

CURRICULUM VITAE

SERGIOS THEODORIDIS

February 2014.

- **Personal Details**

- Date of Birth : 17-12-1951
- Marital Status : Married with two children
- Nationality : Greek.

- **Education**

- 1978, Ph.D
Dept. of Electronics and Electrical Eng.
University of Birmingham, U.K.
- 1975, MSc.
Dept. of Electronics and Electrical Eng.
University of Birmingham, U.K.
- 1973, BSc (Highest Honours)
Dept. of Physics
University of Athens, Greece

- **Professional Experience**

- 1995-Today: Professor, Department of Informatics and Telecommunications
University of Athens
- 1984-1995: Department of Informatics and Computer Engineering
University of Patras
- 1981-1983: Military Service.
- 1978-1981: Res. Fellow University of Birmingham.

- **Research Interests:**

- Adaptive Systems and Algorithms
- Distributed Learning
- Sparsity-Aware Learning
- DSP for communications
- Machine Learning and Pattern Recognition
- OCR
- Medical Applications
- Image Processing and Analysis
- Signal Processing Applications in Music and Audio.

- **Education Related Activities:**

- Founder and director of the Master's course in "Informatics in Medicine and Biology", Dept. Of Informatics and Telecommunications, University of Athens, 2006-2008.
- Head of Undergraduate Studies, Dept. of Informatics and Telecommunications, University of Athens, 2002-2009.
- In charge of the EPEAK project, funded partly by the Greek Government and partly by EU, for upgrading the infrastructure and integrating new technologies in the curriculum, Dept. of Informatics and Telecommunications, University of Athens, 2004-2008 (400,000 Euros).
- 2000-2002: Vice Chairman, Greek Pedagogical Institute. During these three years' period, S. Theodoridis was in charge of the multimillion project (**15 million Euros**), funded partly by

EU and partly by the Greek Government, for training in Information Technologies all (120,000) school teachers in Greece. During this period, S. Theodoridis was in charge of the operational design of the whole project and of the first phase implementation.

• International Activities

Book Editorial Boards

- Editor in Chief, EURASIP Signal Processing Series, Academic Press
- Editor in Chief, E-Reference Signal Processing, Elsevier.

Journal Editorial Boards

- Associate Editor IEEE Signal Processing Magazine, 2011-2014.
- Associate Editor IEEE Transactions on Neural Networks, 2007-2011.
- Associate Editor IEEE Transactions on Circuits and Systems CAS-II, 2007-2009.
- Member Editorial Board IEEE Signal Processing Magazine, 2005-2008.
- Associate Editor IEEE Transactions on Signal Processing, 2002-2005
- Member Editorial Board of the (Elsevier) Signal Processing Journal, 1998- 2008.
- Member Editorial Board of the (EURASIP) Journal on Advances on Signal Processing, 2001-2006.
- Member Editorial Board of the EURASIP Journal on Wireless Communications and Networking., 2003-2009.
- Associate Editor IEEE Transactions on Signal Processing, 1996-1998.

International Conference Organization

- Technical Program Co-Chair ISCCP-2014.
- Technical Program Co-Chair ISCAS-2013.
- Co-Chair, DSP-2011
- Co-Chair, Cognitive Information Processing, CIP-2010
- General Co-Chair (and Founder), Cognitive Information Processing, CIP-2008.
- Technical Program Co-Chairman, IEEE ISCAS-2006
- General Chairman EUSIPCO-98.
- General Co-Chairman IEEE WISP'99
- Organizing Committee Chairman PARLE-95

Guest Editor for Special Issues

- Guest Editor Special Issue on Complex Systems, IEEE Signal Processing Magazine
- Guest Editor Special Issue on Complex Systems, IEEE Journal on Selected Topics on Signal Processing
- Guest Editor Special Issue on Kernel Methods, IEEE Signal Processing Magazine.
- Guest Editor Special issue on Emerging Machine Learning Techniques in Signal Processing, Journal of Advances on Signal Processing (JASP).
- Guest Editor Special Issue on Adaptive Algorithms and Echo Cancellation, IEEE Signal Processing Magazine.
- Guest Editor Special Issue on Signal Processing for Broadband Access Systems: Techniques and Implementations, Applied Signal Processing Journal (JASP).

Invited Speaker in Conferences.

- Invited Plenary Speaker, IFAC Workshop on Adaptation and Learning in Control and Signal Processing (ALCOSP), Caen, France, 2013.
- Invited Plenary Speaker, IEEE Workshop on Machine Learning for Signal Processing, MLSP, Southampton, U.K., 2013.
- Invited Plenary Speaker, 2nd Intl. Workshop on Mathematical Issues in Information Sciences, Xian, China, 2013.
- Invited Keynote Speaker, IMA International Conference on Mathematics in Signal Processing, Birmingham, U.K., 2012.
- Invited Tutorial Speaker, International Conference On Systems, Signals and Image Processing (IWSSIP), Vienna, Austria, 2012.
- Invited Keynote Speaker, European Signal Processing Conference, EUSIPCO, Barcelona, Spain. 2011.
- Invited Keynote Speaker, International Conference on Neural Networks, ICANN, Thessaloniki, Greece, 2010.
- Invited Plenary Speaker, IEEE International Workshop on Machine Learning for Signal Processing, MLSP, Cancun, Mexico. 2008.
- Invited Plenary Speaker, International Symposium on Image and Signal Processing and Analysis, ISPA, Istanbul, Turkey, 2007
- Invited Plenary Speaker IEEE Benelux Signal Processing Symposium, Leuven, Belgium, 2002.
- Invited State of the Art Lecturer, IEEE Conference on Instrumentation and Measurement, Budapest, Hungary, 2001..

Activity in International Scientific Organizations

- Chairman, IEEE Signal Processing Theory and Methods Technical Committee, 2013-2015.
- Member of the Board of Governors (Member-at-Large), IEEE Signal Processing Society, 2011-2013
- Member of the Board of Governors (BOG), IEEE Circuits and Systems Society, 2008-2010.
- Chairman (and Founder) of the Signal Analysis and Machine Learning Technical Committee, Intl. Association for Pattern Recognition (IAPR), 2006- 2008.
- Member of the Machine Learning for Signal Processing Technical Committee, IEEE SP society, 2006-2009.
- Treasurer Conference Board, IEEE SP Society, 2006-2009.
- Member of the Signal Processing Technical Committee, IEEE CAS society, 2003-2010.
- President of the European Association for Signal, Speech and Image Processing (EURASIP) 2004- 2006.
- Adcom Member European Association for Signal, Speech and Image Processing (EURASIP) 1998-2008.

Member of Prestigious Awards Committees

- IEEE SPS Fellows Committee (2014-Today)
- IEEE/RSE Maxwell Award Committee (2013-Today)
- EURASIP, Chairman of the Fellows Award Committee (2009-Today)
- IEEE Computational Intelligence Society, Best Ph.d thesis Committee Award (2010, 2011)
- IEEE Circuits and Systems Society, Van Vankelburg Award Committee (2011, 2012)

Distinctions-Awards

- European Association for Signal Processing (EURASIP) Meritorious Service Award, 2014.
- Fellow EURASIP (cited for: *contributions to adaptive signal processing and machine learning*), 2011.

- Corresponding Fellow Royal Society of Edinburgh (RSE) (Scottish Academy of Arts and Science), 2009.
- Fellow IEEE (cited for: *contributions to the design of adaptive signal processing systems*), 2008.
- Fellow IET, 2000.

- IEEE Circuits and Systems Society Distinguished Lecturer, 2014-2016.
- IEEE Signal Processing Society Distinguished Lecturer, 2009-2010.
- Co-author of the paper that received the **Best Scientific paper award** (Track III: Signal, Speech, Image and Video Processing) the 20th International Conference on Pattern Recognition, ICPR, Istanbul, Turkey, 2010.
- Co-author of the paper that received the **Best student paper award** of the Intl. Workshop on Cognitive Information Processing, Elba, Italy, 2010.
- Co-author of the paper that received the **2009 Outstanding paper award** of the IEEE Transactions on Neural networks.
- Co-author of the paper that received the **Best student paper award** in IEEE Workshop on Multimedia and Signal Processing, Crete, Greece, 2007.
- Co-author of the paper that received the **Best paper award** in Multimedia Metadata Applications (M3A) Workshop, Innovations Conference for Knowledge Management, New Media Technologies and Semantic Technologies (Triple-i: i-Know, i-Semantics, i-Media),Graz, Austria, 2007.
- Co-author of the paper that received the **Best student paper award** in European signal Processing Conference (EUSIPCO), Antalya, Turkey, 2005.

- Advisor of the Phd. Thesis (M. Mavroforakis), which received the **Best Phd Thesis Award**, IEEE Computational Intelligence Society, 2010.
- Advisor of the Phd. Thesis (M. Mavroforakis), which received the **Best Phd Thesis Award**, European Association for Signal and Image Processing (EYRASIP), 2011.

• Non University Related Activities

- 2007-2010: Chairman of the Signal Processing Advisory Committee, Edinburgh Research Partnership (ERP), Scotland.
- 2005-2010: Member of the National (Greek) Council for Research and Technology. This was a 13 member committee and it is the highest in rank body in Greece that consults to the Greek Government on Policies related to Research and Technology and it is also in charge for the evaluation of the Research Centers and Institutes in Greece.
- 2001-2004: Member of the consulting committee to the Minister of Education, on Policies related to Education and Information Technologies.
- 1996-2000: Member Board of Directors COSMOTE (The Greek DCS-1800 mobile phone operating company). COSMOTE is now the leading mobile phone company in Greece. During the first period of operation (1996), S. Theodoridis was in charge of the evaluation and later negotiation team for the purchase of the multimillion worth NOKIA base station system. During this period, S.Theodoridis was only part-time involved in the University .
- 1993-1995: Chairman, Patras Innovation Technology (PIT) Centre. PIT was an institute, funded partly by EU and partly by the Greek Government, whose goal was to intensify the interaction between the University and the local SME's, in the area of Information Technologies.

• Project Funding

(Budget in Euros)

- HANDICAM: FET, Funded by EU,FP&, Budget 450,000, 2013-2106.

- EMPHATIC: Funded by EU, FP7, Budget 350,000, 2012-2014.
- Sparse Online Learning (SOL): Funded by EU, Marie Curie, budget 450,000, 2012-2015.
- Adaptive Sparsity-Aware Distributed Learning with Applications to Cognitive Radio (ASSURANSE): Program ARISTEIA (Research Excellence), GRST, Budget 300,000, 2012-2015.
- Processing, Analysis, Synthesis and Context-Based Retrieval for Multimedia Music-Related Data Bases of Traditional Music and Dancing Recordings (ERASITECHNIS): Program THALIS, Funded by GRST, budget 600,000 Euros, 2012-2015.
- Secure Wireless Nonlinear COMMunications at the physical layer (SWINCOM): Program THALIS, Funded by GRST, budget 520,000, 2012-2015.
- Efficient Algorithms For Sensor Networks: HERAKLEITOS, Funded by GRST (Greek General Secretariat for Research and Technology), budget 60,000 Euros, period 2011-2013.
- PHYDYAS-PHYSical layer for DYnamic spectrum AccesS and cognitive radio: Funded by EU (IST), budget: 370,000 Euros, period, 2008-2010.
- MMng-Architecting Next Generation Multimedia Systems: Marie Curie (EU), budget 435,000 Euros, period 2007-2009.
- Automatic Recognition of Content Harmful to Sensitive Social Groups in Video Recordings: Funded by GRST (Greek General Secretariat for Research and Technology), budget 175,000 Euros, period 2006-2008.
- MEDAS: Funded by GRST, budget 80,000Euros, period 2006-2008.
- RHTOR: Funded by GRST, budget 90,000 Euros, period 2006-2008.
- Efficient Geometric Algorithms for Designing Support Vector Machines and application to Music Information Retrieval Systems, Funded by GRST, Budget 93,000 Euros, period 2006-2008.
- Efficient Algorithms for Space-Time MIMO Wireless Networks, Funded by GRST, budget 50,000 Euros, 2006-2008.
- I-Imas: Funded by EU (IST), budget: 150,000 Euros, period: 2004-2007.
- HERON: Virtual Musical Instruments with Physical Modeling: Funded by the Ministry of Education, budget: 68,000 Euros, period: 2004-2006.
- Non linear Methods for Pattern Recognition: Funded by the Ministry of Education, budget: 35,000 Euros, period: 2004-2006.
- POLYMNIA: Funded by GRST, budget: 196,000 Euros, Period: 2003-2006.
- Efficient algorithms for space time equalizers in wireless communication channels: Funded by GRST, budget: 60,000 Euros, period: 2003-2006. (Joint project with Bell Labs, U.S.A)
- KATOPTRO: Funded by GRST, budget: 263,000, period: 2003-2006.
- Design of Nonlinear Classifiers for Pattern recognition: Funded by the Ministry of Education, budget: 34,000, period: 2003-2006.
- PANDA (Patterns for Next-generation Database Systems): Funded by EU (IST), budget: 25,000, period: 2001-2004.
- ISODIA: Funded by GSRT, Budget: 180,000, Period: 2000-2002.
- New generation of sensors for real time imaging: Funded by GRST, Budget: 135,000, Period: 1999-2001.
- ASPIS II: Funded by EU, budget: 135,000, Period: 1997-2000.
- EUROMED: Funded by EU, budget: 150,000, Period: 1995-1998.
- Novel Algorithms for Echo cancellation in Communication Networks: Funded by GRST, budget: 70,000, period: 1992-1994.
- Deign of Efficient Algorithms for System Identification: Funded by GRST, budget: 60,000, period: 1989-1991.
- Design of basic elements and VLSI Implementation for a High Resolution Spectrum Analyzer: Funded by GRST, budget 70,000, period 1987-1989.

- **Supervision of successfully completed PhD Thesis.**

- K. Berberidis: (Currently) Professor, Dept of Computer Eng., University of Patras, Greece
- A. Liavas: (Currently) Professor, Dept of Electronics and Computer Eng. University of Crete, Greece

- S. Voliotis: (Currently) Professor, Dept of Electronics, Technological and Educational Inst., Chalkida, Greece.
- A Rontogiannis: (Currently) Asc. Research Professor, National Space Research Institute.
- E. Kofidis: (Currently) Ast. Professor, Dept. of Statistics, University of Pireaus, Greece.
- V. Gezerlis: (Currently) Senior Engineer, Hellenic Telecommunications Organization (OTE)
- Y. Kopsinis: (Currently) Research Fellow, Dept. of Electronics and Electrical Eng. University of Edinburgh, U.K.
- A Pikrakis: (Currently) Ast. Professor, Dept. of Informatics, University of Pireaus.
- C. Georgoulakis: (Currently) School Teacher.
- D. Delviniotis: (Currently) Research Fellow, University of Athens.
- M. Mavroforakis (Currently) Director, IT Department, National Bank of Greece
- H. Georgiou (Currently) Self Employed Consultant.
- I. Antonopoulos (Currently) Greek Government.
- T. Gianakopoulos (Currently), Res. Fellow Democritus Research Center, Greece.
- A. Beikos (Currently) Res. Fellow University of Patras
- D. Katselis (Currently), Res. Fellow, KTH, Sweden
- A. Makris (Currently) Res. Fellow, INRIA
- V. Dalakas (Currently) Charokopeio University, Greece.
- C. Rizogiannis (Currently) Greek Army.
- S. Tzikopoulos (Currently) Post Doc, Univ. of Pennsylvania, U.S.A.
- S. Chouvardas (Currently) Post Doc. Univ. of Athens.

• Invited Visiting Posts

- **Otto Monstead Guest** Professor, Technical University of Denmark, 2012.
- Dept. of Signal Processing and Communications, University Carlos III, Madrid, Spain. Holder of the **Excellence Chair** of the University, 2011.
- Dept. of Computer Science, Hokkaido University, Japan
- Dept. of Systems Science, Kyoto University, Japan
- Technische Hochschule Darmstadt, Germany.
- Dept of Electrical Eng., University of Edinburgh, UK
- CNET, Lannion, France

• Reviewer

Reviewer to the journals

- IEEE Transactions on Signal Processing
- IEEE Transactions on Pattern Analysis and Machine Intelligence
- IEEE Transactions on Circuits and Systems
- IEEE Transactions on Image Processing
- IEEE Transactions on Communications
- IEEE Transactions on Neural Networks
- Signal Processing
- Advances on Signal Processing
- Pattern Recognition
- Pattern Recognition Letters

Conference Program Committees/Scientific Committees/Session Chairman

- ICASSP
- ISCAS
- IJCNN

- EC-VIP-MC
- EUSIPCO
- DSP
- ISPA
- IEEE WISP

- **Publications**

I: Thesis

- 1) S. Theodoridis, "A Study of the performance of Maximum Entropy Method in Spectral Analysis", PhD Thesis, Dept. of Electronics and Electrical Eng., University of Birmingham, U.K., Dec. 1978.
- 2) S. Theodoridis, "RLC Active Filters Dissertation, Dept. of Electronics and Electrical Eng., University of Birmingham, U.K., Oct. 1975.

II. Books

- 1) S. Theodoridis "Machine Learning: A Signal and Information Processing Perspective", Academic Press, (anticipated 950 pages), To appear, end 2014.
- 2) R. Chellapa, S. Theodoridis (Eds) "Academic Press Library in Signal Processing", Vols 1-4, Academic Press, 2013.
- 3) S. Theodoridis, K. Koutroumbas, "Pattern Recognition", Academic Press, 1st Edition 1998, 2nd Edition 2003, 3rd Edition 2006, 4th Edition 2009, 960 pages. **The book has been among the best selling titles of Academic Press and it has also been translated into Chinese and into Greek (more than 25000 copies sold).**
- 4) S. Theodoridis, A. Pikrakis, K. Koutroumbas, D. Cavouras, "Introduction to Pattern Recognition: A MATLAB based approach", Academic Press, 2010. **The book has been translated in Korean.**
- 5) S. Theodoridis, K. Berberidis "Introduction to the Theory of Signals and Systems", TYPWTHITW, 1998. (In Greek)
- 6) E. Sagriotis, S. Theodoridis "Image Analysis and Pattern Recognition", Greek Open University Press, 2000. (In Greek)
- 7) S. Karaboyas, S. Theodoridis "Signals and Systems", Greek Open University Press, 2000. (In Greek).
- 8) N. Kalouptsidis, S. Theodoridis (eds.), "Adaptive System Identification and Signal Processing Algorithms", Prentice Hall 1993.

III. Publications in Journals and Book Chapters

A. ACCEPTED

- 1) P. Bouboulis, S. Theodoridis, L.Dala "Complex Support Vector Machines for Regression and Quaternary Classification", IEEE Transactions on Neural Networks, to appear 2014.
- 2) K. Slavakis, P. Bouboulis, S. Theodoridis "Online Learning in Reproducing Kernel Spaces," Academic Press Library in Signal Processing, Academic Press, 2014.
- 3) S. Theodoridis, Y. Kopsinis, K. Slavakis "Sparsity-Aware Learning and Compressed Sensing: An Overview", Academic Press Library in Signal Processing, Academic Press, 2104.

- 4) S. Chouvardas, K. Slavakis, S. Theodoridis “Trading off complexity with communication costs in distributed adaptive learning via Krylov subspaces for dimensionality reduction,” *IEEE Journal of Selected Topics in Signal Processing*, Vol. 7(2), pp. 257-274, 2013.
- 5) K. Slavakis, Y. Kopsinis, S. Theodoridis, S. McLaughlin “Generalized thresholding and online sparsity-aware learning in a union of subspaces,” *IEEE Transactions on Signal Processing*, Vol.61(15), pp. 3760-3773, 2013.
- 6) S. Chouvardas, K. Slavakis, S. Theodoridis, I. Yamada “Stochastic analysis of hyperslab-based adaptive projected subgradients method under bounded noise,” *IEEE Signal Processing Letters*, pp. 729-732, 2013.
- 7) E. Kofidis, D. Katselis, A.A. Rontogiannis, S. Theodoridis, “Preamble-Based Channel Estimation in OFDM/OQAM Systems: A Review”, *Signal Processing*, Elsevier, vol. 93, pp. 2038-2054, 2013.
- 8) P. Bouboulis, S. Theodoridis, M. Mavroforakis “The augmented complex kernel LMS”, *IEEE Transactions on Signal Processing*, Vol 60(9), pp. 4962-4967, 2012.
- 9) S. Chouvardas, K. Slavakis, Y. Kopsinis, S. Theodoridis “A Sparsity promoting adaptive algorithm for distributed learning,” *IEEE Transactions on Signal Processing*, Vol. 60(10), pp. 5412-5425, 2012.
- 10) K. Slavakis, P. Bouboulis, S. Theodoridis “Nonlinear multivariable regression: The MIMO channel equalization case”, *IEEE Transactions on Neural Networks and Learning Systems*, Vol. 23(2), pp. 260-276, 2012.
- 11) P. Bouboulis, K. Slavakis, S. Theodoridis “Adaptive Learning in Complex Reproducing Kernel Hilbert Spaces employing Wirtinger's subgradients”, *IEEE Transactions on Neural Networks and Learning Systems*, Vol. 23(3), pp. 425-438, 2012.
- 12) K. Rizogiannis, E. Kofidis, A. Rontogiannis, S. Theodoridis “Adaptive BLAST-type Decision-Feedback Equalizers for DS-CDMA Systems,” *Signal Processing*, vol. 92, pp. 977-988, 2012.
- 13) A. Makris, D. Kosmopoulos, S. Perantonis, S. Theodoridis “A hierarchical feature fusion framework for adaptive visual tracking”, *Image and Vision Computing*, Elsevier, 2011.
- 14) S. Chouvardas, K. Slavakis, S. Theodoridis “Adaptive Robust Distributed Learning in Diffusion Sensor Networks”, *IEEE Transactions on Signal Processing*, Vol. 59(10), pp. 4692-4708, 2011.
- 15) P. Bouboulis, S. Theodoridis “Extension of Wirtinger Calculus to Reproducing Kernel Hilbert Spaces and the complex kernel LMS”, *IEEE Transactions on Signal Processing*, Vol. 59(3), pp. 964-978, 2011.
- 16) Y. Kopsinis, K. Slavakis, S. Theodoridis “On line sparse system identification and signal reconstruction using projections onto weighted l_1 balls”, *IEEE Transactions on Signal Processing*, Vol. 59(3), pp. 936-952, 2011.
- 17) S. Theodoridis, K. Slavakis, I. Yamada, “Adaptive learning in a world of projections: A unified framework for linear and nonlinear regression and classification tasks”, *IEEE Signal Processing Magazine*, Vol. 28(1), pp. 97-123, 2011. **(number six in the list of top downloaded papers in January 2011, IEEE SP Magazine).**
- 18) S. Tzikopoulos, M. Mavroforakis, H. Georgiou, N. Dimitropoulos, and S. Theodoridis “A fully automated scheme for mammographic segmentation and classification based on breast density and asymmetry”, *Computer Methods and Programs in Biomedicine*, V.102(1), pp. 47-63, 2011.
- 19) P. Bouboulis, K. Slavakis, S. Theodoridis, “Image denoising using kernels and semiparametric regularization”, *IEEE Transactions on Image Processing*, Vol. 19(6), pp. 1465-1480, 2010. **(number two in the list of top downloaded papers in June 2010 in IEEE Trans. IP).**

- 20) D. Katselis, E. Kofidis, T. Rontogiannis, S. Theodoridis “Preamble-based channel estimation for C_o-OFDM and OFDM/OQAM systems,” *IEEE Trans. On Signal Processing*, Vol. 58(5), pp. 2911-2916, 2010.
- 21) C. Rizogiannis, E. Kofidis, C. Papadias, S. Theodoridis, “Semi-blind maximum-likelihood joint channel/data estimation for correlated channels in multiuser MIMO networks”, *Signal Processing*, Vol. 90, pp.1209-1224, 2010.
- 22) K. Slavakis, S. Theodoridis, I Yamada, “Adaptive constrained learning in reproducing kernel Hilbert spaces”, *IEEE Transactions on Signal Processing*, pp. 4744-4764, Vol 57(12), 2009.
- 23) A. Rontogiannis, S. Theodoridis, “Housholder-Based RLS Algorithms”, in *QRD-RLS Adaptive Filtering*, J.A. Apolonario Jr., Springer 2009.
- 24) J. Vandewalle, L. Trajkovic, S. Theodoridis, “Introduction and outline of the special issue on circuits and systems education: experiences, challenges, and views,” *IEEE Circuits and Systems Magazine*, Vol. 9(1), pp. 27-33, 2009.
- 25) A. Pikrakis, T. Giannakopoulos, S. Theodoridis, "An Overview of Speech/Music Discrimination Techniques in the Context of Audio Recordings", in G. Tsihrintzis and L. Jain (Eds.) “Multimedia Services in Intelligent Environments - Advanced Tools and Methodologies”, book series “Studies in Computational Intelligence”, Volume 120, pp. 81-102, 2008, Publisher: Springer Berlin / Heidelberg, ISBN: 978-3-540-78491-3
- 26) D. Delviniotis, G. Kouroupetroglou, and S. Theodoridis, "Acoustic Analysis of musical intervals in modern Byzantine Chant Scales", *Journal of the Acoustical Society of America (JASA)*, Vol. 124(4), pp. EL262-EL269, 2008
- 27) D. Katselis, L. Kofidis, S. Theodoridis, “On Training Optimization for Estimation of Correlated MIMO Channels in the Presence of Multiuser Interference”, *IEEE Transactions on Signal Processing*, Vol. 56(10), pp. 4892-4904, 2008.
- 28) S. Theodoridis et. al “Design and characterization of the I-ImaS multi-element x-ray detector system”, *IEEE Transactions on Nuclear Science*, Vol. 55(3), pp. 827-832, 2008.
- 29) S. Theodoridis, et.al. “Preliminary images from an adaptive imaging system”, *Physica Medica.*, Vol. 24(3), pp. 117-121, 2008.
- 30) K. Slavakis, S. Theodoridis “Sliding Window Generalized Kernel Affine Projection Algorithm using Projection Mappings”, **Special Issue on Emerging Machine Learning Techniques in Signal Processing**, *EURASIP Journal on Advances in Signal Processing*, vol. 2008, Article ID 830381, 2008. doi:10.1155/2008/830381.
- 31) A. Pikrakis, T. Giannakopoulos, S. Theodoridis “A speech-music discrimination framework for radio broadcasts”, *IEEE Transactions on Multimedia*, Vol. 10(5), pp.846-858, 2008.
- 32) K. Slavakis, S. Theodoridis, I. Yamada “Online classification using kernels and projection-based adaptive algorithms”, *IEEE Transactions on Signal Processing*, Vol. 56(7), pp. 2781-2797, 2008.
- 33) A. Pikrakis, T. Giannakopoulos, S. Theodoridis, “An overview of speech/music discrimination techniques in the context of audio recordings”, *Studies in Computational Intelligence*, Volume 120, Pages 81-102, Springer Verlag (ISSN 1860-949X), 2008.
- 34) I. Antonopoulos, A. Pikrakis, S. Theodoridis, “Self-Similarity Analysis Applied on Tempo Induction from Music Recordings”, *Journal of New Music Research*, **Special Issue on Tempo Tracking**, Vol. 36(1), pp. 27 – 38, 2007.
- 35) Konidaris, B. Gatos, K. Ntzios, I. Pratikakis, S. Theodoridis and S. J. Perantonis, “Keyword-Guided Word Spotting in Historical Printed Documents Using Synthetic Data and User feedback”, *International Journal on Document Analysis and Recognition (IJ DAR)*, **Special Issue on Historical Documents**, Vol. 9, No. 2-4, pp. 167-177, 2007.
- 36) H. Georgiou, M. Mavroforakis, N. Dimitropoulos, D. Cavouras, S. Theodoridis “Multi-scaled morphological features for the characterization of mammographic masses using

- statistical classification schemes”, *Artificial Intelligence in Medicine*, Vol. 41, pp. 39-55, 2007.
- 37) M. Mavroforakis, M. Sdralis, S. Theodoridis “A geometric nearest point algorithm for the efficient solution of the SVM classification task”, *IEEE Transactions on Neural Networks*, Vol. 18(5), pp. 1545-1550, 2007.
 - 38) D. Katselis, E. Kofidis, S. Theodoridis “Estimation of correlated MIMO fading channels in interference-limited environments”, *Signal Processing*, Vol. 87(9), pp. 2177-2197, 2007.
 - 39) S. Theodoridis, M Mavroforakis “Reduced convex hulls: a geometric approach to support vector machines,” *IEEE Signal Processing Magazine*, Vol. 24(3), pp. 119-122, May 2007.
 - 40) A. Fant, P. Gasiorek, R. Turchetta, B. Avset, A. Bergamaschi, D. Cavouras, I. Evangelou, M.J. French, A. Galbiati, H. Georgiou, G. Hall, G. Iles, J. Jones, R. Longo, N. Manthos, M.G. Metaxas, M. Noy, J.M. Ostby, F. Psomadellis, G.J. Royle, H. Schulerud, R.D. Speller, P.F. van der Stelt, S. Theodoridis, F. Triantis, C. Venanzi “I-IMAS: A 1.5D sensor for high-resolution scanning”, *Nucl. Instr. Meth. Res. A*, Vol. 573, pp. 27-29, 2007.
 - 41) S. Theodoridis, et. al. “CMOS Monolithic Active Pixel Sensors”, *Nucl. Instrum. Meth. Res. A*, Vol. 582(3), pp. 866-870, 2007.
 - 42) V. Drakopoulos, P. Bouboulis, S. Theodoridis “Image compression using affine fractal interpolation on rectangular lattices”, *FRACTALS*, Vol. 14(4), pp. 259-269, December 2006.
 - 43) Y. Kopsinis, S. Theodoridis, E. Kofidis, “An efficient low complexity cluster-based MLSE equalizer for frequency-selective fading channels”, *IEEE Trans. on Wireless Communications*, Vol. 5(4), pp. 705-712, 2006.
 - 44) E. Kofidis, Y. Kopsinis, S. Theodoridis, “On the least Squares Performance of a Novel Efficient Center Estimation Method for Clustering-Based MLSE Equalization”, *IEEE Trans. on Signal Processing*, Vol. 54(4), pp. 1459-1472, 2006.
 - 45) A. Pikrakis, S. Theodoridis, D. Kamarotos “Recognition of musical patterns using hidden Markov models”, *IEEE Transactions on Audio, Speech and Language Processing*, Vol.14(5), pp. 1795-1807, 2006.
 - 46) M. Mavroforakis, S. Theodoridis “A geometric approach to support vector machine (SVM) classification, *IEEE Trans. on Neural Networks*, Vol. 17(3), pp.671-683, 2006. (**2009 Outstanding paper award** of the IEEE Transactions on Neural networks).
 - 47) E. Kofidis, V. Dalakas, Y. Kopsinis, S. Theodoridis, “A Novel Efficient Cluster-Based MLSE Equalizer for Satellite Communication Channels with M-QAM Signaling,” *EURASIP Journal on Applied Signal Processing*, vol. 2006, Article ID 34343, 2006.
 - 48) M. Mavroforakis, H Georgiou, N. Dimitropoulos, D. Cavouras, S. Theodoridis “Mammographic masses characterization based on localized texture and data set fractal analysis using linear, neural and support vector machine classifiers,” *Artificial Intelligence in Medicine*, Vol. 37, pp. 145-162, 2006.
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IV. Publications in International Conferences

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