, R.Magalotti, F.Antonacci, A.Sarti, S.Tubaro, "Robust Beamforming Under Uncertainties in the Loudspeakers Directivity Pattern", in proc. of 2014 International Conference on Acoustics, Speech and Signal Processing (ICASSP'14), Florence, May 4-9, 2014
- [Co43] A. Canclini, D. Markovic, L. Bianchi, F. Antonacci, A. Sarti, S. Tubaro, "A Geometrical Approach to Room Compensation for Sound Field Rendering Applications", in proc. of 2014 European Signal Processing Conference (EUSIPCO 2014), Lisbon, Sep. 1-5, 2014
- [Co42] L.Bianchi, D. Markovic, F.Antonacci, A.Sarti, S. Tubaro, "Deconvolution of plenacoustic images", accepted for publication at 2013 IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA'13)
- [Co41] D. Markovic, F. Antonacci, A. Sarti, S. Tubaro, "Estimation of the Room Geometry From an Impulse Response", accepted for publication at 2013 IEEE International Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA'13)
- [Co40] L.Bianchi, F.Antonacci, D.Markovic, A.Sarti, S. Tubaro, "Rendering of Directional Sources through Loudspeaker Arrays based on Plane Wave Decomposition", accepted for publication at 2013 IEEE International Workshop on Multimedia Signal Processing (MMSP 2013)
- [Co39] L.Bianchi, F.Antonacci, A.Canclini, A.Sarti, S.Tubaro, "Localization of virtual acoustic sources based on the Hough transform for sound field rendering applications", in proc. of 2013 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP'13), pgs. 326-330
- [Co38] A.Canclini, F.Antonacci, J.Filos, A.Sarti, S.Tubaro, "Exact localization of acoustic reflectors in three-dimensional geometries", in proc. of International Workshop on Acoustic Signal Enhancement (IWAENC 2012), pgs. 1-4, Aachen, Germany, Sep. 2012
- [Co37] D.Markovic, C.Hofmann, F.Antonacci, K.Kowalczyk, A.Sarti, W.Kellermann, "Reflection coefficient estimation by pseudospectrum matching", in proc. of International Workshop on Acoustic Signal Enhancement (IWAENC 2012), pgs. 1-4, Aachen, Germany, Sep. 2012,
- [Co36] D.Markovic, G.Sandrini, F.Antonacci, A.Sarti, S.Tubaro, "Plenacoustic imaging in the ray space", in proc. of International Workshop on Acoustic Signal Enhancement (IWAENC 2012), pgs. 1-4, Aachen, Germany, Sep. 2012,
- [Co35] L.Bianchi, F.Antonacci, A.Canclini, A.Sarti, S.Tubaro, "A psychoacoustic-based analysis of the impact of pre-echoes and post-echoes in soundfield rendering", in proc. of International Workshop on Acoustic Signal Enhancement (IWAENC 2012), pgs. 1-4, Aachen, Germany, Sep. 2012
- [Co34] A. Canclini, D. Markovic, F. Antonacci, A. Sarti, S. Tubaro, "A Room-compensated virtual surround system exploiting early reflections in a reverberant room", in proc. of 20th European Signal Processing Conference (EUSIPCO 2012), pgs. 1029-1033, Bucharest, Romania, Aug. 2012
- [Co33] J.Filos, A.Canclini, F.Antonacci, A.Sarti, P.A.Naylor, "Localization of planar acoustic reflectors from the combination of linear estimates", in proc. of 20th European Signal Processing Conference (EUSIPCO 2012), pgs.1019-1023, Bucharest, Romania, Aug. 2012

- [Co32] A.Contini, A. Canclini, F.Antonacci, M.Compagnoni, A.Sarti, S.Tubaro, "Self-calibration of microphone arrays from measurement of Times Of Arrival of acoustic signals", in proc. of 5th International Symposium on Communications, Control and Signal Processing (ISCCSP 2012), pgs. 1-5, Rome, Italy, May 2012
- [Co31] A. Sarti, W. Kellermann, R. Rabenstein, P. A. Naylor, M. Omologo, P. Svaizer, F. Antonacci, P. Annibale, P. Bestagini, A. Canclini, D. Markovic, K. Kowalczyk, M. R. P. Thomas and A. Brutti, "The SCENIC Project: Space-Time Audio Processing for Environment-Aware Acoustic Sensing and Rendering," in proc. of AES 131st Convention, New York, USA, Oct. 2011.
- [Co30] A. Canclini, F. Antonacci, M. R. P. Thomas, J. Filos, A. Sarti, P. A. Naylor And S. Tubaro," Exact Localization of Acoustic Reflectors from Quadratic Constraints," in Proc. IEEE Workshop on App. of Signal Processing to Audio and Acoust. (WASPAA 2011), pgs. 17-20, New Paltz, NY, USA, Oct. 2011.
- [Co29] J. Filos, M.Thomas, F. Antonacci, A.Sarti, P.Naylor, "Robust inference of room geometry from acoustic measurements using the Hough transform", in proc. of 19th European Signal Processing Conference (EUSIPCO'11), pp. 161-165, Barcelona, Spain, Aug. 29-Sep. 2, 2011
- [Co28] E. Nastasia, F. Antonacci, A. Sarti, S.Tubaro, "Localization of planar acoustic reflectors through emission of controlled stimuli", in proc. of 19th European Signal Processing Conference (EUSIPCO'11), pgs. 156-160, Barcelona, Spain, Aug. 29-Sep. 2, 2011
- [Co27] P.Annibale, A.Canclini, F. Antonacci, R.Rabenstein, A. Sarti, S.Tubaro, "An angular frequency domain metric for the evaluation of wave field rendering techniques", in proc. of 19th European Signal Processing Conference (EUSIPCO'11), pgs. 166-170, Barcelona, Spain, Aug. 29-Sep. 2, 2011
- [Co26] A. Canclini, P. Annibale, F. Antonacci, R. Rabenstein, A. Sarti, S.Tubaro, "From direction of arrival estimates to localization of planar reflectors in a two dimensional geometry", in proc. of 2011 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2011), pgs. 2620-2623, Prague, Czech Republic, May 2011
- [Co25] A. Canclini, P. Annibale, F. Antonacci, A. Sarti, R. Rabenstein, S. Tubaro, "A Methodology for evaluating the accuracy of wave field rendering techniques, ", in proc. of 2011 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2011), pgs. 69-72, Prague, Czech Republic, May 2011
- [Co24] S.D. Valente, M. Tagliasacchi, F. Antonacci, P. Bestagini, A. Sarti, S. Tubaro, "Geometric calibration of distributed microphone arrays from acoustic source correspondences", in proc. of IEEE International Workshop on Multimedia Signal Processing, (MMSP2010), pgs. 13-18, Saint Malo, France, Oct. 2010
- [Co23] P. Annibale, F. Antonacci, A. Canclini, R. Rabenstein, A. Sarti, "Wave-Based and Geometric Representations of Sound Fields" in proc. of 9th ITG-Fachtagung Sprachkommunikation. pp. A1-A4, Bochum, Germany, Oct. 2010

- [Co22] D.Markovic, A. Canclini, F. Antonacci, A. Sarti, S. Tubaro, "Visibility-Based Beam Tracing for Soundfield Rendering", in proc. of IEEE International Workshop on Multimedia Signal Processing (MMSP2010), pgs. 40-45, Saint Malo, France, Oct. 2010
- [Co21] F.Antonacci, A. Sarti, S. Tubaro, "Geometric reconstruction of the environment from its response to multiple acoustic emissions," 2010 IEEE International Conference on Acoustics Speech and Signal Processing (ICASSP 2010), pp.2822-2825, 14-19 Mar. 2010
- [Co20] S.D. Valente, F.Antonacci, M.Tagliasacchi, A.Sarti, S.Tubaro, "Self-calibration of two microphone arrays from volumetric acoustic maps in non-reverberant rooms", in proc. of International Symposium on Communications Control and Signal Processing (ISCCSP2010), pgs. 1-4, Cyprus, Mar. 2010
- [Co19] F.Antonacci, G.Prandi, R.Galli, G.Bernasconi, A.Sarti, "Audio-based object recognition system for tangible acoustic interfaces", in proc. of IEEE Workshop on Haptic Audio-Visual Environments and Games (HAVE 2009), pgs. 123-128, Lecco, Italy, Nov. 2009
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