
SHORT CURRICULUM VITAE

Athanasios P. Liavas

Professor

Personal Information

Date of birth : June 9, 1966
Nationality Greek
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Education

Sep 1989 – Oct 1993 *Ph.D in Engineering*
Department of Computer Engineering and Informatics
University of Patras, Greece
Thesis title : Efficient concurrent algorithms for Signal
Processing and System Identification
Supervisor : Prof. Sergios Theodoridis

Sep 1984 – Jun 1989 *B.Sc. in Computer Engineering and Informatics*
Department of Computer Engineering and Informatics
University of Patras, Greece

Research interests

- Signal Processing for Communications
- Wireless Communications
- Convex Optimization

Employment

<i>Sep 2013 – Present</i>	<i>Professor</i> Dept. ECE, Technical University of Crete, Greece.
<i>Sep 2011 – Aug 2013</i>	<i>Professor and Department ViceChair</i> Dept. ECE, Technical University of Crete, Greece.
<i>Sep 2009 – Aug 2011</i>	<i>Professor and Department Chair</i> Dept. ECE, Technical University of Crete, Greece.
<i>Mar 2004 – Aug 2009</i>	<i>Associate Professor</i> Dept. ECE, Technical University of Crete, Greece.
<i>Aug 2001 – Feb 2004</i>	<i>Assistant Professor</i> Dept. Mathematics, University of the Aegean, Greece.
<i>Jan 1999 – Jul 2001</i>	<i>Visiting Assistant Professor</i> Dept. Informatics, University of Ioannina, Greece.
<i>Jun 1998 – Dec 1998</i>	<i>Marie Curie Fellow (Return Grant)</i> Dept. Informatics, University of Athens, Greece.
<i>Jun 1996 – May 1998</i>	<i>Marie Curie Fellow</i> Dept. SIM, I.N.T., Evry, France.
<i>Aug 1995 – Apr 1996</i>	<i>Post – Doctoral Research Fellow</i> Biomedical Eng. Dept, Technical Univ. Ilmenau, Germany.

Research Projects

<i>Apr 2012 – Mar 2015</i>	PI for TSI of the EU FP7 project NOPTILUS
<i>Oct 2006 – Sept 2009</i>	Coordinator and PI for TSI of the EU FP6 – FET Open project COOPCOM

Teaching

<i>Mar 2004 –</i>	<i>Department of ECE, Technical University of Crete</i> Convex Optimization (postgraduate) Advanced Topics in Convex Optimization (postgraduate) Information Theory (postgraduate) Network Information Theory (postgraduate) Estimation Theory (postgraduate) Detection Theory (postgraduate) Advanced Wireless Communications (postgraduate) Signals and Systems Digital Communications Systems I Digital Communications Systems II Wireless Communications Randomized Algorithms
<i>Sep 2001 – Feb 2004</i>	<i>Department of Mathematics, University of the Aegean</i> Introduction to Informatics Programming Languages Time – Series Analysis (postgraduate)
<i>Jan 1999 – Aug 2001</i>	<i>Department of Informatics, University of Ioannina</i> Discrete Mathematics Digital Signal Processing Digital Image Processing

Honors/Scholarships

<i>Jun 1998 – Dec 1998</i>	Marie Curie Fellowship (Return Grant) (EU)
<i>Jun 1996 – May 1998</i>	Marie Curie Fellowship (EU)
<i>Jan 1991 – Jun 1993</i>	Postgraduate Fellowship (Computer Technology Institute)
<i>Sep 1984 – Jun 1989</i>	Undergraduate Fellowship (John Latsis Foundation)
<i>Jun 2005 – Sep 2009</i>	Associate Editor, <i>IEEE Trans. Signal Proc.</i>
<i>Jan 2006 – Dec 2011</i>	Elected Member, <i>IEEE SPCOM TC</i>

Journal papers

1. A. P. Liavas, G. Kostoulas, G. Lourakis, K. Huang, and N. D. Sidiropoulos, "Nesterov-based Alternating Optimization for Nonnegative Tensor Factorization: Algorithm and Parallel Implementations," submitted to the *IEEE Transactions on Signal Processing* (second revision), September 2017.
2. K. Huang, N. D. Sidiropoulos, and A. P. Liavas, "A Flexible and Efficient Algorithmic Framework for Constrained Matrix and Tensor Factorization," *IEEE Transactions on Signal Processing*, vol 64, pp. 5052–5065, October 2016.
3. A.P. Liavas, and N.D. Sidiropoulos, "Parallel Algorithms for Constrained Tensor Factorization via the Alternating Direction Method of Multipliers", *IEEE Transactions on Signal Processing*, 2015.
4. A. P. Liavas and D. Tsipouridou, "Single-carrier systems with MMSE linear equalizers: performance degradation due to channel and CFO estimation errors," *IEEE Transactions on Signal Processing*, vol. 60, no. 6, June 2012, pp. 3328–3334, June 2012.
5. G. N. Karystinos and A. P. Liavas, "Efficient Computation of the Binary Vector that Maximizes a Rank-deficient Quadratic Form," *IEEE Trans. Info. Theory*, vol. 56, no.7, pp. 3581-3593, July 2010.
6. D. Tsipouridou and A. P. Liavas, "On the sensitivity of the MIMO Tomlinson-Harashima precoder with respect to channel uncertainties," *IEEE Trans. Signal Proc.*, vol. 58, no.4, pp. 2261-2272, April 2010.
7. D. Tsipouridou and A. P. Liavas, "On the sensitivity of the transmit MIMO Wiener filter with respect to channel and noise second-order statistics uncertainties," *IEEE Trans. Signal Proc.*, vol. 56, no. 2, Febr. 2008.
8. A. P. Liavas and D. Tsipouridou, "On the performance of the mismatched MMSE and LS linear equalizers," *IEEE Trans. Signal Proc.*, vol. 55, no. 7, part 1, pp. 3302–3311, July 2007.
9. A. P. Liavas, "On the sensitivity of a suboptimum precoding scheme for frequency-selective block based channel with respect to channel inaccuracies," *IEEE Trans. Info. Theory*, vol. 51, no. 9, pp. 3374–3381, September 2005.
10. A. P. Liavas, "Tomlinson-Harashima precoding with partial channel knowledge," *IEEE Trans. Commun.*, vol. 53, no 1, pp. 5–9, January 2005.
11. A. P. Liavas, "On the robustness of the finite-length MMSE-DFE with respect to channel and second-order statistics estimation errors," *IEEE Trans. Signal Proc.*, vol. 50, no. 11, pp. 2866–2874, November 2002.
12. A. Beikos and A. P. Liavas, "Performance analysis and comparison of blind to non-blind least squares equalization with respect to effective channel overmodeling," *Signal Processing*, vol. 82, pp. 1233–1253, September 2002.

13. A. P. Liavas and P. A. Regalia, "On the behavior of information theoretic criteria for model order selection," *IEEE Trans. Signal Proc.*, vol. 49, no. 8, pp. 1689–1695, August 2001.
14. Papaloukas, C., Fotiadis, D.I., Liavas, A.P., Likas, A., Michalis, L.K., "A knowledge-based technique for automated detection of ischaemic episodes in long duration electrocardiograms," *Medical and Biological Engineering and Computing*, vol. 39, no. 1, pp. 105–112, Jan. 2001.
15. J-P. Delmas, H. Gazzah, A. P. Liavas and P. A. Regalia, "Statistical analysis of some second order methods for blind channel identification/equalization with respect to channel under-modeling," *IEEE Trans. Signal Proc.*, vol. 48, no. 7, pp. 1984–1998, July 2000.
16. A. P. Liavas, "Least-squares equalization performance versus equalization delay," *IEEE Trans. Signal Proc.*, vol. 48, no. 6, pp. 1832–1835, June 2000.
17. A. P. Liavas, P. A. Regalia and J-P. Delmas, "On the robustness of the linear prediction method for blind channel identification with respect to effective channel undermodeling/overmodeling," *IEEE Trans. Signal Proc.*, vol. 48, no. 5, pp. 1477–1481, May 2000.
18. A. P. Liavas, P. A. Regalia and J-P. Delmas, "Blind channel approximation: Effective channel length determination," *IEEE Trans. Signal Proc.*, vol. 47, no. 12, pp. 3336–3344, December 1999.
19. A. P. Liavas, P. A. Regalia and J-P. Delmas, "Robustness of the least squares and subspace methods for blind channel identification/equalization with respect to effective channel under-modeling/overmodeling," *IEEE Trans. Signal Proc.*, vol. 47, no. 6, pp. 1636–1645, June 1999.
20. A. P. Liavas and P. A. Regalia, "On the numerical stability and accuracy of the conventional RLS algorithm," *IEEE Trans. Signal Proc.*, vol. 47, no. 1, pp. 88–96, January 1999.
21. A. P. Liavas and P. A. Regalia, "Acoustic echo cancellation: Do IIR models offer better modelling capabilities than their FIR counterparts?," *IEEE Trans. Signal Proc.*, vol. 46, no. 9, pp. 2499–2504, September 1998.
22. A. P. Liavas, G.V. Moustakides, G. Henning, E. Psarakis and P. Husar, "A Periodogram based method for the detection of Steady-State Visually Evoked Potentials," *IEEE Trans. Biomedical Engin.*, vol. 45, no. 2, pp. 242–248, February 1998.
23. A. P. Liavas and S. Theodoridis, "Efficient Levinson and Schur-type algorithms for block near-to-Toeplitz systems of equations," *Signal Processing*, vol. 35, pp. 241–255, 1994.
24. S. Theodoridis and A. P. Liavas, "Highly concurrent algorithm for the solution of ρ -Toeplitz system of equations," *Signal Processing* vol. 24, pp. 165–176, 1991.

Conference papers

1. A. P. Liavas, G. Kostoulas, G. Lourakis, K. Huang, and N. D. Sidiropoulos, "Nesterov-type parallel algorithm for large-scale nonnegative tensor factorization," *IEEE ICASSP*, New Orleans, June 2017.
2. K. Huand, N. D. Sidiropoulos and A. P. Liavas, "Efficient algorithms for universally constrained matrix and tensor factorization," *EUSIPCO*, Nice, December 2015.
3. A. P. Liavas and N. D. Sidiropoulos, "Parallel algorithms for large-scale constrained tensor decomposition," *IEEE ICASSP*, Brisbane, August 2015.
4. A. P. Liavas and G. N. Karystinos, "Outage capacity of a noncoherent cooperation scheme with binary input and a simple relay," *IEEE ISWPC 2008*.
5. G. N. Karystinos and A. P. Liavas, "Outage capacity of a cooperation scheme with binary input and a simple relay," *IEEE ICASSP 2008* (journal version in preparation).
6. G. N. Karystinos and A. P. Liavas, "Efficient computation of the binary vector that maximizes a rank-deficient quadratic form," *IEEE ICASSP 2008* (journal version in preparation).
7. D. Tsipouridou and A. P. Liavas, "On the sensitivity of transmit Wiener filtering for broadcast channels with respect to channel estimation errors," *IEEE ICASSP*, April 2007.
8. G. N. Karystinos and A. P. Liavas, "Efficient computation of the binary vector that maximizes a rank-3 quadratic form," *Proc. Allerton 2006*.
9. A. P. Liavas, "Sensitivity analysis of a suboptimal precoding scheme for block channels with respect to channel inaccuracies," *IEEE ICASSP*, March 2005.
10. A. P. Liavas, "Robustness of the finite-length MMSE-DFE with respect to channel and second-order statistics estimation errors," *Proc. EUSIPCO*, Toulouse, August 2002.
11. A. P. Liavas, "On the robustness of the finite-length MMSE-DFE with respect to channel and second-order statistics estimation errors," *Proc. IEEE Workshop on Statistical Signal Processing*, Singapore, August 2001.
12. J-P. Delmas, H. Gazzah and A. P. Liavas, "Statistical analysis of second-order statistics methods for blind channel identification," *Proc. First Int. Conf. on Mathematics for Signal Processing*, London, December 1998.
13. A. P. Liavas, P. A. Regalia and J-P. Delmas, "Blind channel approximation: Effective channel length determination," *Proc. Asilomar Conf. on Signals, Systems and Computers*, Pacific-Grove, CA, November 1998.
14. A. P. Liavas, P. A. Regalia and J-P. Delmas, "Robustness of least-squares and subspace methods for blind channel identification/equalization algorithms with respect to channel undermodeling," *Proc. EUSIPCO*, Rodos, September 1998.

15. A. P. Liavas and P. A. Regalia, "Numerical accuracy issues of recursive least squares algorithms," *Proc. IEEE Int. Conf. Acoustics, Speech and Signal Processing 1998*, Seattle, May 1998.
16. A. P. Liavas and P. A. Regalia, "Performance Assesments of IIR and FIR models for Acoustic Echo Cancellation," *Proc. Inter. Workshop on Acoustic Echo and Noise Control*, London, Sept. 1997.
17. A. P. Liavas, G. V. Moustakides, G. Henning, E. Psarakis and P. Husar, "On the detection of Steady-State Visually Evoked Potentials," *Proc. IEEE Int. Conf. Biomedical Eng.*, Amsterdam, November 1996.
18. A. P. Liavas and S. Theodoridis, "Novel Schur-type algorithm for near-to-Toeplitz linear systems with multichannel entries," *Proc. EUSIPCO*, Brussels, August 1992, pp. 879-882.
19. A. P. Liavas and S. Theodoridis, "Efficient Levinson-type algorithm for block ρ -Toeplitz system solution," *Proc. IEEE Int. Conference Acoustics, Speech and Signal Processing*, Toronto, May 1991. pp. 2265-2268.

