Dr. Nikolaos MITIANOUDIS

Personal Information

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Tel: +302541079572
Date of birth: December 1975
Sex: Male
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Academic Positions

Assistant Professor in Audio and Image Processing – Democritus University of Thrace, Department of Electrical and Computer Engineering (Sep. 2013 -now).

Lecturer in Image Processing – Democritus University of Thrace, Department of Electrical and Computer Engineering (Jun 2010- Aug. 2013).

Education

PhD in Audio Processing – Queen Mary, University of London, Department of Electronic Engineering (Oct 2000- Sep 2003).
Title: "Blind audio source separation using Independent Component Analysis".
Supervisors: Prof. Mike Davies, Prof. Mark Sandler
Date of award: 31/05/2004
The first year was conducted at King's College London, under the supervision of Prof. M. Davies. My doctorate studies were concluded at Queen Mary London, due to the relocation of the Audio Signal Processing research lab. Novel research on:
- o Audio Source Separation of convolutive mixtures, i.e. real room recordings.
- o Audio Source Separation in the case of less sensors than signals.
- o Automated Source Identification and Extraction from Instantaneous mixtures.

MSc in Communications and Signal Processing – Imperial College, University of London, Department of Electrical and Electronic Engineering (Oct 1999 – Oct 2000)
Date of award: 1/11/2000
Supervisor: Dr. Patrick Naylor
Dissertation title: "A graphical framework for the evaluation of Speaker Verification algorithms".

MEng in Electrical and Computer Engineering (5-year course) – Aristotle University of Thessaloniki, Greece, School of Engineering, (Sep 1993 - Sep 1998)
Grade: 9/10
Date of award: 17/11/1998
Supervisor: Dr. Dimitris Mitrakos
Dissertation title: "Modern transmission and encoding techniques in telecommunications systems. Applications on the DSP Texas Instruments TMS 320 C542 chip".

Languages

- ➢ Greek (Mother Language)
- ➢ English (Fluent – Cambridge Proficiency in English)
- ➢ French (Basic Understanding)

Research Experience

Technical University of Crete, Dep. of Electronic and Computer Engineering (2013-2015)
Duties: Research Collaborator
Principal Investigator Dr. Aggelos Bletsas (TUC)
Subject: Environmental Sensing with Backscatter Radio and Backscatter Sensor Networks, RFIDs. (BLASE)
Funding: General Secretariat of Research and Technology, Greece.

Democritus University of Thrace, Dep. of Electrical and Computer Engineering (2012-2015)
Principal Investigator Dr. Nikolaos Mitianoudis (DUTH)
Post Doc Researcher: Dr. Dimitrios Alexiadis
Subject: Frequency-Domain 3D structure and Motion Estimation (F3SME)
Funding: General Secretariat of Research and Technology, Greece. Action 'Support of post-doctoral researchers'

Imperial College London, Dep. of Electrical and Electronic Engineering (Oct 2003 – April 2009)
Duties: Research Associate.
Principal Investigator: Dr. Tania Stathaki
Subject: Applied Multi-Dimensional Image Fusion.
Funding: Data Information Fusion (DIF) – Defence Technology Centre (DTC)
Duties:

- o Research on various Computer Vision and Image Processing topics, including:
    - ▪ Image Enhancement (Denoising, Restoration)
    - ▪ Image Segmentation.
    - ▪ Image fusion using self-trained ICA bases.
    - ▪ Object Recognition using scale and rotation invariant features.
    - ▪ Target Following-Tracking.

- o Co-supervision of a number of PhD and MSc students working on various areas, including image, audio and biomedical signal processing.
- o Participation in project meetings, demonstration and presenting research output, collaboration with other project partners such as Cambridge University, University of Bristol, Waterfall Solutions, General Dynamics and QinetiQ.

Teaching Experience

Democritus University of Thrace, Electrical and Computer Engineering Dep. (Oct 2010- now)
Duties: Teaching
- o Electrical Circuits I (Theory-Tutorials-Lab)
- o Electrical Circuits II (Theory-Tutorials-Lab) - (2012-now)
- o Digital Signal Processing (Theory, Tutorials-Lab)
- o Audio Technology (Theory, Tutorials)
- o Signals and Systems (Tutorials - Lab) (2010-2011)
- o Signal and Image Coding - Postgraduate (2013-now)

Queen Mary, University of London, (Oct 2001- May 2003).
Duties: Tutor/Demonstrator for the MSc modules:
- o Statistical methods for Signal Processing
- o Intelligent Signal Processing.
- o Real-time Digital Signal Processing.
Demonstrator for the following MEng/BEng modules:
- o 1st and 2nd year Electronics and Digital Circuits lab demonstrator.

King's College, University of London, (Oct 2000-May 2001).
Duties: Demonstrator for the following MEng/BEng modules:
- o 1st year Electronics and Digital Circuits lab demonstrator.

Academic Supervision

BEng students

1. Moschakis I., " Automated Speech Transcription via Lip Reading", in progress.
2. Gentsidis K., " Person Identification using Motion Amplification", in progress.
3. Milios V., " Image and Video Colorization using Generative Adversarial Networks", in progress.
4. Vasilakis I., " Automated resolution enhancement of Audio recordings ", in progress.
5. Stefanou A., " Live and Cover song indentification ", in progress.
6. Keramidiotis V., " Digital simulation of analog effects in real-time ", in progress.

7. Lykiardopoulos D.V., " Vocal Extraction using Deep Neural Networks ", in progress.
8. Pallikaras V.E., " Automated speaker diarization and recognition in videos ", in progress.
9. Simiakakis A., " Real-time Audio Source Separation", in progress.
10. Sidiropoulos I., " Digital Simulation of Analog Effects", in progress.
11. Servanti N., " Deep Neural Networks for Music Information Extraction", in progress.
12. Konstantinidis P., " Sound effects implementation and Guitar Amplifier simulation in real-time environment", in progress.
13. Sakellariou Z., " Image and Video Super-resolution with Deep Neural Networks", in progress.
14. Tzouchas A., " Image and Video Colorization with Deep Neural Networks", October 2018.
15. Maniatopoulos A., " Time-Series Modelling and Prediction using Deep Neural Networks", October 2018.
16. Papadopoulos A., " Motion amplification in video ", June 2018.
17. Kilis N., " Automated Dereverberation from recordings", June 2018.
18. Kazantzidis I., " Audio Source Separation using Deep Neural Networks ", June 2018.
19. Makaratzis I., " Audio Source Separation using sparse representations ", June 2018.
20. Dimitriadis Th., " Musical Instrument Identification using Deep Neural Networks ", June 2018.
21. Pagonis A., " Image Content analysis using Deep Neural Networks ", March 2018.
22. Bakoulas N., " Real-time motion amplification in video sequences ", October 2017.
23. Arampatzis A., " Radio Source Localization using antenna arrays and array signal processing using Software-Defined Radio ", October 2017.
24. Zerzis P., " Musical Analysis of Audio Recordings ", October 2017. Kaloudis I., "Automated Singing voice extraction from song recordings ", May 2017.
25. Asvestopoulos Th., "Automatic solution of electrical circuit images", March 2017.
26. Dimopoulos G., "Automatic face models fitting in real-life faces", November 2016.
27. Parissis E., "Music Retrieval using monophonic melodies", June 2016.
28. Merianos I., "Dynamic Range Extension for HDR image synthesis", March 2016.
29. Feleskouras P., "Motion and Colour changes amplification in video sequences", March 2016.
30. Mallis D., "Audio Source Separation in room environments", November 2015.
31. Sachos K.A., " Polyphonic Melody Transcription using spectral signatures", November 2015.
32. Sfakianou A., "Language ID using audio cues", March 2015.
33. Sgouros T., "Audio Source Separation using fewer microphones", November 2014.
34. Souftas K., " Automated Song Retrieval using main melody", November 2014.
35. Tzotzadinis C., "Automated Audio Source Separation and Localization", October 2014.
36. Sihonidis C., "Real-time implementation of audio effects", October 2014.
37. Chalegoua J., "Real-time Algorithms for sound source localisation and separation", June 2014.
38. Tourtounis D., "Panorama image synthesis using interest points", October 2013.
39. Tastzoglou D., " Motion Estimation in videos using Polar FFT", October 2013.
40. Antonopoulos A.S., "Texture-based Image Fusion using Independent Component Analysis", July 2013.
41. Karampelas E., "Hidden Factor Extraction and Prediction from Financial Time-Series", June 2013.
42. Aravanis I., "Polyphonic Music Transcription using Nonnegative Matrix Factorisation", February 2013.
43. Panagiotou V., "Audio Feature Extraction for Automated Song Retrieval", October 2012.

MSc/MEng students

1. Zerzis P., "Music Information extraction using Deep Neural Networks", in progress.
2. Pistola Th., "Audio Feature Extraction and Identification using Deep Neural Networks", September 2016.
3. Tourtounis D., "Copy-and-paste forgery detection in images", November 2015.
4. Oudre L., "Image Fusion using Dispersion Minimisation", September 2007. (Co-supervision)
5. Loussararian P., "Automatic language identification using audio cues", June 2007.
6. Picard M., "Image Fusion using Anisotropic Diffusion", September 2006. (Co-supervision)
7. Stafyllakis T., "Overcomplete audio source separation", September 2005.
8. Lefakis K., "Automatic Chord Recognition using Hidden Markov Models", September 2005.
9. Arivao F., "Image fusion using Independent Component Analysis", September 2005.
10. Sekwalor C., "Musical Instrument Sound Source Recognition", September 2005.
11. Tonelli M., "Blind audio dereverberation", September 2003. (Co-supervision)

PhD students

1. Maniatopoulos A.A, "Audio-visual Speech Recognition systems", in progress.
2. Pistola Th., "Complex Signal Analysis with Machine Learning Techniques ", in progress.
3. Sgouros Th., "Sound Source Separation with sparse representations ", in progress.

4. Zaid O., "Image Fusion using Chebyshev polynomials" (Co-supervision)
5. Li Q., "Object-based Hyper-Spectral Image Fusion". (Co-supervision)
6. Tzimiropoulos G., "Affine Object Deformation and Symmetry detection". (Co-supervision)
7. Korizis H., "Smooth component extraction from financial time-series". (Co-supervision)

Working Experience

International Hellenic University, Greece, Academic Assistant (Nov. 2008- August 2011).
Duties:
- o Formation and organisation of two MSc Programmes at the School of Science and Technology:
    - o MSc in Information and Communication Technology Systems
    - o MSc in Energy Systems

University of Macedonia, Greece, EU programme for the preservation of the Byzantine Musical Heritage (Oct 1998- Sep 1999).
Duties:
- o Computer support and local network administration.
- o Web page authoring and Web server administration.
- o Sound and Image processing of old recordings and monastery manuscripts.

AMYLUM Hellas, Amylum Industry (Jun 1997- Sep 1997).
Duties:
- o Training Electrical Engineer.

Awards /Distinctions

- ➢ Student paper award at IST 2016.
- ➢ Royal Academy of Engineering travel grant award (Sep. 2004).
- ➢ Queen Mary London research support studentship (2001-2003).
- ➢ King's College research support studentship (2000-2001).
- ➢ Technical Chamber of Greece awards (1997, 1999 and 2000) for excellent performance during undergraduate studies.
- ➢ Ranked 2/158 in my MEng degree (1998).
- ➢ National Scholarships Foundation of Greece (IKY) scholarships (1993, 1995, 1996, 1997) for excellent performance during undergraduate studies. First place scholarship in 1997.

Scientific Societies / Activities

- ➢ Associate Editor at IEEE Transactions on Image Processing (2018-2021).
- ➢ Guest Editor at MDPI Journal of Imaging, Special Issue on Modern Advances in Image Fusion (2018-2019).
- ➢ Senior Member of IEEE (2011).
- ➢ Member of Audio Engineering Society (AES).
- ➢ Member (Chartered Engineer) of the Technical Chamber of Greece (TEE).
- ➢ Member of Signal Processing Society.

- ➢ Regular reviewer for the following scientific journals:

    - o IEEE Signal Processing Letters.
    - o IEEE Journal of Selected Topics in Signal Processing
    - o IEEE Geoscience and Remote Sensing Letters.
    - o IEEE Transactions on Audio, Speech and Language Processing.
    - o IEEE Transactions on Signal Processing.
    - o IEEE Transactions on Image Processing.
    - o IEEE Transactions on Neural Networks.
    - o IEEE Sensors Journal.

- o Elsevier Neurocomputing.
- o Elsevier Signal Processing.
- o Elsevier Information Fusion.
- o IEE Proceedings on Vision, Signal and Image Processing.
- o IEEE Transactions on Circuits and Systems.
- o Elsevier Computational Statistics & Data Analysis.

➢ Reviewer for the following conferences:

- o Digital Audio Effects (DAFx) Conference, London, UK, 2003.
- o International Conference on Independent Component Analysis and Source Separation (ICA), London, UK, 2007.
- o 16th International Conference on Digital Signal Processing, 5-7 July, Santorini, Greece, 2009.
- o European Signal Processing Conference (EUSIPCO), Glasgow, Scotland, August 2009.
- o First IEEE International Workshop on Computer Vision for Computer Games (CVCG2010), San Francisco, CA, 2010.
- o 20th International Conference on Artificial Neural Networks (ICANN), Thessaloniki, Greece 2010
- o 7th IEEE, IET International Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP), Newcastle upon Tyne, UK, 2010
- o IEEE International Conference on Imaging Systems and Techniques (IST 2010), Thessaloniki, Greece 2010.
- o Ninth International Conference on Latent Variable Analysis and Signal Separation (LVA-ICA), St. Malo, France, September 2010.
- o 17th International Conference on Digital Signal Processing (DSP), July 6-8, Corfu, Greece, 2011.
- o European Signal Processing Conference (EUSIPCO), Barcelona, Spain, September 2011.
- o European Signal Processing Conference, Bucharest, Romania (EUSIPCO-2012).
- o 18th International Conference on Digital Signal Processing (DSP), July 1-3, Santorini, Greece, 2013.
- o International Conference on Image Processing (ICIP), 27-30 October, Paris, France, 2014.
- o International Conference on Image Processing (ICIP), Quebec, Canada, 2015.
- o International Conference on Image Processing (ICIP), Phoenix, Arizona, USA, 2016.
- o International Conference on Image Processing (ICIP), Beijing, Chine, 2017.
- o International Conference on Image Processing (ICIP), Athens, Greece, 2018.
- o International Conference on Image Processing (ICIP), Taipei, Taiwan, 2019.
- o European Signal Processing Conference, Budapest, Hungary (EUSIPCO-2016).

➢ Organising committee for the following conferences/meetings:

- o Digital Audio Effects (DAFx) Conference, London, UK, 2003.
- o Digital Music Research Network launch day (2002)
- o Independent Component Analysis: Generalisations, Algorithms and Applications, one day discussion meeting (2002).
- o International Conference on Independent Component Analysis and Source Separation (ICA), London, UK, 2007.
- o 17th International Conference on Digital Signal Processing (DSP), July 6-8, Corfu, Greece, 2011.
- o 13th International Conference on Engineering Applications of Neural Networks (EANN 2012).
- o IEEE Int. Conf. on Imaging Systems Technology, Manchester, UK (IST2012).
- o Sensor Signal Processing for Defence 2012 (SSPD 2012).
- o 12th IFIP International Conference on Artificial Intelligence Applications and Innovations (AIAI 2016)
- o 13th IFIP International Conference on Artificial Intelligence Applications and Innovations (AIAI 2017)
- o 14th IFIP International Conference on Artificial Intelligence Applications and Innovations (AIAI 2018)
- o 15th IFIP International Conference on Artificial Intelligence Applications and Innovations (AIAI 2019)

Invited Talks / Seminars

➢ "Modern Surveillance Systems", Guest lecture at the Interdisciplinary Postgraduate Course "Technical Systems organisation and Management", DUTH, Xanthi, 27/5/2017.
➢ "Machine Audition - Applications and Challenges", EESTEC JLC Xanthi, 19/11/2013.
➢ "Sound and Digital Audio Processing", 3-lecture seminar, IEEE Student Branch Thrace, DUTH, 9-17-23 / 5 /2012.
➢ "The Cocktail Party Problem and possible solutions", Democritus University of Thrace, Electrical and Computer Engineering Department, Internal Seminar Series, Xanthi, Greece, 25/10/2010.
➢ "Image Fusion: Theory and Applications", Informatics and Telematics Institute, Thessaloniki, Greece, 28/04/2010.
➢ "Image Fusion using ICA bases", Digital Systems & Media Computing Laboratory, Hellenic Open University, IEEE Greece Section lecture, 21/03/2008.
➢ "Audio Source Separation: An Overview", Imperial College Internal Seminar Series, London, 23/11/2007.
➢ "Batch and Online Underdetermined Source Separation using Laplacian Mixture Models", Queen Mary Research Seminars, London, 08/02/2006.

Publications

Book Chapters

B1   **Mitianoudis N.**,"Underdetermined Audio Source Separation using Laplacian Mixture Modelling", Book chapter, Advances in Modern Blind Source Separation Techniques: Theory and Applications, Springer, to appear.
B2   **Mitianoudis N.**, Stathaki T., "Image Fusion schemes using ICA bases", Book chapter in Elsevier Image fusion: Algorithms and applications, Academic Press, pages 520, 2008.
B3   **Mitianoudis N.**, Stathaki T., "Enhancement of Multiple Sensor Images using Joint Image Fusion and Blind Restoration", Book chapter in Elsevier Image fusion: Algorithms and applications, Academic Press, pages 520, 2008.
B4   Oudre L., Stathaki T., **Mitianoudis N.**, "Image Fusion using Optimisation of Statistical Measurements", Book chapter in Elsevier Image fusion: Algorithms and applications, Academic Press, pages 520, 2008.

Journals

J1   Merianos I., **Mitianoudis N.**, "Multiple-Exposure Image Fusion for HDR Image Synthesis Using Learned Analysis Transformations", J. Imaging, 5(3), 32, 2019.
J2   Mallis D., Sgouros T., **Mitianoudis N.**, "Convolutive Audio Source Separation using Robust ICA and an intelligent evolving permutation ambiguity solution", Evolving Systems, Volume 9, Issue 4, pp 315-329, Dec. 2018.
J3   Alexiadis D.S., **Mitianoudis N.**, Stathaki T., "Frequency-domain joint motion and disparity estimation using steerable filters", Inventions, 3(1), 12, pp. 1-29, 2018.
J4   Alexiadis D.S., **Mitianoudis N.**, Stathaki T., "Multidimensional directional steerable filters - Theory and application to 3D flow estimation", Image and Vision Computing, Vol. 71, pp. 38-67, 2018.
J5   Tsekouras G.E., Trygonis V., Maniatopoulos A., Rigos A., Chatzipavlis A., Tsimikas J., **Mitianoudis N.**, Velegrakis A.F., "A Hermite Neural Network Incorporating Artificial Bee Colony Optimization to Model Shoreline Realignment at a Reef-Fronted Beach", Neurocomputing, Vol. 280, pp. 32-45, Mar. 2018.
J6   Tourtounis D., **Mitianoudis N.**, Sirakoulis G.Ch., "Salt-n-pepper noise filtering using Cellular Automata", Journal of Cellular Automata, Vol. 13, No. 1-2, pp. 81-101, 2018..
J7   **Mitianoudis N.,** Dergiades T., "Stock Prices Predictability at Long-horizons: Two Tales from the Time-Frequency Domain", Credit and Capital Markets, Vol. 50, No. 1, pp. 37-61, 2017.

J8 Konstantopoulos C., Koutroulis E., **Mitianoudis N.**, Bletsas A., "Converting a Plant to a Battery and Wireless Sensor with Scatter Radio and Ultra-Low Cost ", IEEE Transactions on Instrumentation and Measurement, Vol. 65, No. 2, pp. 388 - 398, 2016.

J9 **Mitianoudis N.**, Papamarkos N., "Document Image Binarization using Local Features and Gaussian Mixture Modelling", Image and Vision Computing, Vol. 38, pp. 33-51, 2015.

J10 Stergiopoulou E., Sgouropoulos K., Nikolaou N., Papamarkos N., **Mitianoudis N.**, "Real-Time Hand Detection in a Complex Background", Engineering Applications of Artificial Intelligence, Vol. 35, pp. 54-70, 2014.

J11 Alexiadis D.S., **Mitianoudis N.**, "MASTERS: A virtual lab on Multimedia Systems for Telecommunications, Medical and Remote Sensing applications", IEEE Transactions on Education, Vol. 56, No. 2, pp. 227- 234, May 2013.

J12 **Mitianoudis N.**, "A Generalised Directional Laplacian Distribution: Estimation, Mixture Models and Audio Source Separation", IEEE Transactions on Audio, Speech and Language Processing, Vol. 20, No. 9, pp. 2397- 2408, Nov. 2012.

J13 Tzimiropoulos G., **Mitianoudis N.**, Stathaki T., "A Unifying Approach to Moment-based Shape Orientation and Symmetry Classification", IEEE Transactions on Image Processing, Vol. 18, No. 1, pp. 125 - 139, Jan. 2009.

J14 **Mitianoudis N.**, Stathaki T., "Optimal Contrast Correction for ICA-based Fusion of Multimodal Images", IEEE Sensors Journal, Vol. 8, No. 12, pp. 2016 - 2026, Dec. 2008.

J15 Mahmood A., Tudor P., Oxford W., Hansford R., Nelson J., Kingsbury N., Katartzis A., Petrou M., **Mitianoudis N.**, Stathaki T., Achim A., Loza A., Cvejic N., "Applied Multi-Dimensional Fusion", The Computer Journal, Vol. 50, No. 6, November 2007.

J16 **Mitianoudis N.**, Stathaki T., "Joint Fusion and Blind Restoration for Multiple Image Scenarios with Missing Data", The Computer Journal, Vol. 50, No. 6, November 2007.

J17 Tzimiropoulos G., **Mitianoudis N.**, Stathaki T., "Robust recognition of planar shapes under affine transforms using Principal Component Analysis", IEEE Signal Processing Letters, Vol. 14, No. 10, pp. 723 - 726, October 2007.

J18 **Mitianoudis N.**, Stathaki T., "Batch and online underdetermined source separation using Laplacian Mixture Models", IEEE Transactions on Audio, Speech and Language Processing, Vol. 15, No. 6, pp. 1818 - 1832, August 2007.

J19 Li Q., **Mitianoudis N.**, Stathaki T., "Spatial Kernel K-Harmonic Means Clustering for Multi-spectral Image Thresholding ", IET Proceedings on Image Processing, Vol. 1, No. 2, pp. 156-167, June 2007.

J20 **Mitianoudis N.**, Stathaki T., Constantinides A.G., "Smooth Signal Extraction from instantaneous mixtures", IEEE Signal Processing Letters, Vol. 14, No. 4, pp. 271 - 274, April 2007.

J21 **Mitianoudis N.**, Stathaki T., "Pixel-based and Region-based Image Fusion schemes using ICA bases", Information Fusion 8 (2), pp. 131–142, April 2007.

J22 **Mitianoudis N.**, Stathaki T., "Overcomplete Source Separation using Laplacian Mixture Models", IEEE Signal Processing Letters, vol. 12, no. 4, April 2005.

J23 **Mitianoudis N.**, Davies M., "Audio Source Separation: Problems and Solutions", International Journal of Adaptive Control and Signal Processing, Volume: 18, Issue: 3, pages: 299-314, April 2004.

J24 Davies M., **Mitianoudis N.**, "A simple mixture model for sparse overcomplete ICA", IEE proceedings in Vision, Image and Signal Processing, Volume: 151, Issue: 1, pages: 35-43, February 2004.

J25 **Mitianoudis N.**, Davies M., "Audio source separation of convolutive mixtures", IEEE Transactions on Speech and Audio processing, Volume: 11, issue: 5, pages 489-497, September 2003.

Conferences

C1 Merianos I., **Mitianoudis N.**, "A Hybrid Multiple Exposure Image Fusion Approach for HDR Image Synthesis", IEEE International Conference on Imaging Systems and Techniques, Chania, Greece, October 2016. (Student Paper Award)

C2 Mallis D., Sgouros Th., **Mitianoudis N.**, "Convolutive Audio Source Separation using Robust ICA and reduced Likelihood Ratio Jump", 2th IFIP Int. Conf. on Artificial Intelligence Applications and Innovations (AIAI 2016), 16 Sep. - 18 Sep., 2016, Thessaloniki, Greece.

C3 Sgouros Th., **Mitianoudis N.**, "Underdetermined Source Separation using a sparse STFT framework and Weighted Laplacian Directional Modelling", European Signal Processing Conference (EUSIPCO), 29 Aug. - 2 Sep., 2016, Budapest, Hungary.

C4 Sichonidis Ch., Vourkas I., **Mitianoudis N.**, Sirakoulis G.Ch., "A memristive circular buffer for real-time signal processing", Int. Conf. on Modern Circuits and Systems Technologies (MOCAST), May 12-14, 2016, Thessaloniki, Greece.

C5 **Mitianoudis N.,** Papamarkos N., "Multi-spectral Document Image Binarization using Image Fusion and Background Subtraction Techniques", IEEE Int. Conf. on Image Processing (ICIP), October 27-30, 2014, Paris, France.

C6 Alexiadis D.S., **Mitianoudis N**., Stathaki T., "Multidimensional Steerable Filters and 3D Flow Estimation", IEEE Int. Conf. on Image Processing (ICIP), October 27-30, 2014, Paris, France.

C7 **Mitianoudis N.,** Papamarkos N., "Local Co-occurrence and Contrast Mapping for Document Image Binarization", 14th Int. Conf. on Frontiers in Handwritten Recognition, September 1-4, 2014, Crete Island, Greece.

C8 Panagiotou V., **Mitianoudis N.,** "PCA Summarization for Audio Song Identification using Gaussian Mixture Models ", 18th Int. Conf on DSP (DSP2013), July 1-3, 2013, Santorini, Greece.

C9 **Mitianoudis N.,** Antonopoulos S.A, Stathaki T., "Region-based ICA Image Fusion using Textural Information ", 18th Int. Conf on DSP (DSP2013), July 1-3, 2013, Santorini, Greece.

C10 **Mitianoudis N.,** "A Generalised Directional Laplacian Distribution for Underdetermined Audio Source Separation ", 9th IMA Int. Conf. on Mathematics in Signal Processing, December 17 - 20, 2012, Birmingham, UK.

C11 Zaid O., **Mitianoudis N.,** Stathaki T., "Region-based Image Fusion using a combinatory Chebyshev-ICA Method", IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2011, Prague, Czech Republic.

C12 Zaid O., **Mitianoudis N**., Stathaki T., "Two-dimensional Chebyshev polynomials for Image Fusion", 28th Picture Coding Symposium, December 7-10, 2010, Nagoya, Japan.

C13 **Mitianoudis N.,** "A Directional Laplacian Density for Underdetermined Audio Source Separation ", 20th International Conference on Artificial Neural Networks (ICANN), Thessaloniki, Greece, September 2010.

C14 **Mitianoudis N.**, Tzimiropoulos G., Stathaki T., "Fast Wavelet-based Pansharpening of Multi-Spectral Images ", IEEE International Conference on Imaging Systems and Techniques, Thessaloniki, Greece, July 2010.

C15 **Mitianoudis N.**, Stathaki T., "Optimal Contrast for Color Image Fusion using ICA bases", 11th International Conference on Information Fusion, Cologne, Germany, July 2008.

C16 Korizis H., **Mitianoudis N.**, Constantinides A.G.., "Compact representations of market securities using smooth component extraction", International Conference on Independent Component Analysis and Source Separation (ICA 2007), London, UK.

C17 **Mitianoudis N.**, Stathaki T., "Underdetermined Source Separation using Mixtures of Warped Laplacians", International Conference on Independent Component Analysis and Source Separation (ICA 2007), London, UK.

C18 Tzimiropoulos G., **Mitianoudis N.**, Stathaki T., "An Affine Invariant Function using PCA Bases with an Application to Within-Class Object Recognition", IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2007, Hawaii, USA.

C19 **Mitianoudis N.**, Stathaki T., "Adaptive Image Fusion using ICA bases", IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2006, Toulouse, France.

C20 **Mitianoudis N.**, Stathaki T., Davies M., "Blind separation of skewed signals in instantaneous mixtures", IEEE Workshop on Signal Processing Systems (SIPS2005), Athens, Greece.

C21 Tonelli M., **Mitianoudis N.**, Davies M., "A Maximum Likelihood approach to blind Audio de-reverberation", DAFX-04, Naples, Italy, October 2004.

C22 **Mitianoudis N.**, Davies M., "Permutation alignment for Frequency Domain ICA using subspace beamforming methods", 5th International Conference on Independent Component Analysis and Source Separation, Granada, Spain, September 2004.

C23 **Mitianoudis N.**, Davies M., "Using Beamforming in the Audio Source Separation Problem", Seventh International Symposium on Signal Processing and its Applications, Paris, France, July 2003.

C24 **Mitianoudis N.**, Davies M., "Intelligent audio source separation using Independent Component Analysis", Audio Engineering Society Conference, Munich, May 2002.

C25 **Mitianoudis N.**, Davies M., "New fixed-point solutions for convolved mixtures", 3rd International Conference on Independent Component Analysis and Source Separation, San Diego, California, December 2001.

C26 **Mitianoudis N.**, Davies M., "A fixed point solution for convolved audio source separation", IEEE workshop on Applications of Signal Processing on Audio and Acoustics, New Paltz, New York, October 2001.

C27 Reiss J., **Mitianoudis N.**, Sandler M., "A generalised method for the calculation of mutual information in time-series", Audio Engineering Society Conference, Amsterdam, May 2001.

Misc

M1 **Mitianoudis N.**, Stathaki T., "Training image-analysis bases improves Image Fusion", SPIE Newsroom, 30-12-2008.

Referees

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