

CURRICULUM VITAE

SERGIOS THEODORIDIS

Sept. Dec 2020

- **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 Honors),
Dept. of Physics,
University of Athens, Greece.

- **Professional Experience**

- 2020-Today: Distinguished Professor, Department of Electronic Systems, Aalborg University, Denmark.
- 2019-Today: Professor Emeritus, Department of Informatics and Telecommunications, National and Kapodistrian University of Athens, Greece.
- 1995-2019: Professor, Department of Informatics and Telecommunications, National and Kapodistrian University of Athens, Greece.
- 1984-1995: Department of Informatics and Computer Engineering, University of Patras, Greece.
- 1981-1983: Military Service.
- 1978-1981: Res. Fellow University of Birmingham, UK.

- **Research Interests:**

- Adaptive Systems and Algorithms.
- Distributed Learning.
- Sparsity-Aware Learning.
- fMRI data analysis.
- Dictionary learning.
- Bayesian learning.
- Machine Learning and Deep networks.
- OCR.
- Medical Applications.
- Signal Processing Applications in Music and Audio.

- **Education Related Activities:**

- Founder and director (2006-2012) of the Master's course in "Informatics in Medicine and Biology", Dept. of Informatics and Telecommunications, University of Athens.
- 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 for the first phase implementation.

• International Activities

Book Editorial Boards

- Editor in Chief, EURASIP Signal Processing Series, Academic Press, 2009-present.
- Editor in Chief, E-Reference Signal Processing, Elsevier, 2011-present.

Journal Editorial Boards

- **Editor in Chief, IEEE Transactions on Signal Processing, 2015-2017.**
- 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

- Co-chair EUSIPCO-2107.
- Technical Program co-Chair IEEE SSP-2105.
- Technical Program Co-Chair ISCCP-2014.
- Technical Program Co-Chair IEEE 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-Chair, 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 Advances on Machine Learning and Deep Neural Network, IEEE Proceedings.
- 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

- **Vice President for Publications, IEEE Signal Processing Society, 2018-2020.**
- Chairman, IEEE Signal Processing Theory and Methods Technical Committee, 2013-2014.
- 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 (2014-2016).
- 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

- EURASIP **Athanasios Papoulis Award**, 2017.
- IEEE Signal Processing Society **Education Award**, 2014.
- European Association for Signal Processing (EURASIP) **Meritorious Service Award**, 2014.
- IEEE Signal Processing Magazine **Best Paper Award**, 2014.
- IEEE Transactions on Neural Networks, **Outstanding Paper Award**, 2009.
- **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 **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 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)

- AiD: RISE, FUNDED EU, Budget 110,000, 2019-2022.
- MacSeNet: Marie Curie, Funded EU, Budget 500,000, 2015-2018.
- HANDICAM: FET, Funded by EU, 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.
- Design 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) Research Professor, National Space Research Institute.
- E. Kofidis: (Currently) Ass. Professor, Dept. of Statistics, University of Pireaus, Greece.
- V. Gezerlis: (Currently) Senior Engineer, Hellenic Telecommunications Organization (OTE).
- Y. Kopsinis: (Currently) Founder and CEO LIBRA, Scotland, U.K.
- A Pikrakis: (Currently) 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), Postdoc, University Illinois, Urbana Champaign.
- A. Makris (Currently) Res. Fellow, INRIA.
- V. Dalakas (Currently) Charokopeio University, Greece.
- C. Rizogiannis (Currently) IT Consultant.
- S. Tzikopoulos (Currently) Post Doc, Univ. of Pennsylvania, U.S.A.
- S. Chouvardas (Currently) Hwawei, Paris.
- G. Papageorgiou (Currently), Postdoc, University of Edinburgh, U.K.
- C. Chatzichristos (Currently), Postdoc Catholic University, Leuven, Belgium.
- K. Panousis (Currently), Postdoc, Cyprus University of Technology.

- **Invited Visiting Posts**

- Part-Time Professor, Chinese University of Hong-Kong, Shenzhen , China, 2017-2020.
- **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

- IEEE ICASSP.
- NIPS.
- IEEE 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, 1978.
- 2) S. Theodoridis, "RLC Active Filters Dissertation, Dept. of Electronics and Electrical Eng., University of Birmingham, U.K., 1975.

II. Books

- 1) S. Theodoridis "Machine Learning: A Bayesian and Optimization Perspective", Academic Press, (1050 pages), 2015.
- 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. F. Yin, L. Pan, T. Chen, S. Theodoridis, Z.-Q. Tom Luo, A. Zoubir, “Linear multiple low-rank kernel based stationary Gaussian processes regression for time series”, IEEE Transactions on Signal Processing, Vol. 68, pp. 5260-5275, 2020.
2. F. Yin, Z. Lin, Q. Kong, Y. Xu, D. Li, S. Theodoridis, S.R. Cui, “FedLoc: Federated learning framework for data-driven cooperative localization and location data processing”, IEEE Open Access Journal of Signal processing, Vol. 1, pp. 187-215, 2020.
3. I. Tomkos, D. Klonidis, E. Pikasis, S. Theodoridis, “Toward the 6G network era: Opportunities and Challenges”, IEEE IT Professional, Vol. 22, pp. 34-38, 2020.
- 1) M. Morante, Y. Kopsinis, S. Theodoridis, A. Protopappas, “Information assisted dictionary learning for fMRI data analysis, IEEE Access, Vol.8, DOI:10.1109/ACCESS.2020.2994276, 2020.
- 2) C. Chatzichristos, M. Morante, N. Andreadis, Y. Kopsinis, E. Kofidis, S. Theodoridis “Emojis influence autobiographical memory retrieval from reading words: An fMRI-based study, PLOS ONE, PONE-D-19-20481R2, 2020.
- 3) C. Chatzichristos, E. Kofidis, M. Morante, S. Theodoridis “Blind fMRI source unmixing via higher-order tensor decompositions”, Journal of Neuroscience Methods, Vol. 315, pp 17-47, 2019.
- 4) D. Delviniotis, S. Theodoridis “On exploring vocal ornamentation in Byzantine chant”, Journal of Voice, Vol. 33 (2), pp 256.e17-256.e34, 2019.
- 5) P. Bouboulis, S. Chouvardas, S. Theodoridis “Online Distributed Learning Over Networks in RKH Spaces Using Random Fourier Features”, IEEE Transactions on SP, Vol. 66 (7), pp. 1920-1932, 2018.
- 6) P. Bouboulis, S. Theodoridis, S.Chouvardas, A Random Fourier Features Perspective of KAFs with Application to Distributed Learning, in Adaptive Learning Methods in Nonlinear Modelling, Eds, D. Comminiolo, J. Principe, Butterworth-Heinemann, 2018.
- 7) J. Plata-Chaves, A. Bertrand, M.Moonen, S. Theodoridis, A. M. Zoubir, “Heterogeneous and multi-task wireless sensor networks - Algorithms, applications and challenges”, IEEE Journal on Special Topics on SP, Vol. 11(3), pp. 450-465, 2017.
- 8) G. Papageorgiou, P. Bouboulis, S. Theodoridis “Robust non-linear regression: A greedy approach employing kernels with application to image denoising”, IEEE Transactions on Signal Processing, 65(16), pp. 4309-4323, 2017.
- 9) S. Chouvardas, Y. Kopsinis, S. Theodoridis “Robust subspace tracking with missing entries: a set theoretic approach”, IEEE Transactions on Signal Processing, Vol. 63(19), pp. 5060-5070, 2015.

- 10) G. Papageorgiou, P. Bouboulis, S. Theodoridis “Robust linear regression analysis: the greedy approach”, IEEE Transactions on Signal Processing, Vol. 63(15), pp. 3872 – 3887, 2015.
- 11) P. Bouboulis, S. Theodoridis, C. Mavroforakis C., L. Dala “Complex Support Vector Machines for Regression and Quaternary Classification”, IEEE Transactions on Neural Networks, Vol. 26(6), pp.1260-1274, 2015.
- 12) S. Chouvardas, G. Mileounis, N. Kalouptsidis, S. Theodoridis “Greedy sparsity-promoting algorithms for distributed learning,” IEEE Transactions on Signal Processing, Vol 63(6), pp. 1419-1432, 2015.
- 13) S. Chouvardas, Y. Kopsinis, S. Theodoridis “Sparsity-aware distributed learning” in: S. Cui, A. Hero, J. Moura, Z.Q. Luo (Eds), Cambridge University Press, 2014.
- 14) K. Slavakis, P. Bouboulis, S. Theodoridis “Online Learning in Reproducing Kernel Spaces,” Academic Press Library in Signal Processing, Academic Press, 2014.
- 15) S. Theodoridis, Y. Kopsinis, K. Slavakis “Sparsity-Aware Learning and Compressed Sensing: An Overview”, Academic Press Library in Signal Processing, Academic Press, 2104.
- 16) 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.
- 17) 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(12), pp. 3760-3773, 2013.
- 18) 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.
- 19) 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.
- 20) P. Bouboulis, S. Theodoridis, M. Mavroforakis “The augmented complex kernel LMS”, IEEE Transactions on Signal Processing, Vol 60(9), pp. 4962-4967, 2012.
- 21) 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.
- 22) 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.
- 23) 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.
- 24) 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.
- 25) A. Makris, D. Kosmopoulos, S. Perantonis, S. Theodoridis “A hierarchical feature fusion framework for adaptive visual tracking”, Image and Vision Computing, Elsevier, 2011.
- 26) 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.
- 27) 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.

- 28) 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.
- 29) 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). Best paper award 2014.**
- 30) 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.
- 31) 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).**
- 32) D. Katselis, E. Kofidis, T. Rontogiannis, S. Theodoridis “Preamble-based channel estimation for C-OFDM and OFDM/OQAM systems,” IEEE Trans. On Signal Processing, Vol. 58(5), pp. 2911-2916, 2010.
- 33) 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.
- 34) 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.
- 35) A. Rontogiannis, S. Theodoridis, “Housholder-Based RLS Algorithms”, in QRD-RLS Adaptive Filtering, J.A. Apolonario Jr., Springer 2009.
- 36) 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.
- 37) A. Pikrakis, T. Giannakopoulos, S. Theodoridis, "An Overview of Speech/Music Discrimination Techniques in the Context of Audio Recordings", in G. Tsihrantzis 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
- 38) 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
- 39) 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.
- 40) 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.
- 41) S. Theodoridis, et.al. “Preliminary images from an adaptive imaging system”, Physica Medica., Vol. 24(3), pp. 117-121, 2008.
- 42) 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.
- 43) 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.

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IV. Publications in International Conferences

- 1) K. Panousis, S. Chatzis, S. Theodoridis, "Local Competition and Stochasticity for Adversarial Robustness Deep Learning", Proceedings Artificial Intelligence and Statistics (AISTATS) (30% acceptance rate), 2021.
- 2) Y. Dai, T. Zhang, Z. Lin, F. Yin, S. Theodoridis, S. Cui "An optimal yet explainable and sample efficient deep kernel for Gaussian process regression", Conference on Uncertainty in Artificial Intelligence (UAI) (25% acceptance rate), 2020.
- 3) K. Panousis, S. Chatzis, S. Theodoridis, "Nonparametric Bayesian deep networks with local competition", Proceedings International Conference on Machine Learning (ICML-20% acceptance rate), 2019.
- 4) Y. Seo, M. Morante, Y. Kopsinis, S. Theodoridis "Unsupervised pre-training of the brain connectivity dynamic using residual D-net", 26th International Conference on Neural Information Processing of the Asian-Pacific Neural Network, Sydney, 2019.
- 5) F. Yin, X. He, L. Pan, T. Chen, S. Theodoridis, Z.-Q. Luo, "Sparse Structure Enabled Grid Spectral Mixture Kernel for Temporal Gaussian Process Regression" , in Proc. Int. Conf. on Information Fusion (FUSION), Cambridge, UK, pp. 1-8, July, 2018.
- 6) C. Chatzichristos, L. Kofidis, S. Theodoridis "PARAFACA2 and its block term analog for blind fMRI source unmixing", European Signal Processing Conference, EUSIPCO, Kws, Greece, 2017.
- 7) M. Morante, Y. Kopsinis, E. Kofidis, C. Chatzichristos, S. Theodoridis "Assisted dictionary learning for fMRI data analysis", International Conference on Acoustics, Speech and Signal Processing (ICASSP), New Orleans 2017.

- 8) C. Chatzichristos, E. Kofidis, Y. Kopsinis, M. Morante Moreno, S. Theodoridis “Higher-Order Block Term Decomposition for Spatially Folded fMRI Data”, 13th Intl. Conf, on Latent Variable Analysis and Signal Separation (LVA/ICA), Grenoble, France, 2017.
- 9) D. Ampeliotis, C. Mavrokefalidis, K. Berberidis, S. Theodoridis “Adapt-align-combine for diffusion-based distributed dictionary learning”, European Signal Processing Conference, EUSIPCO, Budapest, Hungary, 2016.
- 10) S. Chouvardas, Y. Kopsinis, S. Theodoridis, “An online algorithm for distributed dictionary learning”, International Conference on Acoustics, Speech and Signal Processing (ICASSP), Brisbane, Australia, 2015.
- 11) Kopsinis Y., Chouvardas S., Theodoridis S. “Distributed robust subspace tracking,” European Signal processing Conference (EUSIPCO), Nice, France, 2015.
- 12) Papageorgiou G., Bouboulis P., Theodoridis S., “Robust regression in RKHS-An overview,” European Signal processing Conference (EUSIPCO), Nice France, 2015.
- 13) Y. Kopsinis, S. Chouvardas, S. Theodoridis, “Iterative randomized robust linear regression”, International Conference on Acoustics, Speech and Signal Processing (ICASSP), Brisbane, Australia, 2015.
- 14) A. Pikrakis, Y. Kopsinis, S. Chouvardas, S. Theodoridis, “ Pattern classification formulated as a missing data task: The audio genre classification case”, International Conference on Acoustics, Speech and Signal Processing (ICASSP), Brisbane, Australia, 2015.
- 15) S. Chouvardas, M. Mouma, S. Theodoridis, A. Zoubir “Distributed robust labeling of audio scenes in heterogeneous wireless sensor networks”, International Conference on Acoustics, Speech and Signal Processing (ICASSP), Brisbane Australia, 2015.
- 16) A. Pikrakis, S. Theodoridis “Speech-music discrimination: A deep learning perspective.” in European Signal processing Conference (EUSIPCO), Lisbon, Portugal, 2014.
- 17) P. Bouboulis, G Papageorgiou, S. Theodoridis, “Image denoising in RKHS via orthogonal matching pursuit,” Intl. Conference on Cognitive Information Processing (CIP), Copenhagen Denmark, 2104.
- 18) G. Papageorgiou, P. Bouboulis, S. Theodoridis, “Robust linear regression analysis: The greedy way,” in European Signal processing Conference (EUSIPCO), Lisbon, Portugal, 2014.
- 19) Y. Kopsinis, H. Georgiou, S. Theodoridis, “fMRI unmixing via properly adjusted dictionary learning,” in European Signal processing Conference (EUSIPCO), Lisbon, Portugal, 2014.
- 20) S. Chouvardas, Y. Kopsinis, S. Theodoridis, “An Adaptive Projected Subgradient based Algorithm for Robust Subspace Tracking” In Proc. International Conference on Acoustics Speece and Signal Processing, ICASSP, Florence: Italy, May 4-9, 2014.
- 21) K. Slavakis, Y. Kopsinis, S. Theodoridis, “New operators for fixed-point theory: The sparsity-aware learning case” In Proc. of European Signal Processing Conference, EUSIPCO (special session "Advances in set theoretic estimation and convex analysis for machine learning and signal processing tasks"), Marrakech, Morocco, Sept. 9-13, 2013.
- 22) K. Slavakis, Y. Kopsinis, S. Theodoridis, G. B. Giannakis, and V. Kekatos. “Generalized iterative thresholding for sparsity-aware online Volterra system identification,” In Proc. of International Symposium on Wireless Communication Systems (ISWCS), Ilmenau: Germany, Aug. 27-30, 2013.
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- 25) P. Bouboulis, S. Theodoridis, "Complex Support Vector Machines For Quaternary Classification," IEEE Intl. Workshop on Machine Learning for Signal Processing, MLSP, September 22 - 25, Southampton, United Kingdom, 2013.
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- 28) G. Papageorgiou, P. Bouboulis, S. Theodoridis, Robust Kernel-Based Regression Using Orthogonal Matching Pursuit, IEEE Intl. Workshop on Machine Learning for Signal Processing., MLSP, September 22 - 25, Southampton, United Kingdom, 2013.
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- 32) D. Katselis, E. Kofidis, S. Theodoridis "On OFDM/OQAM receivers," 20th European Signal Processing Conf. (EUSIPCO-2012)," Bucharest, Romania, Aug. 27-31, 2012.
- 33) P. Bouboulis, S. Theodoridis, Ch. Mavroforakis "Complex Support Vector Regression," 3rd Intl. Workshop on Cognitive Information Processing (CIP -2012), May 28 - 30, Parador de Baiona, Spain, 2012.
- 34) Y. Kopsinis, K. Slavakis, S. Theodoridis, S. McLaughlin "Generalized thresholding sparsity-aware algorithm for low complexity online learning", Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), pp. 3277-3280, Kyoto: Japan, March 25-30, 2012.
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- 39) P. Bouboulis, S. Theodoridis “The complex Gaussian kernel LMS algorithm”, 20th International Conference on Artificial Neural Networks,” ICANN, Thessaloniki, Greece, 2010.
- 40) P. Bouboulis, S. Theodoridis, K. Slavakis “Edge preserving image denoising in Reproducing Kernel Hilbert Spaces”, International Conference on Pattern Recognition, ICPR, Istanbul, Turkey, 2010. (**Best Paper Award.**)
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- 55) T. Giannakopoulos, A. Pikrakis, S. Theodoridis “A Novel Efficient Approach for Audio Segmentation”, 19th International Conference on Pattern Recognition (ICPR), Florida, 2008.

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- 57) A. Pikrakis, T. Giannakopoulos, S. Theodoridis “Gunshot detection in audio streams from movies by means of dynamic programming and Bayesian networks”, IEEE Intl. Conference on Acoustics Speech and Signal Processing, ICASSP, Las Vegas, 2008.
- 58) K. Slavakis, S. Theodoridis “A generalized kernel affine projection algorithm using convex optimization”, IEEE Intl. Symposium on Circuits and Systems, ISCAS, Seattle, 2008.
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