

CURRICULUM VITAE

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PERSONAL DATA

Date and place of birth: December 25, 1965; Thessaloniki, Greece

Marital Status: Married, two sons.

U.S. & Greek Citizen.

EDUCATION

Ph.D. in Electrical Engineering, August 1992, University of Maryland, College Park.

M.S. in Electrical Engineering, May 1990, University of Maryland, College Park.

Diploma in Electrical Engineering (top grade in class - 9/10), July 1988, Aristotelian University of Thessaloniki, Greece.

ACADEMIC POSITIONS

Professor, Telecommunications Division, Dept. of Electronic and Computer Engineering, Technical University of Crete, Chania, Crete - Greece, Feb. 2002 – present; Adjunct Professor, Dept. of Electrical and Computer Engineering & Digital Technology Center, University of Minnesota, Minneapolis, MN, U.S.A., Sep. 2003 – present.

Chairman, Dept. of Electronic and Computer Engineering, Technical University of Crete, Chania, Crete - Greece, Sep. 2005 - Aug. 2007 (Vice-Chair, Sep. 2003 - Aug. 2005).

Associate Director, Telecommunication Systems Institute (TSI), Technical University of Crete, Chania, Crete - Greece, Nov. 2005 – present.

Associate Professor, Dept. of Electrical and Computer Engineering, University of Minnesota, Minneapolis, Jan. 2000 – Feb. 2002.

Assistant Professor, Dept. of Electrical Engineering, University of Virginia, Charlottesville VA, July 1997 – Jan. 2000.

Assistant Research Scientist, Institute for Systems Research, University of Maryland, College Park, MD, January 1996 – July 1997. Also, Adjunct Professor, Dept. of Electrical Engineering, University of Maryland, College Park, MD, January 1995 – June 1997.

Post-Doctoral Research Associate, Institute for Systems Research, University of Maryland, College Park, MD, August 1994 – January 1996.

Lecturer, Hellenic Air Force Academy, October 1992 – October 1993 (September 1992 – June 1994, completed Greek military service requirements).

Fulbright Fellow, September 1988 – September 1992. Also, Research Assistant, Department of Electrical Engineering and Institute for Systems Research, University of Maryland, College Park, MD, June 1989 – September 1992.

CONSULTING

Consultant, Globespan Inc., Red Bank, NJ, 2000 - 2001: Crosstalk cancellation for DSL modems. Consultant, General Dynamics / Advanced Information Systems, Bloomington, MN, 2002: Frequency hopping radio engineering.

INDUSTRY EXPERIENCE

Member of the Technical Staff, Systems Integration Division, G-Systems Ltd., Athens, Greece, October 1993 - June 1994. Design and development (in a Unix/X/Motif/C - based environment) of integrated control and monitoring systems for military -grade wide-area radio communication networks.

ACADEMIC FELLOWSHIPS

- (1) September 1988 – May 1989, Fulbright Fellowship.
- (2) September 1984 – July 1988, from the Greek National Fellowship Foundation.

ACADEMIC AWARDS

- (1) Technical Chamber of Greece Outstanding Student Award (1988).
- (2) University of Maryland College Park IEEE student chapter Fall 1995 teaching award

RESEARCH HONORS AND AWARDS

- (1) NSF/CAREER Award, 1998.
- (2) IEEE Signal Processing Society 2001 (senior) best paper award, for the paper “Parallel Factor Analysis in Sensor Array Processing”, by N.D. Sidiropoulos, R. Bro, and G. Giannakis, published in the IEEE Trans. on Signal Processing, August 2000.
- (3) IEEE Signal Processing Society 2007 (senior) best paper award, for the paper “On Downlink Beamforming with Greedy User Selection: Performance Analysis and a Simple New Algorithm”, by G. Dimic, and N.D. Sidiropoulos, published in IEEE Trans. on Signal Processing, Oct. 2005.
- (4) Distinguished Lecturer of the IEEE Signal Processing Society for 2008-2009.
- (5) Fellow, IEEE *for contributions to Signal Processing for Communications*, Nov. 2008.

RESEARCH

Dr. Sidiropoulos' current research interests are primarily in signal processing for communications, convex optimization, cross-layer resource allocation for wireless networks, and multiway analysis - i.e., linear algebra for data arrays indexed by three or more variables.

PUBLICATIONS(in reverse chronological order)

Summary: Journal: 68 (64 published / to appear, 4 under review); Patents: 3 (2 awarded, 1 pending); Edited Books: 1 (co-edited with Alex Gershman); Book Chapters: 6; Conference: 98.

Citations: \sim 2200 known third-party citations; $h = 27$.

Journal papers

(68) D. Nion, **N.D. Sidiropoulos**, “Tensor Algebra and Multi-dimensional Harmonic Retrieval in Signal Processing for MIMO Radar”, submitted to *IEEE Trans. on Signal Processing*, Dec. 2009.

(67) D. Angelosante, G.B. Giannakis, and **N.D. Sidiropoulos**, “Estimating Multiple Frequency-Hopping Signal Parameters via Sparse Linear Regression”, submitted to *IEEE Trans. on Signal Processing*, Oct. 2009.

(66) M. Tsatsanis, V. Ntranos, **N.D. Sidiropoulos**, and C. Halliwell, “Optimal Allocation of Marketing Resources in Social Networks: A Signal Processing Approach”, submitted to *IEEE J. on Selected Topics in Signal Processing*, Oct. 2009.

(65) A.B. Gershman, **N.D. Sidiropoulos**, S. Shahbazpanahi, M. Bengtsson, and B. Ottersten, “Convex Optimization-based Beamforming: From Receive to Transmit and Network Designs”, *IEEE Signal Processing Magazine*, special issue on Convex Optimization for Signal Processing, May 2010.

(64) A. Abdelkader, A.B. Gershman, and **N.D. Sidiropoulos**, “Multiple-Antenna Multicasting Using Channel Orthogonalization and Local Refinement”, *IEEE Trans. on Signal Processing*, accepted subject to minor revision.

(63) D. Nion, **N.D. Sidiropoulos**, “Adaptive Algorithms to Track the PARAFAC Decomposition of a Third-Order Tensor”, *IEEE Trans. on Signal Processing*, 57(6):2299-2310, June 2009.

(62) A. Valyrakis, E. Tsakonas, **N.D. Sidiropoulos**, A. Swami, “Stochastic Modeling and Particle Filtering Algorithms for Tracking a Frequency-Hopped Signal”, *IEEE Trans. on Signal Processing*, 57(8):3108-3118, Aug. 2009.

(61) V. Ntranos, **N.D. Sidiropoulos**, L. Tassiulas, “On Multicast Beamforming for Minimum Outage”, *IEEE Trans. on Wireless Communications*, 8(6):3172-3181, June 2009.

(60) D. Nion, K. Mokios, **N.D. Sidiropoulos**, A. Potamianos, “Batch and Adaptive PARAFAC-Based Blind Separation of Convolutional Speech Mixtures”, *IEEE Trans. on Audio, Speech and Language Processing*, to appear.

(59) E. Matskani, **N.D. Sidiropoulos**, Z.-Q. Luo, L. Tassiulas, “Efficient Batch and Adaptive Approximation Algorithms for Joint Multicast Beamforming and Admission Control”, *IEEE Trans. on Signal Processing*, to appear.

(58) K.T. Phan, S.A. Vorobyov, **N.D. Sidiropoulos**, and C. Tellambura, “Spectrum Sharing in Wireless Networks via QoS-Aware Secondary Multicast Beamforming”, *IEEE Trans. on Signal Processing*, 57(6):2323-2335, June 2009.

(57) E. Sayag, A. Leshem, **N.D. Sidiropoulos**, “Finite Word Length Effects on Transmission Rate in Zero Forcing Linear Precoding for Multichannel DSL”, *IEEE Trans. on Signal Processing*, 57(4):1469-1482, Apr. 2009.

- (56) E. Tsakonas, **N.D. Sidiropoulos**, A. Swami, “Optimal Particle Filters for Tracking a Time-Varying Harmonic or Chirp Signal”, *IEEE Trans. on Signal Processing*, 56(10):4598-4610, Oct. 2008.
- (55) E. Matskani, **N.D. Sidiropoulos**, Z.-Q. Luo, L. Tassiulas, “Convex Approximation Techniques for Joint Multiuser Downlink Beamforming and Admission Control”, *IEEE Trans. on Wireless Communications*, 7(7):2682-2693, July 2008.
- (54) A. Ribeiro, **N.D. Sidiropoulos**, G.B. Giannakis, “Optimal Distributed Stochastic Routing Algorithms For Wireless Multihop Networks”, *IEEE Trans. on Wireless Communications*, 7(11):4261-4272, Nov. 2008.
- (53) E. Karipidis, **N.D. Sidiropoulos**, Z.-Q. Luo, “Quality of Service and Max-min-fair Transmit Beamforming to Multiple Co-channel Multicast Groups”, *IEEE Trans. on Signal Processing*, 56(3):1268-1279, Mar. 2008.
- (52) E. Karipidis, **N.D. Sidiropoulos**, Z.-Q. Luo, “Far-field Multicast Beamforming for Uniform Linear Antenna Arrays”, *IEEE Trans. on Signal Processing*, 55(10):4916-4927, Oct. 2007.
- (51) G. Latsoudas, **N.D. Sidiropoulos**, “A Fast and Effective Multidimensional Scaling Approach for Node Localization in Wireless Sensor Networks”, *IEEE Trans. on Signal Processing*, 55(10): 5121 - 5127, Oct. 2007.
- (50) Z.-Q. Luo, **N.D. Sidiropoulos**, P. Tseng, S. Zhang, “Approximation Bounds for Quadratic Optimization with Homogeneous Quadratic Constraints”, *SIAM Journal on Optimization*, 18(1):1-28, Feb. 2007.
- (49) Alejandro Ribeiro, **N.D. Sidiropoulos**, G. B. Giannakis, Yingqun Yu, “Achieving Wireline Random Access Throughput in Wireless Networking via User Cooperation”, *IEEE Trans. on Information Theory*, 53(2):732-758, Feb. 2007.
- (48) A. Stegeman, and **N.D. Sidiropoulos**, “On Kruskal’s uniqueness condition for the Candecomp/Parafac decomposition”, *Linear Algebra and its Applications*, 420:540-552, 2007.
- (47) **N.D. Sidiropoulos**, Z.-Q. Luo, “A Semidefinite Relaxation Approach to MIMO Detection for High-Order QAM Constellations”, *IEEE Signal Processing Letters*, 13(9):525-528, Sep. 2006.
- (46) E. Karipidis, **N.D. Sidiropoulos**, A. Leshem, Li Youming, R. Tarafi, and M. Ouzzif, “Crosstalk Models for Short VDSL2 Lines from Measured 30 MHz Data”, *EURASIP Journal on Applied Signal Processing*, special issue on DSL, 2006, Article ID 85859.
- (45) **N.D. Sidiropoulos**, T.N. Davidson, Z.-Q. Luo, “Transmit Beamforming for Physical Layer Multicasting”, *IEEE Trans. on Signal Processing*, 54(6), Part 1, pp. 2239-2251, June 2006.
- (44) E. Karipidis, **N.D. Sidiropoulos**, A. Leshem, L. Youming, “Experimental Evaluation of Capacity Statistics for Short VDSL Loops”, *IEEE Trans. on Communications*, 53(7):1119-1122, July 2005.
- (43) R. Bro, R.A. Harshman, **N.D. Sidiropoulos**, M.E. Lundy, “Modeling Multi-Way Data with Linearly Dependent Loadings”, *J. Chemometrics*, to appear.
- (42) G. Dimic, **N.D. Sidiropoulos**, “On Downlink Beamforming with Greedy User Selection: Performance Analysis and a Simple New Algorithm”, *IEEE Trans. on Signal*

Processing, 53(10):3857-3868, Oct. 2005. This paper received the IEEE Signal Processing Society 2007 (senior) best paper award.

(41) X. Liu, **N.D. Sidiropoulos**, and A. Swami, "Joint Hop Timing and Frequency Estimation for Collision Resolution in Frequency-Hopped Networks", *IEEE Trans. on Wireless Communications*, 4(6):3063-3074, Nov. 2005.

(40) G. Latsoudas, **N.D. Sidiropoulos**, "A Hybrid Probabilistic Data Association - Sphere Decoding Detector for Multiple-Input Multiple-Output Systems", *IEEE Signal Processing Letters*, 12(4):309-312, Apr. 2005.

(39) T. Jiang, and **N.D. Sidiropoulos**, "Blind Identification of Out of Cell Users in DS-CDMA", *EURASIP Journal on Applied Signal Processing (JASP)*, special issue on Advances in Smart Antennas, 2004(9):1212-1224, Aug. 2004.

(38) **N.D. Sidiropoulos**, A. Swami, and B. Sadler, "Quasi-ML Period Estimation from Incomplete Timing Data", *IEEE Trans. on Signal Processing*, 53(2):733-739, Feb. 2005.

(37) Y. Rong, S.A. Vorobyov, A.B. Gershman, and **N.D. Sidiropoulos**, "Blind Spatial Signature Estimation via Time-Varying User Power Loading and Parallel Factor Analysis", *IEEE Trans. on Signal Processing*, 53(5):1697-1710, May 2005.

(36) S.A. Vorobyov, Y. Rong, **N.D. Sidiropoulos**, and A.B. Gershman, "Robust Iterative Fitting of Multilinear Models", *IEEE Trans. on Signal Processing*, 53(8):2678-2689, Aug. 2005.

(35) G. Dimic, **N.D. Sidiropoulos**, and R. Zhang, "Signal Processing and Queueing Tools for MAC-PHYS Cross-Layer Design", *IEEE Signal Processing Magazine*, special issue on signal processing and queueing aspects of network protocols, p. 40-50, Sept. 2004.

(34) T. Jiang, and **N.D. Sidiropoulos**, "Kruskal's Permutation Lemma and the Identification of CANDECOMP/PARAFAC and Bilinear Models with Constant Modulus Constraints", *IEEE Trans. on Signal Processing*, 52(9):2625-2636, Sept. 2004.

(33) J. M.F. ten Berge, **N.D. Sidiropoulos**, and R. Rocci, "Typical Rank and INDSCAL Dimensionality for Symmetric Three-way Arrays of Order $I_x \times 2 \times 2$ or $I_x \times 3 \times 3$ ", *Linear Algebra and its Applications*, 388:363-377, Sep. 2004.

(32) A. Stamoulis, **N.D. Sidiropoulos**, and G. Giannakis, "Time-Varying Fair Queueing Scheduling for Multicode CDMA Based on Dynamic Programming", *IEEE Trans. on Wireless Communications*, 3(2):512-523, Mar. 2004.

(31) T. Jiang, **N.D. Sidiropoulos**, and G.B. Giannakis, "Kalman Filtering for Power Estimation in Mobile Communications", *IEEE Trans. on Wireless Communications*, 2(1):151-161, Jan. 2003.

(30) G. Dimic, **N.D. Sidiropoulos**, and L. Tassiulas, "Wireless Networks with Retransmission Diversity Access Mechanisms: Stable Throughput and Delay Properties", *IEEE Trans. Signal Processing*, 51(8):2019-2030, Aug. 2003 (special issue on signal processing for networking).

(29) R. Zhang, **N.D. Sidiropoulos**, and M. Tsatsanis, "Collision Resolution in Packet Radio Networks Using Rotational Invariance Techniques", *IEEE Trans. on Communications*, 50(1):146-155, Jan. 2002.

- (28) J. M.F. ten Berge, and **N.D. Sidiropoulos**, “On Uniqueness in CANDECOP / PARAFAC”, *Psychometrika*, 67(3):399-409, Sep. 2002.
- (27) X. Liu, **N.D. Sidiropoulos**, and A. Swami, “Blind High-Resolution Localization and Tracking of Multiple Frequency Hopped Signals”, *IEEE Trans. on Signal Processing*, 50(4):889–901, Apr. 2002.
- (26) **N.D. Sidiropoulos**, and R. Budampati, “Khatri-Rao Space-Time Codes”, *IEEE Trans. on Signal Processing*, special issue on signal processing techniques for space-time coded transmissions, 50(10):2396-2407, Oct. 2002.
- (25) R. Bro, **N.D. Sidiropoulos**, and A.K. Smilde, “Maximum Likelihood Fitting Using Ordinary Least Squares Algorithms”, *J. of Chemometrics*, 16:387-400, Sep. 2002.
- (24) X. Liu, and **N.D. Sidiropoulos**, “Almost Sure Identifiability of Constant Modulus Multidimensional Harmonic Retrieval”, *IEEE Trans. on Signal Processing*, 50(9):2366-2368, Sep. 2002.
- (23) T. Jiang, **N.D. Sidiropoulos**, and J. M.F. ten Berge, “Almost Sure Identifiability of Multidimensional Harmonic Retrieval”, *IEEE Trans. on Signal Processing*, 49(9):1849-1859, Sep. 2001.
- (22) M.S. Pattichis, A.C. Bovik, J.W. Havlicek, and **N.D. Sidiropoulos**, “Multidimensional Orthogonal FM Transforms”, *IEEE Trans. on Image Processing*, 10(3):448 -464, Mar. 2001.
- (21) **N.D. Sidiropoulos**, and Xiangqian Liu, “Identifiability Results for Blind Beamforming in Incoherent Multipath with Small Delay Spread”, *IEEE Trans. on Signal Processing*, 49(1):228-236, Jan. 2001.
- (20) **N.D. Sidiropoulos**, “Generalizing Carathéodory’s Uniqueness of Harmonic Parameterization to N Dimensions”, *IEEE Trans. Information Theory*, 47(4):1687-1690, May 2001.
- (19) **N.D. Sidiropoulos**, and G. Z. Dimic, “Blind Multiuser Detection in W-CDMA Systems with Large Delay Spread”, *IEEE Signal Proc. Letters*, 8(9):87-89, Mar. 2001.
- (18) X. Liu, and **N.D. Sidiropoulos**, “Cramér-Rao Lower Bounds for Low-rank Decomposition of Multidimensional Arrays”, *IEEE Trans. on Signal Processing*, 49(9):2074-2086, Sep. 2001.
- (17) **N.D. Sidiropoulos**, G.B. Giannakis, and R. Bro, “Blind PARAFAC Receivers for DS-CDMA Systems”, *IEEE Trans. on Signal Processing*, 48(3):810–823, March 2000.
- (16) **N.D. Sidiropoulos**, R. Bro, and G.B. Giannakis, “Parallel Factor Analysis in Sensor Array Processing”, *IEEE Trans. on Signal Processing*, 48(8):2377-2388, Aug. 2000. This paper received the IEEE Signal Processing Society 2001 (senior) best paper award.
- (15) **N.D. Sidiropoulos**, and R. Bro, “On the Uniqueness of Multilinear Decomposition of N -way Arrays”, *J. Chemometrics*, 14(3):229-239, May 2000 (special cross-disciplinary issue on multi-way analysis).
- (14) Tao Li, and **N.D. Sidiropoulos**, “Blind Digital Signal Separation Using Successive Interference Cancellation Iterative Least Squares”, *IEEE Trans. on Signal Processing*, 48(11):3146-3152, Nov. 2000.

- (13) **N.D. Sidiropoulos**, and R. Bro, “Mathematical Programming Algorithms for Regression - based Nonlinear Filtering in R^N ”, *IEEE Trans. on Signal Processing*, Vol. 47, No. 3, pp. 771–782, Mar. 1999.
- (12) **N.D. Sidiropoulos**, M.S. Pattichis, A.C. Bovik, and J.W. Havlicek, “COPERM: Transform-Domain Energy Compaction by Optimal Permutation”, *IEEE Trans. on Signal Processing*, Vol. 47, No. 6, pp. 1679–1688, June 1999.
- (11) **N.D. Sidiropoulos**, “On the Tractability of Estimating the Germ Process of Certain Germ-Grain Random Set Models and Related Problems”, *Pattern Recognition*, special issue on random sets, Vol. 32, No. 9, pp. 1667–1674, 1999.
- (10) F. Korn, **N.D. Sidiropoulos**, C. Faloutsos, E. Siegel, Z. Protopapas, “Fast and Effective Retrieval of Medical Tumor Shapes”, *IEEE Trans. Knowledge and Data Engineering*, Vol. 10, No. 6, pp. 889–904, Nov.-Dec. 1998.
- (9) R. Bro and **N.D. Sidiropoulos**, “Least Squares Regression Under Unimodality and Non-negativity Constraints”, *Journal of Chemometrics*, Vol. 12, pp. 223-247, 1998.
- (8) **N.D. Sidiropoulos**, J.S. Baras, and C.A. Berenstein, “Weak Continuity with Structural Constraints”, *IEEE Trans. on Signal Processing*, Vol. 45, No. 12, pp. 3096-3104, Dec. 1997.
- (7) **N.D. Sidiropoulos**, “Fast Digital Locally Monotonic Regression”, *IEEE Trans. on Signal Processing*, Vol. 45, No. 2, pp. 389-395, Feb. 1997.
- (6) **N.D. Sidiropoulos**, “The Viterbi Optimal Runlength-Constrained Approximation Nonlinear Filter”, *IEEE Trans. on Signal Processing*, Vol. 44, No. 3, pp. 586-598, March 1996.
- (5) **N.D. Sidiropoulos**, J.S. Baras, and C.A. Berenstein, “Further results on MAP Optimality and Strong Consistency of Certain Classes of Morphological Filters”, *IEEE Trans. on Image Processing*, Vol. 5, No. 5, pp. 762-764, May 1996.
- (4) **N.D. Sidiropoulos**, D. Meleas, and T. Stragas, “MAP Signal Estimation in Noisy Sequences of Morphologically Smooth Images”, *IEEE Trans. on Image Processing*, Vol. 5, No. 6, pp. 1088-1093, June 1996.
- (3) **N.D. Sidiropoulos**, J.S. Baras, and C.A. Berenstein, “Optimal Filtering of Digital Binary Images Corrupted by Union/Intersection Noise”, *IEEE Trans. on Image Processing*, Vol. 3, No. 4, pp. 382-403, 1994.
- (2) **N.D. Sidiropoulos**, J.S. Baras, and C.A. Berenstein, “An Algebraic Analysis of the Generating Functional for Discrete Random Sets, and Statistical Inference for Intensity in the Discrete Boolean Random Set Model”, *Journal of Mathematical Imaging and Vision*, Vol. 4, pp. 273-290, 1994.
- (1) I. Pitas, and **N.D. Sidiropoulos**, “Pattern Recognition of Binary Image Objects Using Morphological Shape Decomposition”, *Computer Vision and Image Processing*, L. Shapiro and A. Rosenfeld, Editors (collection of refereed papers from *J. Computer Vision, Graphics, and Image Processing*), Academic Press, 1992.

- (3) **N.D. Sidiropoulos**, G. Giannakis, and P. Duvaut, “Methods and Apparatus for Cross-talk Cancellation in DSL Modems”, submitted to the U.S. Patent Office by Globespan Inc., July 25, 2000, pending.
- (2) **N.D. Sidiropoulos**, and J.S. Baras, “Computer-Aided Determination of Window and Level Settings for Filmless Radiology”, **US Patent 6,127,669** issued Oct. 3, 2000.
- (1) A. Biliris, H.V. Jagadish, T. Johnson, C. Faloutsos, **N.D. Sidiropoulos**, K. Yi, “Method and apparatus for analyzing co-evolving time sequences”, **US Patent 6,055,491** issued April 25, 2000.

Edited book

- (1) A. Gershman, **N.D. Sidiropoulos** (Eds.), *Space-Time Processing for MIMO Communications*, John Wiley & Sons, Apr. 2005.

Book chapters

- (6) X. Liu, **N.D. Sidiropoulos**, and T. Jiang, “Multidimensional Harmonic Retrieval with Applications in MIMO Wireless Channel Sounding”, in *Space-Time Processing for MIMO Communications*, A. Gershman, N. Sidiropoulos, Eds., John Wiley & Sons, Apr. 2005.
- (5) X. Liu, and **N.D. Sidiropoulos**, “PARAFAC Techniques for High Resolution Array Processing”, in *High Resolution Signal Processing*, Y. Hua, and A. Gershman, Eds., Marcel-Dekker, Dec. 2002.
- (4) **N.D. Sidiropoulos**, and R. Bro, “PARAFAC Techniques for Signal Separation”, in *Signal Processing Advances in Communications*, P. Stoica, G. Giannakis, Y. Hua, and L. Tong, Eds., Prentice-Hall, Oct. 2000.
- (3) F. Korn, **N.D. Sidiropoulos**, C. Faloutsos, E. Siegel, Z. Protopapas, “Indexing Large Tumor-like Shape Databases”, in *Advances in Biomedical Image Databases*, Stephen Wong, Ed., Kluwer Academic Press, Boston, MA, 1998.
- (2) **N.D. Sidiropoulos**, “On Optimal Filtering of Morphologically Smooth Discrete Random Sets and Related Open Problems”, in *Random Sets: Theory and Applications*, J. Goutsias, R. P. S. Mahler, and H. T. Nguyen, Eds., IMA Volumes in Mathematics and its Applications, vol. 97, pp. 97-104, Springer 1997.
- (1) F. Korn, **N.D. Sidiropoulos**, C. Faloutsos, E. Siegel, and Z. Protopapas, “Efficient and Effective Nearest Neighbor Search in a Medical Image Database of Tumor Shapes”, in *Image Description and Retrieval*, Enrico Vicario (Ed.), Plenum Press, Italy, 1997.

Conference papers

- (98) D. Evaggelinakis, **N.D. Sidiropoulos**, and A. Swami, “Joint Admission and Power Control Using Branch & Bound and Gradual Admissions”, submitted to *IEEE SPAWC 2010*, June 20-23, Marrakech, Morocco.
- (97) H. Zhu, G. Mateos, G.B. Giannakis, **N.D. Sidiropoulos**, and Arindam Banerjee, “Sparsity-Cognizant Overlapping Co-Clustering for Behavior Inference in Social Networks”, in *Proc. IEEE ICASSP 2010*, Mar. 14-19, Dallas, Texas.

- (96) D. Angelosante, G.B. Giannakis, and **N.D. Sidiropoulos**, “Multiple frequency-hopping signal estimation via sparse regression”, in *Proc. IEEE ICASSP 2010*, Mar. 14-19, Dallas, Texas.
- (95) I. Mitliagkas, **N.D. Sidiropoulos**, and A. Swami, “Distributed Joint Power and Admission Control for Ad-hoc and Cognitive Underlay Networks”, in *Proc. IEEE ICASSP 2010*, Mar. 14-19, Dallas, Texas.
- (94) I. Schizas, G.B. Giannakis, and **N.D. Sidiropoulos**, “Exploiting Covariance-domain Sparsity for Dimensionality Reduction”, in *Proc. IEEE CAMSAP 2009*, Dec. 13-16, 2009, Aruba, Dutch Antilles.
- (93) A. Abdelkader, I. Wajid, A.B. Gershman, **N.D. Sidiropoulos**, “Transmit Beamforming for Wireless Multicasting Using Channel Orthogonalization and Local Refinement”, in *Proc. ICASSP 2009*, April 19-24, 2009, Taipei, Taiwan.
- (92) D. Nion, **N.D. Sidiropoulos**, “A PARAFAC-based Technique for Detection and Localization of Multiple Targets in a MIMO Radar System”, in *Proc. ICASSP 2009*, April 19-24, 2009, Taipei, Taiwan.
- (91) I. Mitliagkas, **N.D. Sidiropoulos**, and A. Swami, “Convex Approximation-based Joint Power and Admission Control for Cognitive Underlay Networks”, in *Proc. IEEE IWCMC 2008*, Limin Hersonissou, Crete, Greece, August 6-8, 2008.
- (90) E. Karipidis, **N.D. Sidiropoulos**, and L. Tassiulas, “Joint QoS Multicast Power / Admission Control and Base Station Assignment: A Geometric Programming Approach”, in *Proc. IEEE SAM 2008*, July 21-23, 2008, Darmstadt, Germany.
- (89) K.T. Phan, S.A. Vorobyov, **N.D. Sidiropoulos**, and C. Tellambura, “Spectrum Sharing in Wireless Networks: A QoS-Aware Secondary Multicast Approach with Worst User Performance Optimization”, in *Proc. IEEE SAM 2008*, July 21-23, 2008, Darmstadt, Germany.
- (88) E. Matskani, **N.D. Sidiropoulos**, and L. Tassiulas, “On Multicast Beamforming and Admission Control for UMTS-LTE”, in *Proc. IEEE ICASSP 2008*, Mar. 30 - Apr. 4, 2008, Las Vegas, Nevada.
- (87) A. Leshem, E. Sayag, **N.D. Sidiropoulos**, “Fixed Point Error Analysis of Linear Multichannel Precoding for VDSL”, in *Proc. IEEE ICASSP 2008*, Mar. 30 - Apr. 4, 2008, Las Vegas, Nevada.
- (86) K. Mokios, A. Potamianos, **N.D. Sidiropoulos**, “On the effectiveness of PARAFAC - based estimation in blind speech separation”, in *Proc. IEEE ICASSP 2008*, Mar. 30 - Apr. 4, 2008, Las Vegas, Nevada.
- (85) E. Matskani, **N.D. Sidiropoulos**, Z.-Q. Luo, and L. Tassiulas, “Joint Multicast Beamforming and Admission Control”, *Proc. IEEE CAMSAP 2007*, Dec. 12-14, St. Thomas, U.S. Virgin Islands.
- (84) A. Valyrakis, **N.D. Sidiropoulos**, A. Swami, “Multichannel Particle Filters for Tracking a Frequency Hopped Signal”, *Proc. IEEE CAMSAP 2007*, Dec. 12-14, St. Thomas, U.S. Virgin Islands.
- (83) E. Matskani, **N.D. Sidiropoulos**, Z.-Q. Luo, and L. Tassiulas, “A Second-order Cone Deflation Approach to Joint Multiuser Downlink Beamforming and Admission Control”, in *Proc. IEEE SPAWC 2007*, Helsinki, Finland, June 17-20, 2007.

- (82) A. Ribeiro, **N.D. Sidiropoulos**, G.B. Giannakis, “Distributed Routing Algorithms for Wireless Multihop Networks”, *Proc. of IEEE ICASSP 2007*, April 15-20, 2007, Honolulu, Hawaii, U.S.A.
- (81) E. Matskani, **N.D. Sidiropoulos**, Z.-Q. Luo, and L. Tassiulas, “Joint Multiuser Downlink Beamforming and Admission Control: A Semidefinite Relaxation Approach”, *Proc. of IEEE ICASSP 2007*, April 15-20, 2007, Honolulu, Hawaii, U.S.A.
- (80) A. Ribeiro, Z.-Q. Luo, **N.D. Sidiropoulos**, G.B. Giannakis, “Modelling and Optimization of Stochastic Routing for Wireless Multi-hop Networks”, *Proc. IEEE Infocom 2007*, Anchorage, Alaska, May 6-12, 2007.
- (79) A. Ribeiro, Z.-Q. Luo, **N.D. Sidiropoulos**, and G.B. Giannakis, “A General Optimization Framework for Stochastic Routing in Wireless Multihop Networks”, *Proc. of 2006 Asilomar Conference on Signals, Systems & Computers*, Oct. 29 - Nov. 1, 2006, Asilomar Conference Grounds, Pacific Grove, CA.
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- (77) **N.D. Sidiropoulos**, A. Swami, A. Valyrakis, “Tracking a Frequency-Hopped Signal Using Particle Filtering”, *Proc. IEEE ICASSP 2006*, May 14-19, 2006, Toulouse, France.
- (76) E. Karipidis, **N.D. Sidiropoulos**, Z.-Q. (Tom) Luo, “Convex Transmit Beamforming For Downlink Multicasting to Multiple Co-channel Groups”, *Proc. IEEE ICASSP 2006*, May 14-19, 2006, Toulouse, France.
- (75) K. Mokios, **N.D. Sidiropoulos**, A. Potamianos, “Blind Speech Separation Using PARAFAC Analysis and Integer Least Squares”, *Proc. IEEE ICASSP 2006*, May 14-19, 2006, Toulouse, France.
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- (73) G. Latsoudas, **N.D. Sidiropoulos**, “A Two-stage FASTMAP-MDS Approach for Node Localization in Sensor Networks”, in *Proc. IEEE CAMSAP 2005*, Dec. 12-14, 2005, Puerto Vallarta, Mexico, to appear.
- (72) Alejandro Ribeiro, **N.D. Sidiropoulos**, G. B. Giannakis, “Achieving Wireline Random Access Throughput in Wireless Networking via User Cooperation”, in *Proc. IEEE SPAWC 2005*, June 5-8, 2005, NYC, NY, U.S.A.
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- (70) G. Latsoudas, and **N.D. Sidiropoulos**, “On the Performance of Certain Fixed-Complexity Multiuser Detectors in FEXT-limited Vectored DSL Systems”, in *Proc. ICASSP 2005*, March 19-23, 2005, Philadelphia, PA, U.S.A.

- (69) Y. Yu, A. Ribeiro, **N.D. Sidiropoulos**, and G. B. Giannakis, "Cooperative Random Access with Long PN Spreading Codes", in *Proc. ICASSP 2005*, March 19-23, 2005, Philadelphia, PA, U.S.A.
- (68) A. Ribeiro, Y. Yu, **N.D. Sidiropoulos**, and G. B. Giannakis, "Increasing the Throughput of Spread-Aloha Protocols via Long PN Spreading Codes", in *Proc. ICC 2005*.
- (67) S. Vorobyov, Y. Rong, A. Gershman, and **N.D. Sidiropoulos**, "Robust Iterative Fitting of Multilinear Models based on Linear Programming", in *Proc. ICASSP 2004*, May 17-21, Montreal, Quebec, Canada.
- (66) K.N. Mokios, **N.D. Sidiropoulos**, M. Pesavento, C.F. Mecklenbrauker, "On 3-D Harmonic Retrieval for Wireless Channel Sounding", in *Proc. ICASSP 2004*, May 17-21, Montreal, Quebec, Canada.
- (65) G. Dimic, **N.D. Sidiropoulos**, "Low-Complexity Downlink Beamforming for Maximum Sum Capacity", in *Proc. ICASSP 2004*, May 17-21, Montreal, Quebec, Canada.
- (64) **N.D. Sidiropoulos**, T.N. Davidson, "Broadcasting with Channel State Information", in *Proc. SAM 2004*, July 18-21, Sitges, Barcelona, Spain.
- (63) S. Vorobyov, Y. Rong, **N.D. Sidiropoulos**, and A. Gershman, "Robust Fitting of Multilinear Models with Application to Blind Multiuser Receivers: Iterative Weighted Median Filtering Approach", in *Proc. SPAWC 2004*, July 11-14, Lisbon, Portugal.
- (62) Y. Rong, S. Vorobyov, **N.D. Sidiropoulos**, and A. Gershman, "Deterministic Cramer - Rao Bound for Symmetric PARAFAC model with Application to Blind Spatial Signature Estimation", in *Proc. ISSPIT 2003*, Dec. 14-17, Darmstadt, Germany.
- (61) S. Vorobyov, Y. Rong, A. Gershman, and **N.D. Sidiropoulos**, "Blind Spatial Signature Estimation Using Time-Varying User Power Loading and Parallel Factor Analysis", in *Proc. Vehicular Technology Conference Fall 2003 (VTCF'03)*, Orlando, FL.
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- (59) G. Dimic, and **N.D. Sidiropoulos**, "Frequency-Hopped Network Diversity Multiple Access for Semi-Ad-Hoc Wireless Networks", in *Proc. ICASSP2003*.
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- (56) T. Jiang, **N.D. Sidiropoulos**, "A Direct Blind Receiver for SIMO and MIMO OFDM Systems Subject to Unknown Frequency Offset and Multipath", in *Proc. SPAWC2003*, June 15 - 18, 2003, Rome, Italy.
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- (51) G. Dimic, and **N.D. Sidiropoulos**, "Stability Analysis of Collision Resolution Protocols with Retransmission Diversity", in *Proc. ICASSP2002*, Orlando, Florida, May 13-17, 2002.
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- (49) X. Liu, and **N.D. Sidiropoulos**, "On Constant Modulus Multidimensional Harmonic Retrieval", in *Proc. ICASSP2002*, Orlando, Florida, May 13-17, 2002.
- (48) X. Liu, **N.D. Sidiropoulos**, and A. Swami, "Joint hop timing and angle - carrier estimation of multiple frequency hopped signals", in *Proc. IEEE SAM 2002 Workshop*, 4-6 Aug. 2002, Rosslyn, VA.
- (47) R. Budampati and **N.D. Sidiropoulos**, "Khatri-Rao Space-Time Codes over Frequency - Selective Channels", in *Proc. IEEE SAM 2002 Workshop*, 4-6 Aug. 2002, Rosslyn, VA.
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- (44) A. Stamoulis, **N.D. Sidiropoulos**, and G. B. Giannakis, "Time-Varying Fair Queuing Scheduling for Multicode CDMA Based on Dynamic Programming", in *Proc. GLOBECOM 2001*, San Antonio, Texas.
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- (36) **N.D. Sidiropoulos**, “Identifiability of Harmonic Parameterization in N Dimensions”, in *Proc. ISIT2001*, June 24 - 29, 2001, Washington, D.C.
- (35) G. Dimic, and **N.D. Sidiropoulos**, “Multicode Multicarrier Random Access”, in *Proc. 34th Annual Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, Oct. 30 - Nov. 1, 2000.
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- (26) **N.D. Sidiropoulos**, and R. Bro, “User Separation in DS-CDMA Systems with Unknown Long PN Spreading Codes”, in *Second IEEE-SPS Workshop on Signal Processing Advances in Wireless Communications (SPAWC99)*, May 9-12, 1999, Annapolis, MD.
- (25) Tao Li, and **N.D. Sidiropoulos**, “Blind Separation of Linear Mixtures of Digital Signals Using Successive Interference Cancellation Iterative Least Squares”, in *Proc.*

1999 International Conference on Acoustics, Speech, and Signal Processing (ICASSP99), Phoenix, Arizona, March 15-19, 1999.

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(22) R. Bro, **N.D. Sidiropoulos**, and G.B. Giannakis, "Optimal Joint Azimuth-Elevation and Signal-Array Response Estimation Using Parallel Factor Analysis", in *32nd Asilomar Conf. on Signals, Systems, and Computers*, Nov. 1998, Monterey, CA.

(21) **N.D. Sidiropoulos**, M.S. Pattichis, A.C. Bovik, and J.W. Havlicek, "COPERM: Transform-Domain Energy Compaction by Optimal Permutation", in *Proc. 1998 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP98)*, May 12-15, Seattle, Washington.

(20) **N.D. Sidiropoulos**, and R. Bro, "Dynamic Programming Algorithms for a Class of Nonlinear Regression Problems in R^N ", in *Proc. 1998 IEEE DSP Workshop (DSP98)*, August 9-12, 1998, Bryce Canyon National Park, Utah.

(19) **N.D. Sidiropoulos**, "Optimal Adaptive Scalar Quantization and Image Compression", in *Proc. 1998 Int. Conference on Image Processing (ICIP98)*, October 4-7, Chicago, Illinois.

(18) **N.D. Sidiropoulos**, "Variable-Rate Optimal Adaptive Scalar Quantization and Image Compression", in *Proc. 1998 Conference on Information Sciences and Systems (CISS98)*, March 18-20, Princeton, NJ.

(17) C. Faloutsos, H.V. Jagadish, and **N.D. Sidiropoulos**, "Recovering Information from Summary Data", in *Proc. 1997 International Conference on Very Large Databases (VLDB97)* – this is one of the two most prestigious DB conferences - acceptance ratio is 1 in 6 submitted papers.

(16) Flip Korn, **N.D. Sidiropoulos**, Christos Faloutsos, Eliot Siegel, and Zenon Protopapas, "Fast and Effective Similarity Search in Medical Tumor Databases Using Morphology", in *Proc. SPIE Conference on Multimedia Storage and Archiving Systems*, Nov. 18-19, 1996, Boston, Mass.

(15) Flip Korn, **N.D. Sidiropoulos**, Christos Faloutsos, Eliot Siegel, and Zenon Protopapas, "Fast Nearest Neighbor Search in Medical Image Databases", in *Proc. 1996 International Conference on Very Large Databases (VLDB96)* – this is one of the two most prestigious DB conferences - acceptance ratio is 1 in 6 submitted papers.

(14) **N.D. Sidiropoulos**, J.S. Baras, C.A. Berenstein, "Structurally Robust Weak Continuity", in *Proc. 1996 IEEE Signal Processing Workshop on Statistical Signal and Array Processing (SSAP-96)*, June 24-26 1996, Corfu, Greece.

(13) **N.D. Sidiropoulos**, "Fast Digital Locally Monotonic Regression", in *Proc. 1996 IEEE International Symposium on Circuits and Systems (ISCAS-96)*, May 12-15, 1996, Atlanta, GA.

- (12) **N.D. Sidiropoulos**, J.S. Baras, E. Siegel, S.M. Pomerantz, Z. Protopapas, B.I. Reiner, "Computer-Aided Selection of Window and Level for Filmless Radiology", in *Proc. 1996 Symposium for Computer-Assisted Radiology (S/CAR96)*, June 6-9, 1996, Denver, Colorado.
- (11) **N.D. Sidiropoulos**, "The Viterbi Optimal Runlength-Constrained Approximation Nonlinear Filter", in *Proc. 1996 International Symposium on Mathematical Morphology and Its Application to Image and Signal Processing*, May 11-13, 1996, Atlanta, GA.
- (10) **N.D. Sidiropoulos**, J.S. Baras, C.A. Berenstein, "On Morphological Openings and Closings of Signals in Shaped Noise", in *Proc. 1995 IEEE Int. Conf. on Image Processing (ICIP95)*, October 22-25, 1995, Washington, DC.
- (9) **N.D. Sidiropoulos**, J.S. Baras, C.A. Berenstein, "The Combinatorial Basis of Uniformly Bounded Discrete Random Set Theory", in *Proc. 1995 Conf. On Information Sciences and Systems*, March 22-24, 1995, The Johns Hopkins University, Baltimore, MD 21218.
- (8) **N.D. Sidiropoulos**, J.S. Baras, C.A. Berenstein, "Some new results on Optimality and Consistency of Morphological Openings and Closings", in *Proc. SPIE's 40th Annual Meeting*, SPIE vol. 2568, July 9-14, 1995, San Diego, CA.
- (7) **N.D. Sidiropoulos**, D. Meleas, and T. Stragas, "Multiframe MAP Signal Estimation in Morphologically Smooth Images", in *Proc. 1995 IEEE Workshop on Nonlinear Signal and Image Processing*, June 20-22, 1995, Neos Marmaras, Halkidiki, Greece.
- (6) **N.D. Sidiropoulos**, J.S. Baras, C.A. Berenstein, "Optimal Filtering of Digital Binary Images Corrupted by Union/Intersection Noise", in *Proc. of 31st IEEE Conference on Decision and Control*, Tucson, Arizona, December 16-18, 1992.
- (5) **N.D. Sidiropoulos**, J.S. Baras, C.A. Berenstein, "Optimal Morphological Filters for Discrete Random Sets under a Union or Intersection Noise Model", in *Proc. of Conference on Visual Communications and Image Processing*, SPIE vol. 1818, Boston, Mass. November 1992.
- (4) **N.D. Sidiropoulos**, J.S. Baras, C.A. Berenstein, "Discrete Random Sets: an inverse problem, plus tools for the Statistical Inference of the Discrete Boolean Model", in *Proc. of Conference on Image Algebra and Morphological Image Processing III*, P.D. Gader, E.R. Dougherty, and J. Serra, Editors, SPIE vol. 1769, San Diego, California, July 19-24, 1992.
- (3) **N.D. Sidiropoulos**, J.S. Baras, C.A. Berenstein, "Optimal Mask Filtering of Discrete Random Sets under a Union/Intersection Noise Model", in *Proceedings of the 1992 Conference on Information Sciences and Systems*, Princeton University, Princeton, New Jersey, March 18-20, 1992.
- (2) **N.D. Sidiropoulos**, J.S. Baras, C.A. Berenstein, "Two-Dimensional Signal Deconvolution: design issues related to a novel multisensor-based approach", in *Proc. SPIE vol. 1569, Proceedings of Conference on Stochastic and Neural Methods in Signal Processing, Image Processing, and Computer Vision*, San Diego, California, July 24-26, 1991.
- (1) **N.D. Sidiropoulos**, J.S. Baras, C.A. Berenstein, "Two-Dimensional Signal Deconvolution Using Multiple Sensors", in *Proceedings of the 1991 Conference on Information Sciences and Systems*, The Johns Hopkins University, Baltimore, Maryland, March 20-22, 1991.

PLENARY TALKS

N.D. Sidiropoulos, “Cross-layer Wireless Networking: Complexity, Approximation, and Opportunities for SP Research”, *IEEE SPAWC 2010 Workshop*, June 20-23, Marrakech, Morocco.

N.D. Sidiropoulos, “Signal Processing Applications of Parallel Factor Analysis”, *Joint CNRS-SIAM Workshop on Tensor Decompositions and Applications*, Aug. 29 - Sep. 2, 2005, Luminy, Marseille, France.

N.D. Sidiropoulos, “Low-Rank Decomposition of Multi-Way Arrays: A Signal Processing Perspective”, *IEEE SAM 2004*, July 18-21, Sitges, Barcelona, Spain.

N.D. Sidiropoulos, “Links Between Multidimensional Low-Rank and Harmonic Decomposition”, *Numerical Multilinear Algebra and its Applications* mini-symposium at *SIAM 50th Anniversary and 2002 Annual Meeting*, Philadelphia, PA, July 8-12, 2002.

TALKS UNDER IEEE SPS DISTINGUISHED LECTURER PROGRAM

N.D. Sidiropoulos, “Multicast beamforming and admission control for UMTS-LTE and 802.16e”, Univ. of Belgrade, Serbia, July 2, 2008; Technical Univ. of Darmstadt, Germany, July 24, 2008; Northwestern University, Chicago, Nov. 7, 2008; Nokia Research Center, Helsinki, Finland, Nov. 12, 2008; University of Hong Kong, Apr. 28, 2009.

N.D. Sidiropoulos, “Analyzing Data ‘Boxes’: Multi-way linear algebra and its applications in signal processing and communications”, University Carlos III, Madrid, Spain, June 13, 2008; Institute Mihailo Pupin (IMP), Belgrade, Serbia, June 30, 2008; University of Minnesota, Minneapolis, Nov. 5, 2008; University of Illinois, Chicago, November 7, 2008; University of Helsinki, Finland, Nov. 11, 2008; Hong Kong University of Science and Technology, Apr. 27, 2009; University of Athens, Greece, Oct. 17, 2009 (part of Greek SP Jam).

COLLOQUIA

N.D. Sidiropoulos, “Parallel Factor Analysis”, invited colloquium at ETH, Zurich, Switzerland, Dec. 9, 2002. This talk was part of the prestigious *Communications, Information Theory, and Signal Processing* seminar at ETH.

N.D. Sidiropoulos, “Parallel Factor Analysis”, invited colloquium at FTW Research Center and the Technical University of Vienna (TUW), Vienna Austria, October 25, 2002.

N.D. Sidiropoulos, “Parallel Factor Analysis”, invited colloquium at University of Duisburg, Germany, June 24-27, 2002.

N.D. Sidiropoulos, “Code-Blind DS/FH Spread-Spectrum Multiuser Detection”, McMaster University, Hamilton, Ontario, Canada, Dept. of ECE Colloquium speaker, Aug. 31, 2001.

N.D. Sidiropoulos, “Code-Blind Spread-Spectrum Multiuser Detection”, University of Florida Gainesville, Dept. of ECE Colloquium speaker, March 27, 2001.

N.D. Sidiropoulos, “PARAFAC Analysis in Communications, Sensor Array Processing, and Networking”, University of Maryland Center for Satellite and Hybrid Communication Networks, Advanced Networks Colloquium Series, Feb. 11, 1999.

CONFERENCE TUTORIALS

- (1) **N.D. Sidiropoulos**, “Linear Algebra for Three-way Arrays: A Signal Processing Perspective”, *IEEE ICASSP 2005* tutorial TUT-14, March 19, 2005, Philadelphia, PA, U.S.A.
- (2) **N.D. Sidiropoulos**, “Linear Algebra for Three-way Arrays: A Signal Processing Perspective”, *IEEE ISSPIT 2003* tutorial, Dec. 14, 2003, Darmstadt, Germany.

STUDENT ADVISING

Tao Li, Ph.D. (UVA) May 2000, “Blind Signal Separation Using Batch and Adaptive Multilinear Regression”. Member of Technical Staff, Philips Wireless, San Jose, CA, 2000-2006. Senior system architect, ApaceWave, Fremont, CA (2007).

Xiangqian Liu, M.Sc. December 1999 (UVA), Ph.D. July 2002 (UMN), “Multidimensional Low Rank and Harmonic Analysis with Applications in Spread Spectrum Communications”. Assistant Professor, University of Louisville, KY (2002); Associate Professor, University of Louisville, KY (2008); Staff Scientist, Broadcom, Atlanta (2009).

Tao Jiang, Ph.D. August 2003 (UMN), “Low-Rank Decomposition of Multi-Way Arrays with Applications in Signal Processing and Wireless Communications”. Post-Doctoral Researcher in Prof. Otterstens group at KTH, Sweden, Aug. 2004 - Mar. 2005; Mathematical Analyst, Bear Stearns, London U.K. & Tokyo, Japan, Apr. 2005 - May 2008; June - October 2008, Analyst at JP Morgan, Tokyo; Senior Analyst with the Royal Bank of Scotland, stationed in Hong Kong, since Nov. 2008.

Goran Dimic, M.Sc. April 2001 (UMN), Ph.D. May 2004 (UMN), “Capacity-Approaching Schemes for Multiple Access and Multiuser Downlink Transmission in Wireless Networks”. Senior Researcher and Group Leader, Institute Mihailo Pupin, Belgrade, Dec. 2005 -.

Rama Budampati, M.Sc. December 2001 (UMN), “Khatri-Rao Space-Time Codes”. Member of Technical Staff at Honeywell, Minnesota, 2003-.

Georgios Latsoudas, M.Sc. Aug. 2006 (TUC), “Multidimensional Scaling Approach for Node Localization in Wireless Sensor Networks”. Member of Technical Staff, Wind Cellular, Athens-Greece.

Kleanthis Mokios, M.Sc. August 2006 (TUC), “Blind Speech Separation Using PARAFAC Analysis”. Currently in military service.

Evaggelia Matskani, M.Sc. July 2007 (TUC), “Convex Approximation Techniques for Joint Multiuser Downlink Beamforming and Admission Control”. Continues for Ph.D.

Alexandros Valyrakis, M.Sc., Oct. 2007, “Stochastic Modeling and Particle Filtering for Frequency Hopping”. Officer in the Greek Air Force Corps of Engineers.

Eleftherios Karipidis, Ph.D. Aug. 2008 (TUC), “Transmit Beamforming to Multiple Co-channel Multicast Groups”. Assistant Professor at Linkoping University, Sweden.

Current Ph.D. students: Evaggelia Matskani. Current M.Sc. students: Dimitris Evaggelidakis. Thimios Tsakonas, Yiannis Mitliagkas, Vassilis Ntranos are undergraduate students whose work is worth graduate student status.

Post-Doc: Dimitri Nion (PhD at ENSEA, France, w/ Lieven De Lathauwer; Post-Doc topic on adaptive filtering-based PARAFAC decomposition, funded by the French Government).

SELECTED FUNDING

Awarded (Total PI share 1997 – today \$2M) :

NSF CAREER, 1998-2002.

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Participant in EC FP6/7 projects NEWCOM, WIP, COOPCOM, N-CRAVE

TEACHING EXPERIENCE

(1) ENEE 425, *Digital Signal Processing*, Spring 1995, Dept. of Electrical Engineering, University of Maryland, College Park. Student evaluation grade average: 3.49/4.0. Dept. average not available for Spring 1995; Fall 1995 Dept. average is 3.32/4.0.

(2) ENEE 420, *Communication Systems*, Fall 1995, Dept. of Electrical Engineering, University of Maryland, College Park. Student evaluation grade average: 3.81/4.0. Fall 1995 Dept. average is 3.32/4.0.

(3) ENEE 724, *Statistical Signal Processing*, Spring 1996, Dept. of Electrical Engineering, University of Maryland, College Park (advanced graduate level). Student evaluation grade average: 3.84/4.0. Spring 1996 Dept. average is 3.33/4.0.

(4) *A Short Course on DSP*, Fall 1996, Army Research Laboratory, Ft. Monmouth, NJ.

(5) ENEE 425, *Digital Signal Processing*, Spring 1997, Dept. of Electrical Engineering, University of Maryland, College Park. Student evaluation grade average: 3.56/4.0. Spring 1997 undergraduate Dept. average is 3.37/4.0.

(6) EE 611, *Probability and Stochastic Processes*, Fall 1997, Dept. of Electrical Engineering, University of Virginia. Student evaluation: two standard deviation units above mean for all 600-level courses after 1984. Instructor rating: 4.649, mean for all 600-level courses: 4.313.

(7) EE 774, *Advanced Digital Signal Processing* (emphasizing spectral analysis), Spring 1998, Dept. of Electrical Engineering, University of Virginia. Student evaluation: three standard deviation units above mean for all 700-level courses after 1984. Instructor rating: 4.671, mean for all 700-level courses: 4.246.

(8) EE 323, *Signals and Systems I*, Fall 1998, Dept. of Electrical Engineering, University of Virginia. Student evaluation: one standard deviation unit below mean for all 300-level courses after 1984. Instructor rating: 3.621, mean for all 300-level courses: 3.830

(9) EE 324, *Signals and Systems II*, Spring 1999, Dept. of Electrical Engineering, University of Virginia. Student evaluation: two standard deviation units above mean for all 300-level courses after 1984. Instructor rating: 4.223, mean for all 300-level courses: 3.844.

(10) EE 323, *Signals and Systems I*, Fall 1999, Dept. of Electrical Engineering, University of Virginia.

- (11) Recitations for EE 3025, Probability and Stochastic Processes, Spring 2000, Dept. of Electrical and Computer Engineering, University of Minnesota.
- (12) EE5381, Telecommunication Networks, Fall 2000, Dept. of Electrical and Computer Engineering, University of Minnesota, Minneapolis. Instructor rating: 6.3, mean for all 5000-level courses: 5.83.
- (13) EE 3025, Probability and Stochastic Processes, Spring 2001, Dept. of Electrical and Computer Engineering, University of Minnesota. Instructor rating: 5.0, mean for all 3000-level courses: 5.0.
- (14) EE5381, Telecommunication Networks, Fall 2001, Dept. of Electrical and Computer Engineering, University of Minnesota, Minneapolis.
- (15) TEL 601, Probability and Stochastic Processes, Spring 2002, 2003, 2005 (**3 times**), Dept. of ECE, Technical University of Crete.
- (16) TEL 201, Signals and Systems, Fall 2002, 2003 (**2 times**), Dept. of ECE, Technical University of Crete.
- (17) TEL 302, Digital Communications, Spring 2003, 2004 (**2 times**), Dept. of ECE, Technical University of Crete.
- (18) TEL 609, Convex Optimization, Spring 2004, 2008, 2009 (**3 times**) Dept. of ECE, Technical University of Crete.
- (19) TEL 301, Telecommunication Systems I, Fall 2004-2009 (**6 times**), Dept. of ECE, Technical University of Crete.
- (20) TEL 502, Statistical Signal Processing for Communications, Spring 2005, 2008, 2009 (**3 times**) Dept. of ECE, Technical University of Crete.
- (21) TEL 603, Estimation and Detection, Spring 2007, Dept. of ECE, Technical University of Crete.

PROFESSIONAL SOCIETIES AND SERVICE

Memberships: *Fellow* IEEE; Member, Technical Chamber of Greece.

Associate Editor: IEEE Signal Processing Letters (2000 - 2002); IEEE Trans. Signal Processing (2000 - 2006); IEEE Signal Processing Magazine Editorial Board (2009 -); Elsevier Signal Processing (2009 -). Guest Editor for Special Issue on Convex Optimization in Signal Processing, IEEE Signal Processing Magazine, May 2010.

Chair: Signal Processing for Communications Technical Committee (SPCOM-TC), IEEE Signal Processing Society, 2007 - 2008 (vice-chair, 2005 - 2006).

Technical Committee Memberships: Signal Processing for Communications Technical Committee (SPCOM-TC), IEEE Signal Processing Society (2000 - 2008). Sensor Array and Multichannel processing Technical Committee (SAM-TC), IEEE Signal Processing Society (2004 - 2009).

Technical Program Committee (TPC) Chair: IEEE CAMSAP 2005, Dec. 13-15, 2005, Puerto Vallarta, Mexico.

General co – Chair (with R. Rao, RIT): IEEE CAMSAP 2007, St. Thomas, U.S. Virgin Islands, Dec. 12-14, 2007.

Technical Program Committee (TPC) co – Chair (with B. Sadler, ARL):

IEEE SAM 2008, July 21-23, Darmstadt, Germany.

General Chair: TRICAP 2006 (cross-disciplinary three-way analysis workshop), Chania, Crete, Greece, June 2006.

Steering Committee Member and Co – Organizer: TRICAP 2003 (cross-disciplinary three-way analysis workshop), June 22-27, Lexington, KY.

Reviewer: Regular reviewer for NSF, ARO, IEEE Trans. on: Signal Processing, Information Theory, Communications, Wireless Communications; IEEE Signal Processing Letters, and IEEE Communications Letters.

Technical Program Committee Member: IEEE ICASSP 2000 - 2010; IEEE SPAWC 2003-2010; IEEE SAM 2002, 2004, 2006, 2010; IEEE ICIP98, Chicago; IEEE ICIP99, Kobe, Japan.

Panel Member: NSF KDI/LIS, NSF SPS/CAREER, NSF/ITR, NSF/COM, Belgian Science Foundation, German Science Foundation, Israeli Science Foundation.

SERVICE TO THE DEPARTMENT

At UVA: Member, Undergraduate, Computing Resources Committees, 1997-98. Member, Long Range Planning, Graduate, Computing Resources, Eminent Speakers Committees, 1998-99. *At UMN:* ECE Colloquium Coordinator, 2000-2001. ECE Communications Seminar Coordinator, 2001-2002. *At TUC:* Vice-Chair, Dept. of ECE, 2003-2005; Chair, Dept. of ECE, 2005-2007; Director, Telecommunications Laboratory, since 2003. Member of the Board, Telecommunication Systems Institute, 2003-.

IEEE – STYLE BIOGRAPHICAL SKETCH

Nicholas Sidiropoulos (*Fellow, IEEE*) received the Diploma in Electrical Engineering from the Aristotelian University of Thessaloniki, Greece, and M.S. and Ph.D. degrees in Electrical Engineering from the University of Maryland - College Park, in 1988, 1990 and 1992, respectively. He has been a Postdoctoral Fellow (1994-1995) and Research Scientist (1996-1997) at the Institute for Systems Research, University of Maryland; Assistant Professor in the Department of Electrical Engineering at the University of Virginia (1997-1999), and Associate Professor in the Department of Electrical and Computer Engineering at the University of Minnesota - Minneapolis (2000-2002). Since 2002, he is a Professor in the Department of Electronic and Computer Engineering at the Technical University of Crete, Chania - Crete, Greece, and Adjunct Professor at the University of Minnesota. His current research interests are primarily in signal processing for communications, cross-layer wireless networking, convex optimization / approximation, and multi-way analysis / multi-linear algebra. He received the NSF/CAREER award in 1998, the IEEE Signal Processing Society (SPS) Best Paper Award in 2001 and 2007, served as IEEE SPS Distinguished Lecturer (2008-2009), and as Chair of the IEEE Signal Processing for Communications and Networking Technical Committee (2007-2008). He served as Associate Editor for IEEE Transactions on Signal Processing (2000 - 2006), IEEE Signal Processing Letters (2000 - 2002), and currently serves on the editorial board of IEEE Signal Processing Magazine. He also served as TPC Chair for IEEE CAMSAP 2005 and IEEE SAM 2008, as General co-Chair for IEEE CAMSAP 2007, and currently serves on the organizing committees for IEEE ICASSP 2011 in Prague and ICASSP 2015 in Brisbane.