



Kostas Berberidis

CURRICULUM VITAE

(last update 1st Sept. 2009)

Personal

- Born in Serres, Greece, in 1962.
- Married with two children.

Education

- Diploma degree in electrical engineering from the Democritus University of Thrace, Greece, in 1984.
- Ph.D. degree in computer engineering and informatics from the University of Patras, Greece, in 1990.
- Postdoctoral Fellow at C.C.E.T.T. (Centre Commun d'Etudes de Telediffusion et Telecommunications), France (academic year 1994/95).

Research and Academic Positions

- National Defense Research Center, Speech Processing Lab (1991).
- Research and Academic Computer Technology Institute (1992-94 & 1996-97)
- CNET (CCETT), France (1994-95).
- Dept. of Computer Engineering and Informatics (CEID), School of Engineering, University of Patras
 - Assistant Professor, 1997-2002
 - Associate Professor, 2002 - 2007
 - Professor, since 2007
 - Head of the Signal Processing & Communications Lab, 2002 - today

Miscellaneous activities

- Associate Editor, IEEE Transactions on Signal Processing (2005-2008).
- Associate Editor, IEEE Signal Processing Letters (2009-today).
- Associate Editor, EURASIP Journal on Applied Signal Processing (2004 – today).
- Best Paper Awarding Committee for EURASIP JASP Journal.
- Guest Co-Editor for a EURASIP JASP Special Issue.
- Associate Editor, Pattern Recognition Journal (Elsevier) (2006 – today).
- Member of Organizing and Program Committees of International Conferences.
- Member of Evaluation Committees for EU and Hellenic Programs.
- Reviewer for several international journals and conferences.
- Supervised 4 and co-supervised 6 Ph.D. students.
- Currently, supervision of 5 Ph.D. students and co-supervision of other 4.
- Supervised more than 25 MSc theses and more than 90 diploma (final year) theses.
- 15 years teaching experience at a University level.
- Author of three textbooks. One of them is used as a course textbook in 8 different universities.
- Project leader of several R&D projects funded by International, European and Hellenic organizations.
- Served or has been serving at several Administrative positions at the University of Patras and other organizations, such as, Director of the Hardware Division of the CEID, Member of the BoD of CEID, Member of the BoD of the Postgraduate Program “Signal Processing & Communication Systems”, Member of the Patras University Senate, Member of the ICT Committee of Patras University.

Professional and Scientific Societies

- The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
- IEEE Signal Processing Society.
- IEEE Communications Society.
- European Association for Signal Processing (EURASIP)
- Technical Chamber of Greece.

- Greek Association of the Electrical and Electronic Engineers.
- Greek Association for Image Processing and Digital Media.

Research Interests

- Digital Communications / Communications Signal Processing
- Digital Signal Processing and System Identification / Fast Algorithms
- Adaptive Filtering Algorithms
- Array Processing and Adaptive Antennas
- Biomedical Signal Processing
- Sensor Networks
- Image Processing / Watermarking

Publications and International Patents

Journal Publications

- J1. S. Theodoridis, K. Berberidis, N. Kalouptsidis, "A New Adaptive Covariance Symmetric Algorithm and a Fast Initialization Scheme for LS FIR Filters with Symmetric Impulse Response", *Signal Processing* (18), pp. 153-167, Oct. 1989.
- J2. K. Berberidis, S. Theodoridis, "A Normalized Lattice Algorithm for AR Spectral Analysis and System Identification Filters with Symmetric Impulse Response", *IEEE Trans. on Acoustics, Speech, and Signal Processing (ASSP)*, vol. 38, no. 3, pp. 397-405, Mar. 1990.
- J3. K. Berberidis, S. Theodoridis, "New Levinson, Schur, and Lattice type Algorithms for Linear Phase Filtering", *IEEE Trans. on ASSP*, vol. 38, no. 11, pp. 1879-1892, Nov. 1990.
- J4. S. Theodoridis, K. Berberidis, "Adaptive LS Lattice Algorithm for Linear Phase Filtering", in the "Algorithms and Parallel VLSI Architectures", Alle-Jan van der Veen (Ed.), North-Holland, 1991.

- J5. K. Berberidis, S. Theodoridis, "Efficient Symmetric Algorithms for the Modified Covariance Method for Autoregressive Spectral Analysis", *IEEE Trans. on Signal Processing*, vol. 41, No. 1, pp. 43-54, Jan. 1993.
- J6. T. Antonakopoulos, K. Berberidis, V. Makios, "A Computationally Efficient Method for Tone Detection in Noisy Channels", *International Journal of Electronics*, vol. 74, No. 6, pp. 885-900, 1993.
- J7. S. Theodoridis, G.V. Moustakides, K. Berberidis, "A Fast Newton Multichannel Algorithm for Decision Feedback Equalization", *IEEE Transactions on Signal Processing*, vol. 43, No. 1, pp. 327-331, Jan. 1995.
- J8. G.V. Moustakides, K. Berberidis, "New Efficient LS and SVD Based Techniques for High Resolution Frequency Estimation", *IEEE Transactions on Signal Processing*, vol. 43, No. 1, pp. 85-95, Jan. 1995.
- J9. K. Berberidis, J. Palicot, "A Frequency Domain Quasi Newton Algorithm", *Signal Processing* (47), pp. 235-238, 1995.
- J10. K. Berberidis, A.A. Rontogiannis, S. Theodoridis, "Efficient Time Domain Implementation of the Block Adaptive DFE", *IEEE Signal Processing Letters*, vol.5, pp.129-132, June 1998.
- J11. K. Berberidis, S. Theodoridis, "A New Fast Block Adaptive Algorithm", *IEEE Transactions on Signal Processing*, vol.47, pp.75-87, Jan.1999.
- J12. G.O. Glentis, K. Berberidis, and S. Theodoridis, "Efficient least squares adaptive algorithms for FIR transversal filtering: a unified view", *IEEE Signal Processing Magazine*, vol.16, no.4, pp.13-42, July 1999.
- J13. P. Spyridonos, P. Ravazoula, D. Cavouras, K. Berberidis, G. Nikiforidis, "Computer-based Grading of Hematoxylin-Eosin Stained Tissue Sections of Urinary Bladder Carcinomas", *Medical Informatics* (2001), vol.26, no.3, pp.179-190.
- J14. K. Berberidis, P. Karaivazoglou, "An Efficient Block Adaptive DFE Implemented in the Frequency Domain", *IEEE Transactions on Signal Processing*. vol.50, No.9, pp.2273-86, Sept. 2002.
- J15. A.A. Rontogiannis, K. Berberidis, "Efficient Decision Feedback Equalization for Sparse Wireless Channels", *IEEE Transactions on Wireless Communications*, vol.2, No.3, May 2003, pp.570-581.
- J16. A. Papadakis et al, "A novel Spectral Microscope System: Application in the Quantitative Mapping of the Expression of Estrogen and Progesterone Receptors in Breast Cancer Cells", *IEEE Trans. on Biomedical Engineering*, Vol.50, No.2, Feb. 2003, pp.207-217.
- J17. K. Berberidis, S. Rantos and J. Palicot, "A Step-by-Step Quasi-Newton Algorithm in the Frequency Domain and its Application to Adaptive Channel Equalization", *IEEE Transactions on Signal Processing*, Vol.52, No.12, Dec.2004, pp.3335-3344.

- J18. A.A. Rontogiannis, K. Berberidis, "Bandwidth Efficient Transmission Through Sparse Channels Using a Parametric Channel Estimation – based DFE", *IEE Proceedings Communications*, Vol.152, No.2, April 2005, pp.251-265.
- J19. A.A. Rontogiannis, K. Berberidis, A. Marava, and J. Palicot, "Efficient Semi-Blind Estimation of Multipath Channel Parameters via a Delay Decoupling Optimization Approach". *Signal Processing Journal (Elsevier)*, no. 85, 2005, pp. 2394-2411.
- J20. V. Kekatos, A.A. Rontogiannis, and K. Berberidis, "A Robust Parametric Technique for Multipath Channel Estimation in the Uplink of a DS-CDMA System", *EURASIP Journal on Wireless Communications and Networking*, Vol. 2006, Article ID 47938, pp.1-12.
- J21. A.A. Rontogiannis, V. Kekatos, and K. Berberidis, "A Square-Root Adaptive V-BLAST Algorithm for Fast Time-Varying MIMO Channels", *IEEE Signal Processing Letters*, vol.13, no.5, May 2006, pp.265-268.
- J22. I. Karybali and K. Berberidis, "Efficient Spatial Image Watermarking via New Perceptual Masking and Blind Detection Schemes". *IEEE Trans. on Information Forensics and Security*, June 2006, pp. 256-274.
- J23. D. Ampeliotis, K. Berberidis, "Low Complexity Turbo Equalization for High Data Rate Wireless Communications", *EURASIP Journal on Wireless Communications and Networking*, Volume 2006, Article ID 25686, pp. 1–12.
- J24. K. Berberidis, "Adaptive Filtering in the Frequency-Domain: The Quasi-Newton Case", In the book entitled "Recent advances in applied signals, systems and image processing", Springer-Verlag, to appear.
- J25. K. Berberidis, "An Efficient Partitioning-Based Scheme for 2-D Convolution and Signal Processing Applications", *Neural, Parallel and Scientific Computations journal*, Vol.15, 2007, pp.489-500.
- J26. V. Kekatos, A.A. Rontogiannis, and K. Berberidis, "Cholesky Factorization – based Adaptive BLAST DFE for Wideband MIMO Channels", *EURASIP Journal on Applied Signal Processing*, Volume 2007, Article ID 45789, pp.1-11.
- J27. G.C. Alexandropoulos, N.C. Sagias, and K. Berberidis, "On the Multivariate Weibull Fading model with Arbitrary Correlation Matrix", *IEEE Antennas & Wireless Propagation Letters*, vol.6, 2007, pp.93-95.
- J28. A. Lalos and L. Berberidis, "An Efficient Conjugate Gradient Algorithm in the Frequency-Domain: Application to Channel Equalization", *Signal Processing journal (ELSEVIER)*, vol.88, 2008, pp.99-116.
- J29. G. C. Alexandropoulos, N. C. Sagias, F. I. Lazarakis, and K. Berberidis, "New results for the multivariate Nakagami- m fading model with arbitrary correlation matrix and applications," *IEEE Transactions on Wireless Communications*. Vol.7, No.11, Nov.2008, pp.1-11.

- J30. I. Karybali, E. Z. Psarakis, K. Berberidis and G. D. Evangelidis, "*An Efficient Spatial Domain Technique for Subpixel Image Registration*," *Signal Processing: Image Communication*, Elsevier, Vol. 23, Issue 9, pp. 711-724, Oct. 2008.
- J31. A. Lalos, V. Kekatos and K. Berberidis, "Adaptive Conjugate Gradient DFEs for Wideband MIMO Systems", *IEEE Transactions on Signal Processing*, vol. 57, No. 6, June 2009.
- J32. D. Ampeliotis, K. Berberidis, "Sorted Order-K Voronoi Diagrams for Model-Independent Source Localization in Wireless Sensor Networks", *IEEE Transactions on Signal Processing*. To appear 2010.
- J33. D. Ampeliotis, K. Berberidis, "Low Complexity Multiple Acoustic Source Localization in Sensor Networks based on Energy Measurements", *Signal Processing (Elsevier)*. Accepted, subject to revisions.

Conference Publications

- C1. K. Berberidis, S. Theodoridis, "An Adaptive Normalized Lattice Algorithm for LS FIR Multichannel Filters with Linear Phase", *Proceedings of the 1988 IEEE International Symposium on Circuits and Systems (ISCAS-88)*, , pp. 301-304, Helsinki, June 1988.
- C2. S. Theodoridis, K. Berberidis, N. Kalouptsidis, "Adaptive Covariance type Internally Symmetric Algorithm for LS FIR Filtering with Linear Phase", *Proceedings of the 1988 IEEE Int. Symp. on Circuits and Systems (ISCAS-88)*, pp. 35-38, Helsinki, June 1988.
- C3. K. Berberidis, S. Theodoridis, "A New Adaptive Linear Phase LS Lattice Structure with Application to Spectral Line Estimation", *Proceedings of the 1989 IEEE Int. Symp. on Circuits and Systems (ISCAS-89)*, Portland, Oregon, May 1989.
- C4. K. Berberidis, S. Theodoridis, "A New Fast Split-type Algorithm for Adaptive Autoregressive Spectral Analysis", *Proceedings of the 1990 IEEE Int. Symp. on Circuits and Systems (ISCAS-90)*, pp. 283-286, New Orleans, May 1990.
- C5. K. Berberidis, S. Theodoridis, "Efficient Order Recursive Algorithms for Linear Phase Filtering", *Proceedings of the 5-th European Signal Processing Conference (EUSIPCO-90)*, pp. 469-472, Barcelona, Sept. 1990.
- C6. G.V. Moustakides, K. Berberidis, "New LS and SVD Based Methods for Estimating Frequencies of Complex Sinusoids", *Proceedings of the 1993 IEEE Int. Symp. on Circuits and Systems (ISCAS-93)*, pp. 451-454, Chicago, IL, May 1993.
- C7. S. Theodoridis, G.V. Moustakides, K. Berberidis, "A Fast Adaptive Algorithms for Multichannel System Identification - Application to DFE", *Proceedings of the 7-th European Signal Processing Conference (EUSIPCO-94)*, pp. 728-731, Edinburgh, Sept. 1994.

- C8. K. Berberidis, S. Theodoridis, "An Efficient Block Newton-type Algorithm", Proceedings of the IEEE Int. Conference on Acoustics, Speech, and Signal Processing (ICASSP-95), pp. 1133-1136, Detroit, May 1995.
- C9. K. Berberidis, J. Palicot, "Une Version Fréquentielle de l'Égaliseur à Retour de Décision pour la Correction des Canaux à Réponse Impulsionnelle Longue", Proceedings of the 15-th GRETSI Symposium on Signal and Image Processing, Juan les Pins, France, September 1995.
- C10. K. Berberidis, J. Palicot, "A Frequency-Domain Decision Feedback Equalizer for Multipath Echo Cancellation", Proceedings of the 1995 IEEE Global Telecommunications Conference (GLOBECOM-95), Singapore, November 1995.
- C11. K. Berberidis, J. Palicot, "A Block Quasi-Newton Algorithm Implemented in the Frequency Domain", Proceedings of the 1996 IEEE Int. Conference on Acoustics, Speech, and Signal Processing (ICASSP-96), Atlanta, May 1996, pp. 1732-1735.
- C12. K. Berberidis, J. Palicot, "A New Frequency-Domain Equalizer for Channels with Long Impulse Response", Proceedings of the 8-th European Signal Processing Conference (EUSIPCO-96), Trieste, Sept. 1996.
- C13. K. Berberidis, T. Rontogiannis, S. Theodoridis, "Efficient Block Implementation of the DFE", (Invited Paper), Proceedings of Digital Signal Processing Conference (DSP-97), co-organized by IEEE and EURASIP, Santorini, Greece, July 1997.
- C14. K. Berberidis, P. Karaivazoglou, "A Block Adaptive DFE in the Frequency Domain Based on Tentative Decisions", Proceedings of the 9-th European Signal Processing Conference (EUSIPCO-98), Rodos, Greece, Sept. 1998.
- C15. K. Berberidis, T. Rontogiannis, "Efficient DFE for Sparse Multipath Channels", Proceedings of the 2000 IEEE Int. Conference on Acoustics, Speech, and Signal Processing (ICASSP-2000), Istanbul (Konstantinoupolis), Turkey, June 2000.
- C16. P. Panagakis, D. Briassoulis, K. Berberidis, P. Karaivazoglou, E. Dimas, "Early-weaned Piglets Weight Estimation Using Image Analysis", Proceedings of AgEng-2000, UK, Warwick, July 2000.
- C17. P. Karaivazoglou, K. Berberidis, "A New Efficient Decision-Aided ISI Canceller for Mobile Communication Systems", Proceedings of the 2000 IEEE Conference on Vehicular Technology (VTC-2000, fall), Boston, USA, Sept. 2000.
- C18. K. Berberidis, S. Rantos, J. Palicot, "Transform Domain Quasi-Newton Algorithms for Adaptive Equalization in Burst Transmission Systems", Proc. of the 2001 IEEE Int. Conference on Acoustics, Speech, and Signal Processing (ICASSP-2001), Salt Lake City, USA, May 2001.
- C19. A. Rontogiannis, K. Berberidis, "A Low Complexity Decision Feedback Equalizer for Wideband Wireless Applications", Proc. of the IEEE Int. Conference on Communications (ICC-2001), Bucarest, June 2001.

- C20. K. Berberidis, G. Foukarakis, “A New Technique for Tracking Coherent Sources Based on Subspace Updating”, Proc. of the IEEE Int. Conference on Telecommunications (ICT-2001), Bucarest, June 2001.
- C21. K. Berberidis, S. Rantos, J. Palicot, “Un algorithme Quasi-Newton dans le domaine fréquentiel pour l'égalisation de transmission en salves”, Proceedings of the 18-th GRETSI Symposium on Signal and Image Processing, Toulouse, France, Sept. 2001.
- C22. K. Berberidis, A. Marava, P. Karaivazoglou, J. Palicot, “Robust and Fast Converging Decision Feedback Equalizer Based on a New Adaptive Semi-blind Channel Estimation Algorithm”, Proc. of the 2001 IEEE Global Communications Conference (GLOBECOM-2001), San Antonio, USA, Nov. 2001.
- C23. I. Karybali, K. Berberidis, C. Balas, “A High-Performance Image Registration Technique and Application to Multispectral Imaging for Medical Diagnosis”, Proc. of the 2002 European Conference On Biomedical Signal Processing (BIOSIGNAL-2002), Brno, June 2002.
- C24. K. Berberidis, I. Karybali, “A New Efficient Cross-Correlation Based Image Registration Technique with Improved Performance”, Proc. of the 11-th European Signal Processing Conference (EUSIPCO-2002), Toulouse, France, Sept. 2002.
- C25. A.A. Rontogiannis, A. Marava, K. Berberidis and J. Palicot, “Semi-Blind Estimation of Multipath Channel Parameters via a Separable Least Squares Approach”, Proc. of the 2002 Digital Signal Processing Conference (DSP-2002), co-organized by IEEE and EURASIP, Santorini, Greece, July 2002.
- C26. A.A. Rontogiannis, K. Berberidis, A. Marava “A Blind Equalization Technique for Wireless Burst Transmission Systems”, Proc. of the 11-th European Signal Processing Conference (EUSIPCO-2002), Toulouse, France, Sept. 2002.
- C27. K. Berberidis, “Block Subspace Updating Algorithms for Tracking Directions of Coherent Signals in SDMA Mobile Systems”, Proc. of the 9th IEEE International Symposium on Electronics, Circuits, and Systems (ISECS-2002), Dubrovnik, Croatia, Sept. 2002.
- C28. K. Berberidis, “An Efficient Partitioning-Based Scheme for 2D-Convolution”, Proc. of the 9th IEEE International Symposium on Electronics, Circuits, and Systems (ISECS-2002), Dubrovnik, Croatia, Sept. 2002.
- C29. A.A. Rontogiannis, A. Marava, K. Berberidis and J. Palicot, “Efficient Multipath Channel Estimation using a Semiblind Parametric Technique”, Proc. of the 2003 IEEE Int. Conference on Acoustics, Speech, and Signal Processing (ICASSP-2003), Hong Kong, April 2003. The work has also been presented in the 2003 IEEE Workshop on Neural Networks for Signal Processing (IEEE NNSP-2003), Toulouse, France, Sept. 2002.
- C30. I. Nikita, K. Michmizos, K. Berberidis, G. Kostopoulos, “Carbachol induces fast oscillations (20-45Hz) with greater probability and intensity in ventral than in dorsal hippocampal slices of the rat”, International Neuroscience Conference, Athens, Oct. 2003. (among the **awarded** papers of the conference).

- C31. I. Karybali, K. Berberidis, “Blind Image-Adaptive Watermarking”, Proc. of the 2003 IEEE International Symposium on Electronics, Circuits, and Systems (ISECS-2003), Sharjah, United Arab Emirates, Dec. 2003.
- C32. A. Rontogiannis, K. Berberidis, “Bandwidth Efficient Transmission Through Sparse Channels Using a Parametric Channel Estimation Based – DFE”, Proc. of the 5th IEEE Workshop on Signal Processing Advances in Wireless Communications (SPAWC-2004), Lisboa, Portugal, July 2004.
- C33. I. Karybali, K. Berberidis, “A New Blind Image-Adaptive Watermarking Scheme: Theoretical and Experimental Results”, Proc. of the 12-th European Signal Processing Conference (EUSIPCO-2004), Wien, Austria, Sept. 2004.
- C34. J. Palicot, C. Roland, K. Berberidis, “Multiresolution Broadcast using Partial Response Modulation”, Proc. of the 2005 International Conference on Telecommunications (ICT-2005), Cape Town, South Africa, May 2005.
- C35. V. Kekatos, A.A. Rontogiannis, K. Berberidis, “A Robust Method for Estimating Multipath Channel Parameters in the Uplink of a DS-CDMA System”, Proc. of the IEEE Vehicular Technology Conference (IEEE VTC-2005 spring), Stockholm, Sweden, June 2005.
- C36. I. Karybali, K. Berberidis, “Improved Embedding of Multiplicative Watermarks via Space-Time Block Coding”, Proc. of the 13-th European Signal Processing Conference (EUSIPCO-2005), Antalya, Turkey, Sept. 2005.
- C37. D. Ampeliotis, K. Berberidis, “A Linear Complexity Turbo Equalizer”, Proc. of the 13-th European Signal Processing Conference (EUSIPCO-2005), Antalya, Turkey, Sept. 2005.
- C38. K. Berberidis, “Frequency Domain Adaptive Filtering in Signal Processing and Communications”, International Workshop on Systems, Signals and Image Processing – IWSSIP-05, (by IEEE, IEE, EURASIP). **Plenary Talk**. Chalkis, Greece, Sept. 2005.
- C39. D. Ampeliotis, K. Berberidis, “A Low-Complexity Turbo Equalizer”, Proc. of the PCI-2005, Volos, Greece, Sept. 2005. Also selected for publication in the Lecture Notes for Computer Science (LNCS), ISSN 0302-9743, Springer-Berlin, 2005.
- C40. A.A. Rontogiannis, V. Kekatos, and K. Berberidis, “A Square-Root Adaptive V-BLAST Algorithm for Fast Time-Varying MIMO Channels”, Proc. of the 2006 IEEE International Conference on Communications (ICC-2006).
- C41. A.A. Rontogiannis, V. Kekatos, and K. Berberidis, “An Adaptive Decision Feedback Equalizer for Time-Varying Frequency Selective MIMO Channels”, Proc. of the 7-th IEEE International Workshop on Signal Processing Advances in Wireless Communications (IEEE SPAWC-2006), Cannes, France, July 2006.
- C42. D. Ampeliotis, K. Berberidis, “A Linear Complexity Turbo Equalizer Based on a Modified Soft Interference Canceller”, Proc. of the 7-th IEEE International Workshop on Signal Processing Advances in Wireless Communications (IEEE SPAWC-2006), Cannes, France, July 2006.

- C43. A. Lalos, K. Berberidis, "A Frequency-Domain Conjugate Gradient Algorithm and its Application to Channel Equalization", Proc. of the 14-th European Signal Processing Conference (EUSIPCO-2006), Florence, Italy, Sept. 2006.
- C44. I. Karybali, E. Psarakis, K. Berberidis, and G. Evaggelidis, "Efficient Image Registration With Subpixel Accuracy", Proc. of the 14-th European Signal Processing Conference (EUSIPCO-2006), Florence, Italy, Sept. 2006.
- C45. V. Kekatos, K. Berberidis and A.A. Rontogiannis, "A Block Adaptive Frequency-Domain MIMO DFE for Wideband Channels", Proc. of the 2007 IEEE Int. Conference on Acoustics, Speech, and Signal Processing (ICASSP-2007), Hawaii, USA, April 2007.
- C46. K.P. Michmizos, C.Argyropoulos, V. Aidinis, G. Nikiforidis and K. Berberidis, "A Novel Region Growing Technique for Segmenting Microarray Spot Images", Proc. of the 2007 IEEE International Workshop on Imaging Systems and Techniques, IEEE IST 2007, Krakow, Poland, May 2007.
- C47. D. Ampeliotis, K. Berberidis, "Distributed Cancellation-Based Multiple-Source Localization for Wireless Sensor Networks", Proc. of the 15th European Signal Processing Conference, EUSIPCO-2007, Poznan, Poland, Sept. 2007.
- C48. V. Kekatos, A.S. Lalos, and K. Berberidis, "Adaptive Conjugate Gradient DFEs for Wideband MIMO Systems using Galerkin Projections", Proc. of the IEEE Vehicular Technology Conference, IEEE VTC-2007-fall, Baltimore, USA, Sept. 2007.
- C49. G.C. Alexandropoulos, N.C. Sagias, F.I. Lazarakis, A.A. Alexandridis, K. Dangakis and K. Berberidis, "Householder Matrices-Based Analysis of Multichannel Receivers in Nakagami-m Fading with Arbitrary Correlation", 18th IEEE Annual International Symposium on Personal Indoor and Mobile Radio Communications (PIMRC 2007), Athens, Greece, Sept.2007
- C50. G.C. Alexandropoulos, K. Berberidis, N.C. Sagias, F.I. Lazarakis, C.K. Datsikas, A.A. Alexandridis, K. Dangakis, "On the Sum of Squared Correlated Rayleigh Variates and Applications to Maximal-Ratio Diversity", 18th IEEE Annual International Symposium on Personal Indoor and Mobile Radio Communications (PIMRC 2007), Athens, Greece, Sept.2007.
- C51. D. Ampeliotis, A. Antonakoudi, K. Berberidis and E.Z. Psarakis, "Computer Aided Detection of Prostate Cancer using Fused Information from Dynamic Contrast Enhanced and Morphological Magnetic Resonance Images", Proc. of the 2007 IEEE International Conference on Signal Processing and Communication (ICSPC-07), Dubai, UAE, Nov.2007.
- C52. G.C. Alexandropoulos, N.C. Sagias, F.I. Lazarakis and K. Berberidis, "New Results on SC and MRC over Nakagami-m Fading Channels with Arbitrary Correlation Matrix", Proc. of the 2007 IEEE Global Communications Conference, GLOBECOM-2007, Washington, USA, Nov. 2007.
- C53. P. Karaivazoglou, V. Paliouras, K. Karagianni and K. Berberidis, "Finite Word Length Analysis of the EBA-DFE", Proc. of the 3rd International Symposium on Communications, Control and Signal Processing (ISCCSP) 2008, Malta, March 2008.

- C54. D. Ampeliotis, D. A. Antonakoudi, K. Berberidis, E.Z. Psarakis, A. Kounoudes, "A Computer-Aided System for the Detection of Prostate Cancer Based on Magnetic Resonance Image Analysis", Proc. of the 3rd International Symposium on Communications, Control and Signal Processing (ISCCSP) 2008, Malta, March 2008.
- C55. C. Mavrokefalidis, K. Berberidis and A.A. Rontogiannis, "Semi-blind Channel Estimation Schemes based on a Cooperative Form of the Cross-relation Criterion", Proc. of the IEEE International Symposium on Wireless Pervasive Computing, ISWPC-2008, Santorini, Greece, May 2008.
- C56. A. Lalos, A.A. Rontogiannis and K. Berberidis, "Channel Estimation Techniques for Half-Duplex Cooperative Communication Systems", Proc. of the IEEE International Symposium on Wireless Pervasive Computing, ISWPC-2008, Santorini, Greece, May 2008.
- C57. P. Karaivazoglou, K. Karagianni, V. Paliouras and K. Berberidis, "Roundoff Error Effects on a Quasi-Newton Frequency Domain Channel Equalizer", Proc. of the IEEE International Symposium on Wireless Pervasive Computing, ISWPC-2008, Santorini, Greece, May 2008.
- C58. A. Lalos, A.A. Rontogiannis and K. Berberidis, "Channel Estimation Techniques in Amplify and Forward Relay Networks". Proc. of the IEEE Workshop on Signal Processing Advances for Wireless Communications. Recife, Brasil, July 2008.
- C59. D. Ampeliotis, K. Berberidis, "Linear Least Squares Based Acoustic Source Localization Utilizing Energy Measurements". Proc. of the 5th IEEE Sensor Array and Multichannel Signal Processing Workshop. Darmstadt, Germany, July 2008.
- C60. D. Ampeliotis, A.A. Rontogiannis, K. Berberidis, M. Papaleo, and G.E. Corazza, "Turbo Equalization of Non-Linear Satellite Channels using Soft Interference Cancellation". Proc. of the 4th Advanced Satellite Mobile Systems Conference. Bologna, Italy, August 2008.
- C61. D. Ampeliotis, K. Berberidis, "Energy-Based Model-Independent Source Localization in Wireless Sensor Networks". Proc. of the 16th European Signal Processing Conference, EUSIPCO-2008. Lausanne, Switzerland, Sept. 2008.
- C62. C. Tsinos, K. Berberidis, "An Adaptive Beamforming Scheme for Cooperative Wireless Networks", Proc. of the Digital Signal Processing conference (DSP-2009), Santorini, Greece, July 2009.
- C63. C. Tsinos, K. Berberidis, "A New Cooperative Technique for Wireless Communications with Improved Diversity-Multiplexing Tradeoff", Proc. of the 16th European Signal Processing Conference, EUSIPSO-2009, Glasgow, Aug. 24-28, 2009.
- C64. G.A. Ropokis, A.A. Rontogiannis, K. Berberidis, P. Mathiopoulos, 'Performance Analysis of Maximal Ratio Combining over Shadowed-Rice Fading Channels', Proc. of the 2009 International Workshop on Satellite and Space Communications (IWSSC 2009), 10th-11th September 2009, Siena-Tuscany, Italy.

Contributions to International Standards

S1. ETSI, BRAN #24 D084, "On the Length of Burst Preamble for Equalization Purposes in Hiperaccess", June 2001, Sophia Antipolis.

International Patents

P1. K. Berberidis, J. Palicot, "Procédé de Filtrage Numérique Adaptatif Dans le Domain Fréquentiel", Patent PCT/FR96/01377. Sponsored by France Telecom and Telediffusion de France.

P2. K. Berberidis, J. Palicot, "Dispositif de Filtrage Avec Retour de Décision Dans le Domain Fréquentiel", Patent PCT/FR96/01378. Sponsored by France Telecom and Telediffusion de France.

P3. K. Berberidis, J. Palicot, "Decision Feedback Filter Device Working in the Frequency Domain", Patent US N° 09/043,142. Sponsored by France Telecom and Telediffusion de France.

P4. K. Berberidis, A. Marava, P. Karaivazogloy and J. Palicot, "A Fast Converging DFE based on Semi-blind Channel Identification in the Frequency Domain". Patent PCT/FR02/00983. Sponsored by France Telecom R&D.