

Erchin Serpedin

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RESEARCH INTERESTS:

Signal Processing and its Applications in Wireless Communications, Synchronization of Communications Systems, Computational Statistics, Information Theory, Bioinformatics, Genomics and Systems Biology.

EDUCATION:

- Jul.'05-Jun.'07 **Postdoctoral Training in Bioinformatics and Genomics** under a training grant offered by NCI (US National Cancer Institute) at Texas A& M University, College Station, TX.
- Sep.'95-Jan.'99 **Ph.D., Electrical Engineering**, Jan. 1999: University of Virginia, Charlottesville. Dissertation: "Equalization of linear and nonlinear communication channels using transmitter or receiver diversity." Advisor: Prof. Georgios B. Giannakis, University of Minnesota, Minneapolis, MN.
- Sep.'91-Sep.'92 **M.Sc., Electrical Engineering**, Oct. 1992: Georgia Institute of Technology, School of ECE, Atlanta, GA.
- Sep.'91-Oct.'92 **Specialization Degree in Transmission and Processing of Information** Dec. 1992: L'Ecole Supérieure d'Electricité (SUPELEC), Paris, France. Thesis: "High-quality audio transform coding for stereophonic channels." Advisor: Prof. Joel Soumagne, SUPELEC, France.
- 1986 - 1991 **Diploma of Electrical Engineer**, July 1991: Polytechnic Institute of Bucharest, Dept. of Electrical Engineering, Bucharest, Romania. Thesis: "Singular value decomposition-based identification methods for the estimation of state space equations." Advisor: Prof. Petre Stoica, Uppsala University, Sweden.

ACADEMIC EXPERIENCE:

- Sept'10-Present **Full Professor** - Electrical and Computer Engineering Dept., Texas A&M University, College Station, TX.
- Sept'05-Aug.10. **Associate Professor (with Tenure)** - Electrical and Computer Engineering Dept., Texas A&M University, College Station, TX.
- July'99-Aug.'05 **Assistant Professor** - Electrical and Computer Engineering Dept., Texas A&M University, College Station, TX.

- Jan.'99-June'99 **Lecturer** - EE 774 Advanced Digital Signal Processing, Electrical and Computer Engineering Dept., University of Virginia, Charlottesville, VA.
- Sep.'95-Jan.'99 **Research Assistant** for Prof. Georgios B. Giannakis in the Signal Processing Group, Electrical and Computer Engineering Dept., Univ. of Virginia, Charlottesville. Research work on equalization of communication channels: proposed and developed new methods for estimation and equalization of linear and nonlinear channels based on transmitter and receiver diversity techniques.
- Sep.'95-May'96 **Teaching Assistant** - EE 208 Digital Logic Design Lab, EE 614 Estimation and Detection, EE 724 Advanced Digital Signal Processing, ECE Dept., Univ. of Virginia. Conducted laboratory classes, advised students, and graded papers.
- Feb.'93-Aug.'95 **Instructor** - Computer Science and Automatic Control, Polytechnic Institute of Bucharest, Romania. Taught courses/labs on System Identification, DSP, Modeling of Time Series.
- June'92-Dec.'92 **Research Assistant** for Prof. Joel Soumagne, *L'Ecole Supérieure d'Electricité*, Division of Signal Processing, Metz, France. Developed and tested encoders for high quality compression of stereophonic signals.
- Sep.'89-June'91 **Research Assistant** for Prof. Petre Stoica, Polytechnic Institute of Bucharest, Romania. Analyzed and tested statistical signal processing algorithms for estimation of state-space representations of linear systems.

AWARDS:

- Jul.'08 ICDDT (International Conference in Digital Communications) 2008: Best Paper Award
- Apr.'06 ASEE (American Society for Engineering Education) Faculty Award
- Oct.'05 TEES (Texas Engineering and Experimentation Station) Fellow Award
- Apr.'05 NRC (US National Research Council) Faculty Award
- Dec.'04 Outstanding Professor Award: Texas A&M University, ECE Dept.
- Aug.'04 CCCT (Communications, Computing and Control Technologies) 2004 Conference: Best Paper Award
- Jan.'01 US National Science Foundation (NSF) Career Award.
- Sep.'95-May'96 University of Virginia Departmental Fellowship.
- June'91 Graduated at the top of the class at Polytechnic Institute of Bucharest, Departments of Computer Science and Automatic Control, Bucharest, Romania, Rank: 1/300.
- Sep.'89-June'91 National Merit Fellowship.
- Apr.'85 Romanian Mathematical Society Prize at the National Mathematical Olympiad (ranked in top 5).

AWARDS won by Dr. Serpedin's students:

- Apr.'11 Fang-Han Hsu won **Best Poster Presentation** at MCBIOS 2011: The Eighth Annual Conference of the MidSouth Computational Biology and Bioinformatics Society, April 2011.
- May'09 Qasim Chaudhari won the **Richard E. Ewing Award for Excellence in Research**. Dr. Qasim Chaudhari graduated in August 2008, and currently holds the position of assistant professor at Iqra University, Pakistan.
- Aug.'06 Kwadwo Ajepong received a **Pathways to Doctorate Fellowship** awarded by the Dean's Office.
- May'05 Timothy Dureya received the **Best Senior Thesis Award from the College of Engineering**, Texas A&M University.
- Aug.'02 Yik-Chung Wu received a three-year **Croucher Foundation Fellowship** for graduate research studies. Dr. Yik-Chung Wu graduated in August 2005, and is currently an assistant professor at the University of Hong-Kong. Dr. Yik-Chung Wu received two best paper awards at international conferences and published more than fifty (50) journal and conference papers.
- Aug.'02 Yan Wang received the **ECE Departmental Fellowship** for his PhD studies. Dr. Yan Wang graduated in December 2003, and currently works for Nokia.

PUBLICATIONS: (* shows current and former students)

Author or co-author of the following publications:

- 2 research monographs
- 8 book chapters
- 80 journal papers
- 120 conference papers
- 1 edited textbook and its solution manual
- As of Dec. 2011, h-index: 23, and g-index: 38.

Books:

1. Y. Wang and E. Serpedin, *New Advances in Synchronization of Digital Communication Receivers*, VDM Verlag, ISBN-10: 3639072103, 188 pages, Aug. 2008 (research monograph).
2. E. Serpedin and Q. Chaudhari*, *Synchronization of Wireless Sensor Networks: Parameter Estimation, Performance Benchmarks and Protocols*, Cambridge University Press, August 2009, ISBN: 9780521764421, 260 pages (research monograph). A Chinese translation is scheduled to appear in 2012 in a joint effort by Cambridge University Press and Xi'an Jiaotong University Press (XJUP).
3. E. Serpedin, T. Chen, and R. Dinesh, *Mathematical Foundations for Signal Processing, Communications and Networks*, CRC Press/Francis & Taylor, 2011, ISBN: 9781439855133, 857 pages (textbook).

4. E. Serpedin, T. Chen, and R. Dinesh, Solution Manual - Mathematical Foundations for Signal Processing, Communications and Networks, CRC Press/Francis & Taylor, 2011.

Book Chapters:

1. C. Georghiades and E. Serpedin, "Synchronization," Book Chapter in *The Handbook of Communications*, CRC Press, 2nd edition, 2002.
2. K. Noh*, Y.C. Wu* and E. Serpedin, "Adaptive Signal Processing Techniques for Synchronization of Wireless Sensor Networks," Chapter in the Handbook: *Adaptive Processing in Wireless Communications*, (editor: M. Ibnkahla) CRC Press, pp. 373-410, 2008.
3. J. Chen, Y.C. Wu*, T.S. Ng and E. Serpedin, "Multi-user frequency offsets estimation in OFDMA systems," book chapter in *Orthogonal Frequency Division Multiple Access (OFDMA)*, to be published by Auerbach Publications, CRC Press, Taylor&Francis Group, 2009.
4. J. Chen, Y.C. Wu*, T.S. Ng and E. Serpedin, "Training sequence design for channel and frequency estimation in multi-user OFDM systems," book chapter in *Orthogonal Frequency Division Multiple Access (OFDMA)*, Auerbach Publications, CRC Press, Taylor&Francis Group, 2010.
5. Y. Zhou*, Y.C. Wu*, and E. Serpedin, "Effects of diversity on carrier frequency acquisition in OFDM systems," invited book chapter in *OFDM and OFDMA with Linear Diversity for Future Wireless Communications*, Bentham Science Publishing, ed. K. N. Le, 2011.
6. A. Ahmad and E. Serpedin, "Factor Graph Algorithms," book chapter in *Mathematical Foundations for Signal Processing, Communications and Networks*, CRC Press, 2011.
7. F. Hamidi Sepehr and E. Serpedin, "Linear Algebra and Matrix Theory Applications," book chapter in *Mathematical Foundations for Signal Processing, Communications and Networks*, CRC Press, 2011.
8. C. Georghiades and E. Serpedin, "Synchronization of Communication Receivers," Book Chapter in *The Handbook of Mobile Communications*, CRC Press/Taylor & Francis, 3rd edition, 2012.

Journals:

1. A. Noor, E. Serpedin, H. Nounou and M. Nounou, " Inferring Gene Regulatory Networks via Nonlinear State-Space Models and Exploiting Sparsity", IEEE/ACM Transactions on Computational Biology and Bioinformatics, Febr. 2012 (accepted for publication).
2. J.S. Kim, J. Lee*, E. Serpedin and K. Qaraqe, " Robust Clock Synchronization in Wireless Sensor Networks Through Noise Density Estimation," IEEE Trans. On Signal Processing, vol. 59, no. 7, July 2011, pp. 3035 - 3047.
3. B. Wajid* and E. Serpedin, "Review of General Algorithmic Features for Genome Assemblers for Next Generation Sequencers," Genomics, Proteomics & Bioinformatics, Elsevier, Dec. 2011 (accepted for publication).
4. F-H. Hsu*, E. Serpedin, Y. Chen and E. Dougherty, "Stochastic Modeling of the Relationship between Copy Number and Gene Expression Based on Transcriptional Logic," IEEE Transactions on Biomedical Engineering, vol. 59, no. 1, Jan. 2012.

5. S. Ekin*, F. Yilmaz*, H. Celebi, K. A. Qaraqe, M-S. Alouini, E. Serpedin, "Capacity Limits of Spectrum Sharing Systems Over Hyper Fading Channels", *Journal of Wireless Communications and Mobile Computing*, Wiley Oct. 2009 (accepted for publication).
6. I-K. Rhee, S. Kim, K. Jung, E. Serpedin, J-M Park, YH Lee, "Uplink Interference Adjustment for Mobile Satellite Service in Multibeam Environments," *Journal of Communications in Computer and Information Science*, Springer 2011, Volume 151, 371-380, DOI: 10.1007/978-3-642-20998-7-46.
7. H. Jeon, and E. Serpedin, "An Efficient Blind Deterministic Frequency Offset Estimator for OFDM Systems," *IEEE Transactions on Communications*, vol. 59, no. 4, April 2011.
8. K. A. Qaraqe, S. Ekin*, T. Agarwal, and E. Serpedin, "Performance Analysis of Cognitive Radio Multiple-Access Channels over Dynamic Fading Environments", *Springer Journal of Wireless Personal Communications*, Dec. 2011 (accepted for publication).
9. Y. C. Wu*, Q. Chaudhari* and E. Serpedin, "Clock synchronization in wireless sensor networks: an overview," *IEEE Signal Processing Magazine*, vol. 28, no. 1, Jan. 2011, pp. 124-138.
10. J.S. Kim*, J. Lee*, and E. Serpedin, "A Robust Approach for Clock Offset Estimation in Wireless Sensor Networks," *EURASIP Journal on Advances in Signal Processing*, Volume 2010 (2010), Article ID 132381, 8 pages.
11. Q. Chaudhari*, E. Serpedin, and K. Qaraqe, "On minimum variance unbiased estimation of clock offset in a two-way message exchange mechanism," *IEEE Trans. On Information Theory*, vol. 56, no. 6, June 2010.
12. Q. Chaudhari* and E. Serpedin, "Energy Efficient Estimation of Clock Offset for Inactive Nodes in Wireless Sensor Networks," *IEEE Transactions on Information Theory*, vol. 56, no. 1, Jan. 2010.
13. W. Zhao*, E. Serpedin, and E. Dougherty, "Spectral Preprocessing for Clustering Time-Series Gene Expressions," *EURASIP Journal on Bioinformatics and Systems Biology*, Volume 2009 (2009), Article ID 713248, 10 pages.
14. Q. Chaudhari*, E. Serpedin, and K. Qaraqe, "Some Improved and Generalized Estimation Schemes for Clock Synchronization of Listening Nodes in Wireless Sensor Networks," *IEEE Trans. on Communications*, vol. 58, no. 2, Febr. 2010.
15. S. Park*, E. Serpedin, and K. Qaraqe, "Joint Blind Symbol Rate Estimation and Data Symbol Detection for Linearly Modulated Signals," *Journal of Communications Software and Systems*, vol. 5, no. 3, Sept. 2009.
16. W. Zhao*, E. Serpedin, and E. Dougherty, "Identifying Cell Cycle Involved Genes By Combining Gene Expression Analysis and Prior Knowledge," *Journal on Bioinformatics and Systems Biology*, Volume 2009 (2009), Article ID 683463, 9 pages.
17. E. Serpedin, J. Garcia-Frias, Y. Huang, U. Braga-Neto, "Applications of Signal Processing Techniques to Bioinformatics, Genomics, and Proteomics," *EURASIP Journal on Bioinformatics and Systems Biology*, Volume 2009 (2009), Article ID 250306.

18. H. Steendam, M. Ghogho, M. Luise, E. Panayirci, E. Serpedin, "Synchronization in Wireless Communications," *EURASIP Journal on Wireless Communications and Networking*, Volume 2009 (2009), Article ID 568369, March 2009, doi:10.1155/2009/568369.
19. J.S. Kim*, J. Lee*, and E. Serpedin, "A robust estimation scheme for clock phase offsets in wireless sensor networks in the presence of non-Gaussian random delays," *Signal Processing*, Elsevier, Volume 89, Issue 6, June 2009, Pages 1155-1161.
20. I. K. Rhee, J. Lee*, J. Kim*, E. Serpedin, and Yik-Chung Wu, "Clock Synchronization in Wireless Sensor Networks: An Overview," *Sensors Journal*, 2009, 9, 1-x manuscripts; doi:10.3390/sensors90x0000x, ISSN 1424-8220.
21. X. Li, Y.-C. Wu* and E. Serpedin, "Timing Synchronization in Decode-and-Forward Cooperative Communication Systems," *IEEE Trans. on Signal Processing*, Volume 57, no. 4, April 2009, pp. 1444 - 1455.
22. J.S. Kim*, E. Serpedin, and D. R. Shin, "A Handoff Trigger and Network Selection Algorithms for Load-Balancing Handoff in CDMA-WLAN Integrated Networks," *EURASIP Journal on Wireless Communications and Networking*, vol. 2008, Article ID 136939, 14 pages, 2008. doi:10.1155/2008/136939, December 2008.
23. A. Reza* and E. Serpedin, "Incoherent DOA estimation in uniform antenna arrays with inordinate spacing using a subband hopping approach," *Circuits, Systems, and Signal Processing*, Birkhauser, vol. 27, no. 3, ISSN 0278-081X (print), 1531-5878 (online), June 2008.
24. W. Zhao*, K. Ajepong, E. Serpedin, E. Dougherty, "Detecting Cyclic Genes from Irregularly Sampled Gene Expressions for Drosophila Melanogaster" *EURASIP Journal on Bioinformatics and Systems Biology*, Volume 2008, Article ID 769293, 8 pages.
25. W. Zhao*, E. Serpedin, and E. Dougherty, "Recovering Genetic Regulatory Networks from Chromatin Immunoprecipitation and Steady-State Microarray Data," *EURASIP Journal on Bioinformatics and Systems Biology*, Volume 2008, Article ID 248747, 12 pages.
26. K. Noh* and E. Serpedin, "A New Approach for Time Synchronization in Wireless Sensor Networks: Pairwise Broadcast Synchronization," *IEEE Trans. on Wireless Communications*, vol. 7, no. 6, Sept. 2008.
27. Q. Chaudhari*, E. Serpedin, and K. Qaraqe, "On Maximum Likelihood Estimation of Clock Offset and Skew in Networks With Exponential Delays," *IEEE Trans. on Signal Processing*, vol. 56, no. 4, pp. 1685 - 1697, April 2008.
28. H.-G. Jeon and E. Serpedin, "Walsh Coded Training Signal Aided Time Domain Channel Estimation for MIMO-OFDM Systems," *IEEE Trans. on Communications*, vol. 56, no. 9, pp. September 2008.
29. J. Kim* and E. Serpedin, "Improved Particle Filtering Based Estimation of the Number of Competing Stations in IEEE 802.11 Networks," *IEEE Signal Processing Letters*, vol. 15, no. 1, pp. 87-90, January 2008.

30. J. Kim*, D.-R. Shi, and E. Serpedin, "Adaptive multiuser receiver with joint channel and time delay estimation of signals based on the square-root unscented filter," *Digital Signal Processing Journal*, Elsevier, Volume 19 , Issue 3 (May 2009), Pages 504-520, 2009 ISSN: 1051-2004.
31. H.-G. Jeon and E. Serpedin, "A Novel Simplified Channel Tracking Method for MIMO-OFDM Systems with Null Sub-carriers," *Signal Processing*, Elsevier, Volume 88, Issue 4, April 2008, Pages 1002-1016.
32. Q. Chaudhari* and E. Serpedin, "On maximum likelihood estimation of clock phase, skew and drift in networks with exponentially distributed delays," *EURASIP Journal on Advances in Signal Processing*, Volume 2008, Article ID 219458, 6 pages.
33. I. Sari*, K. Noh*, Q. Chaudhari*, E. Serpedin, and B. Suter, "On the Joint Synchronization of Clock Offset and Skew in RBS-Protocol," *IEEE Trans. on Communications*, vol. 56, no. 5, pp. 500-503, May 2008.
34. E. Serpedin, H. Li, A. Dogandzic, H. Dai and P. Cotae, "Signal Processing Techniques for Wireless Sensor Networks," *EURASIP Journal on Advances in Signal Processing*, vol. 2008, Article ID 540176, Year 2008.
35. B. Kelleci*, T. Fischer*, A. Karsilayan, K. Shi* and E. Serpedin, "Adaptive Narrowband Interference Suppression in Multi-Band OFDM Receivers," *Circuits, Systems and Signal Processing Journal*, Birkhauser, vol. 27, no. 4, August 2008, pp. 475-489.
36. T. Fischer*, B. Kelleci*, K. Shi*, E. Serpedin, and A. Karsilayan, " An Analog Approach to Suppressing In-Band Narrowband Interference in UWB Receivers," *IEEE Trans. On Circuits and Systems-Part I*, Volume 54, Issue 5, May 2007, pp. 941 - 950.
37. W. Zhao*, E. Serpedin, and E. Dougherty, " Inferring Connectivity of Genetic Regulatory Networks Using Information Theoretic Criteria," *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, vol. 5, no. 2, pp. 262 - 274, April-June 2008.
38. K. Shi*, Y. Zhou*, B. Kelleci*, T. W. Fischer*, E. Serpedin and A. I. Karsilayan, "Impacts of Narrowband Interference on OFDM-UWB Receivers: Analysis and Mitigation," *IEEE Trans. on Signal Processing*, Volume 55, Issue 3, March 2007, pp. 1118 - 1128.
39. K. Noh*, E. Serpedin, and B. Suter, "Optimum Cooperation of the Cooperative Coding Scheme for Frequency Division Half-Duplex Relay Channels," *IEEE Trans. on Wireless Communications*, Volume 6, Issue 5, May 2007, pp. 1654 - 1658.
40. Y. Zhou*, A. I. Karsilayan and E. Serpedin, "Sensitivity of Multi-Band ZP-OFDM Ultra Wideband Receivers to Synchronization Errors," *IEEE Trans. on Signal Processing*, Volume 55, Issue 2, Jan. 2007, Page(s):729 - 734.
41. K. Noh*, Q. Chaudhari*, E. Serpedin, and B. Suter, "Novel Clock Phase Offset and Skew Estimation Using Two-Way Timing Message Exchanges for Wireless Sensor Networks," *IEEE Trans. on Communications*, Volume 55, Issue 4, April 2007, pp.: 766 - 777.

42. W. Zhao*, E. Serpedin, and E. Dougherty, "Inferring gene regulatory networks from time series data using the minimum description length principle," *Bioinformatics*, Oxford Univ. Press, 1 September 2006; 22: 2129 - 2135.
43. T. Dureya*, I. Sari*, and E. Serpedin, "Blind carrier recovery for circular QAM using nonlinear least-squares estimation," *Digital Signal Processing Journal*, Elsevier, Volume 16, Issue 4, July 2006, Pages 358-368.
44. Y.C. Wu*, and E. Serpedin, "Unified analysis of a class of blind feedforward symbol timing estimators employing second-order statistics," *IEEE Trans. on Wireless Communications*, Volume 5, Issue 4, April 2006, pp. 737 - 742.
45. K. Shi* and E. Serpedin, "Fast Timing Recovery for Linearly and Non-linearly Modulated Systems," *IEEE Trans. on Vehicular Technology*, Volume 54, Issue 6, Nov. 2005, pp. 2017 - 2023.
46. E. Serpedin, F. Panduru*, I. Sari* and G. B. Giannakis, "A bibliography on cyclostationary signal processing," *Signal Processing*, Elsevier, Volume 85, Issue 12, December 2005, Pages 2233-2303.
47. Y. C. Wu* and E. Serpedin, Comments on a "Class of Cyclic-Based Estimators for Frequency-Offset Estimation of OFDM Systems," *IEEE Trans. on Communications*, vol. 53, no. 3, March 2005.
48. Y.C. Wu*, K.-W. Yip, T.-S. Ng, and E. Serpedin, "Maximum-likelihood frame synchronization for IEEE 802.11a WLANs on frequency-selective fading channels with unknown sampling phase offset," *IEEE Trans. on Wireless Communications*, Volume 4, Issue 6, Nov. 2005, pp. 2751 - 2763.
49. Y.C. Wu*, and E. Serpedin, "Data-aided Maximum Likelihood Symbol Timing Estimation in MIMO Correlated Fading Channels," *Wireless Communications and Mobile Computing Journal (WCMC)*, Special Issue on "Multiple-Input Multiple-Output (MIMO) Communications", Wiley, vol. 4, no. 7, pp. 773-791, Nov. 2004.
50. K. Shi*, E. Serpedin, and P. Ciblat, "Decision-directed fine synchronization in OFDM systems" *IEEE Trans. on Communications*, vol. 53, no. 3, March 2005, pp. 408 - 412.
51. Y. C. Wu* and E. Serpedin, "Design and Analysis of Feedforward Symbol Timing Estimators Based on the Conditional Maximum Likelihood Principle," *IEEE Trans. on Signal Processing*, Volume 53, Issue 5, May 2005, pp. 1908 - 1918.
52. K. Shi*, Y. Wang*, and E. Serpedin, "On the Design of Digital Blind Feedforward Nearly Jitter Free Timing Recovery Schemes for Linear Modulations," *IEEE Trans. on Communications*, vol. 52, no. 9, Sept. 2004.
53. Y.-C. Wu*, S.-C. Chan, and E. Serpedin, "Symbol-Timing Estimation in Space-Time Coding Systems based on Orthogonal Training Sequences," *IEEE Trans. on Wireless Communications*, Volume 4, Issue 2, March 2005, pp. 603 - 613.
54. Y.-C. Wu* and E. Serpedin, "Low-complexity feedforward symbol timing estimator using Conditional Maximum Likelihood principle," *IEEE Communications Letters*, vol. 8, no. 3, pp. 168-171, March 2004.

55. Y. Wang*, K. Shi*, and E. Serpedin, "Continuous-mode frame synchronization for frequency selective channels," *IEEE Trans. on Vehicular Technology*, vol. 53, no. 3, pp. 865-874, May 2004.
56. K. Shi* and E. Serpedin, "Coarse Frame and Carrier Synchronization for OFDM Systems" *IEEE Trans. on Wireless Communications*, vol. 3, no. 3, pp. 1271-1284, July 2004.
57. Y. Wang*, E. Serpedin and P. Ciblat, "An Alternative Blind Feedforward Symbol Timing Estimator Using Two Samples per Symbol," *IEEE Trans. on Communications*, vol. 51, no. 9, pp. 1451-1455, Sept. 2003.
58. P. Ciblat and E. Serpedin, "A fine blind frequency offset estimator for OFDM /OQAM systems," *IEEE Trans. on Signal Processing*, vol. 52, no.1, pp. 291-296, January 2004.
59. Y. Wang* and E. Serpedin, "Non-Data Aided Feedforward Carrier Frequency Offset Estimators for QAM Constellations: A Nonlinear Least-Squares Approach," *Eurasip Applied Signal Processing Journal*, no. 13, pp. 1993-2001, Nov. 2004.
60. Y. Wang*, E. Serpedin, and P. Ciblat, "Blind Feedforward Cyclostationarity Based Timing Estimation for Linear Modulations," *IEEE Trans. on Wireless Communications*, vol. 3, no. 3, pp. 709-715, May 2004.
61. P. Ciblat, E. Serpedin, and Y. Wang*, "On a blind fractionally-sampled carrier frequency offset estimator for noncircular transmissions," *IEEE Signal Processing Letters*, vol. 10, no. 4, pp. 89-92, April 2003.
62. Y. Wang* and E. Serpedin, "A Class of Blind Phase Recovery Techniques for Large QAM Modulations: Estimators and Bounds," *IEEE Signal Processing Letters*, vol. 9, no. 10, pp. 301-304, Oct. 2002.
63. Y. Wang*, E. Serpedin, and P. Ciblat, "Optimal blind carrier recovery for burst M-PSK transmissions," *IEEE Transactions on Communications*, vol. 51, no. 9, pp. 1571-1581, Sept. 2003.
64. Y. Wang*, E. Serpedin and P. Ciblat, "Optimal Blind Nonlinear Least-Squares Carrier Phase and Frequency Offset Estimation for General QAM Modulations," *IEEE Trans. on Wireless Communications*, vol. 2, no. 5, pp. 1040-1054, Sept. 2003.
65. Y. Wang*, E. Serpedin, P. Ciblat, and P. Loubaton, "Performance Analysis of a Class of Non-Data Aided Carrier Frequency Offset and Symbol Timing Delay Estimators For Flat-Fading Channels," *IEEE Transactions on Signal Processing*, vol. 50, no. 9, pp. 2295-2305, Sept. 2002.
66. P. Ciblat, P. Loubaton, E. Serpedin, and G. B. Giannakis, "Asymptotic Analysis of Blind Cyclic Correlation Based Symbol-Rate Estimators," *IEEE Trans. on Information Theory*, vol. 48, no. 7, pp. 1922-1934, July 2002.
67. P. Ciblat, P. Loubaton, E. Serpedin, and G. B. Giannakis, "Performance analysis of blind carrier frequency offset estimators for noncircular transmissions through frequency-selective channels," *IEEE Transactions on Signal Processing*, vol. 50, no. 1, pp. 130-140, Jan. 2002.

68. E. Serpedin, P. Ciblat, and G. B. Giannakis, "Performance Analysis of Blind Carrier Phase Estimators for General QAM Constellations," *IEEE Trans. on Signal Processing*, vol. 49, no. 8, pp. 1816-1823, August 2001.
69. G. B. Giannakis and E. Serpedin, "A Bibliography on Nonlinear System Identification," *Signal Processing*, Elsevier Science, vol. 81, no. 3, pp. 533-580, March 2001.
70. E. Serpedin, A. Chevreuil, G. B. Giannakis, and P. Loubaton, "Blind Channel and Carrier Frequency Offset Estimation Using Periodic Modulation Precoders," *IEEE Transactions on Signal Processing*, vol. 48, no. 8, pp. 2389-2405, August 2000.
71. A. Chevreuil, E. Serpedin, P. Loubaton, and G. B. Giannakis, "Blind Channel Identification and Equalization Using Non-Redundant Periodic Modulation Precoders: Performance Analysis," *IEEE Transactions on Signal Processing*, vol. 48, no. 6, pp. 1570-1586, June 2000.
72. E. Serpedin, "Subsequence Based Recovery of Missing Samples in Oversampled Band-limited Signals," *IEEE Transactions on Signal Processing*, vol. 48, no. 2, pp. 580-583, February 2000.
73. E. Serpedin and G. B. Giannakis, "A Simple Proof of a Known Channel Identifiability Result," *IEEE Transactions on Signal Processing*, vol. 47, no. 2, pp. 591-593, Febr. 1999.
74. G. B. Giannakis and E. Serpedin, "Blind Identification of ARMA Channels with Periodically Modulated Inputs," *IEEE Transactions on Signal Processing*, vol. 46, no. 11, pp. 3099-3104, Nov. 1998.
75. E. Serpedin and G. B. Giannakis, "Blind Channel Identification and Equalization with Modulation Induced Cyclostationarity", *IEEE Transactions on Signal Processing*, vol. 46, no. 7, pp. 1930-1944, July 1998.
76. G. B. Giannakis and E. Serpedin, "Linear Multichannel Blind Equalizers of Nonlinear FIR Volterra Channels," *IEEE Transactions on Signal Processing*, vol. 45, no. 1, pp. 67-81, January 1997.
77. E. Serpedin, "Preecho Reduction Using a Kalman Filtering Approach," *Scientific Bulletin of Polytechnic Institute of Bucharest*, Series C: Electrical Engineering, vol. 56, no. 1-4, pp. 271-281, 1994.
78. E. Serpedin, "On a State-Space Modeling Algorithm for Time Series," *Scientific Bulletin of Polytechnic Institute of Bucharest*, Series C: Electrical Engineering, vol. 54, no. 3-4, pp. 195-204, 1992.

Journal Papers Submitted:

79. Y. Zhou, O. Dobre, K. A. Qaraqe, and E. Serpedin, "Signal Detection in Cognitive Radios Using First-Order Cyclostationarity," *PhyComm*, Elsevier, Submitted on Jan. 2012.
80. B. Wajid and E. Serpedin, "Optimal Reference Selection for Genome Assembly using Minimum Description Length Principle", *Eurasip Journal on Bioinformatics and Systems Biology*, Submitted Dec. 2011.

81. F.H. Hsu, E. Serpedin, Y. Chen and E. Dougherty, "Stochastic Modeling of the Relationship between Copy Number and Gene Expression Based in Single Transcription Systems," *IEEE Trans. on Biomedical Engineering*, Jan. 2012 (submitted).
82. S. Ekin, M. Abdallah, E. Serpedin, and K. Qaraqe, "Random Access and Scheduling in Spectrum Sharing OFDM-Based Wireless Networks," *IEEE Trans. On Signal Processing*, Dec. 2011 (submitted).
83. A. Ahmad, D. Zennaro, E. Serpedin and L. Vangelista, "A Factor Graph Approach to Clock Offset Estimation in Wireless Sensor Networks," *IEEE Trans. On Information Theory*, August 2011 (submitted).
84. S. Park, E. Serpedin, and K. Qaraqe, "Gaussian Assumption: the Least Favorable but the Most Useful," *IEEE Signal Processing Magazine*, Dec. 2011 (submitted).
85. S. Park, E. Serpedin, and K. Qaraqe, "On the equivalence between Stein identity and de Bruijn identity, *IEEE Trans. On Information Theory*, Oct. 2011, submitted.
86. S. Park, E. Serpedin, and K. Qaraqe, "An alternative proof of an extremal inequality, *IEEE Trans. On Information Theory*, Sept. 2011, submitted.
87. B. Wajid and E. Serpedin, "BECA- Bayesian Estimation for Comparative Assembly," *Eurasip Journal on Bioinformatics and Systems Biology*, Submitted Dec. 2011.
88. A. Noor, E. Serpedin, H. Nounou and M. Nounou, "Inferring Sparse Gene Regulatory Networks via cubic Kalman filtering", *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, Jan. 2012 (to be submitted).

Conferences:

1. A. Ahmad, D. Zennaro, E. Serpedin, L. Vangelista, "Time-Varying Clock Offset Estimation in Two-Way Timing Message Exchange in Wireless Sensor Networks Using Factor Graphs, *ICASSP 2012*, Kyoto, Japan, March 2012. (accepted).
2. A. Noor, E. Serpedin, H. Nounou and M. Nounou, "Inferring gene regulatory networks with nonlinear models via exploiting sparsity," *ICASSP 2012*, Kyoto, Japan, March 2012 (accepted).
3. B. Wajid and E. Serpedin, "Some Applications of Maximum Likelihood Approach to Genomic Signal Processing," *International Workshop on Genomic Signal Processing (GSP2011)*, Bucharest, June 2011.
4. B. Wajid, R. Aramayo and E. Serpedin, "Exploring Minimum Description Length and Probabilistic Distributions of the Reference Sequences for Comparative Assembly of Genomes," *International Workshop on Genomic Signal Processing (GSP2011)*, Bucharest, June 2011.
5. A. Noor and E. Serpedin, "Modeling Gene Regulatory Network from Time Series Data using Particle Filtering," *International Workshop on Genomic Signal Processing (GSP2011)*, Bucharest, June 2011.
6. F.H. Hsu and E. Serpedin, "Stochastic Modeling of the Computational Logic

- in Gene Transcription,” International Workshop on Genomic Signal Processing (GSP2011), Bucharest, June 2011.
7. A. Noor, E. Serpedin, H. Nounou, and M. Nounou, “A Cubature Kalman Filter Approach for Inferring Gene Regulatory Networks Using Time Series Data”, 2011 IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS’11), Dec. 2011, San Antonio, TX.
 8. F.H. Hsu, E. Serpedin, T-H. Hsiao, A. Bishop, E. Dougherty and Y. Chen, “ Identifying Genes Associated with Chemotherapy Response in Ovarian Carcinomas Based on DNA Copy Number and Expression Profiles’ , , 2011 IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS’11), Dec. 2011, San Antonio, TX.
 9. F.-H. Hsu, E. Serpedin, Y. Chen and E. Dougherty, “Stochastic Modeling of Dynamic Effects of Copy Number Alterations upon Gene Expression Levels” , , 2011 IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS’11), Dec. 2011, San Antonio, TX.
 10. B. Wajid and E. Serpedin, “Minimum Description Length Based Selection of Reference Sequences for Comparative Assemblers”, 2011 IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS’11), Dec. 2011, San Antonio, TX.
 11. J. Kim, J. Lee, E. Serpedin and K. Qaraqe, “A Robust Clock Synchronization Algorithm for Wireless Sensor Networks,” ICASSP 2011.
 12. H. Jeon, K. Su and E. Serpedin, “An Efficient Blind Deterministic Frequency Offset Estimator for OFDM Systems,” ICASSP 2011.
 13. A.R. Ekti, S. Yarkan, K. Qaraqe, and E. Serpedin, “On the evolution of interference in time for cellular mobile radio networks,” 2011 Proceedings of 20th International Conference on Computer Communications and Networks (ICCCN), Maui, Hawaii.
 14. S. Ekin, T. Agarwal, K. Qaraqe, and E. Serpedin, “Capacity of cognitive radio multiple-access channels in dynamic fading environments,” 2011 10th International Symposium on Signals, Circuits and Systems (ISSCS 2011), July 2011, Iasi, Romania.
 15. S. Ekin, S. Yarkan, K. Qaraqe, and E. Serpedin, “On the statistics of sub-carrier collisions for cell-edge users and air interface capacity in OFDMA systems,” ,” 10th International Symposium on Signals, Circuits and Systems (ISSCS 2011), July 2011, Iasi, Romania.
 16. A. Ahmad, A. Noor, and E. Serpedin, “Joint clock offset and skew estimation for inactive nodes in Wireless Sensor Networks,” 2011 45th Annual Conference on Information Sciences and Systems, March 2011, Baltimore.
 17. F. Hsu, E. Serpedin, Y. Chen, and E. Dougherty, “Stochastic Modeling of the Relationship between Copy Number and Gene Expression Based on Transcriptional Logic,” Eighth Annual Conference of the MidSouth Computational Biology and Bioinformatics Society (MCBIOS 2011), College Station, Texas, April 1-2, 2011. (**Best Poster Presentation Award at MCBIOS 2011**).

18. Y. Zhou and E. Serpedin, "GLRT for data-aided time synchronization in MIMO-OFDM systems," COMM 2012 (submitted).
19. F. Hsu, E. Serpedin, Y. Chen, and E. Dougherty, "Applying a gene regulatory model to investigate the effect of copy number variations on gene expression values," Gensips 2010, Nov. 2010.
20. B. Wajid and E. Serpedin, "Making a comparative assembler a pseudo de-novo assembler using minimum description length," Gensips 2010, Nov. 2010.
21. Q. Zhang, O. Dobre, S. Rajan, R. Inkol, and E. Serpedin, "Cyclostationarity Approach for the Recognition of Cyclically Prefixed Single Carrier Signals in Cognitive Radio," IEEE International Conference on Communications, ICC 2010.
22. A. Noor, A. Ahmad, E. Serpedin, H. Nounou and M. Nounou, "On Clock Offset Estimation in Wireless Sensor Networks with Weibull Distributed Network Delays," International Conference on Pattern Recognition - ICPR 2010, Istanbul, Turkey, August 2010.
23. J. Lee, Y. C. Wu, Q. Chaudhari, K. Qaraqe and E. Serpedin, "Signal Processing Techniques for Synchronization of Wireless Sensor Networks," ATOM-N 2010 - SPIE International Conference "Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies, Constanta, Romania, Aug. 2010.
24. S. Ekin, F. Yilmaz, H. Celebi, K. Qaraqe, M.S. Alouini, and E. Serpedin, "Achievable capacity of a spectrum sharing system over hyper fading channels," Globecom 2009 Conference, Nov. 2009.
25. Y. Zhou, K. Qaraqe, E. Serpedin, and O. Dobre, "AM-signal detection in cognitive radios using First-Order Cyclostationarity," The 35th International Conference on Acoustics, Speech, and Signal Processing (ICASSP), March 14 - 19, 2010, Dallas, USA
26. Yi Zhou, K. A. Qaraqe and Erchin Serpedin, Octavia Dobre," FSK-Signal Detection in Cognitive Radios Using First-Order Cyclostationarity," IEEE ICT 2010, Doha , Qatar.
27. Y. Zhou, K. Qaraqe, E. Serpedin, and O. Dobre, "Efficient detection of FSK-signals using cyclostationarity," COMM 2010, June 2010, Bucharest.
28. X. Li, Y. C. Wu* and E. Serpedin, "Multiple timing offsets compensation in cooperative communication systems," IEEE DSP 2009 Conference, June 2009, Greece.
29. X. Li, Y. C. Wu* and E. Serpedin, "On Performance Bounds for Timing Estimation under Fading Channels," WCNC 2009 Conference, April 2009, Budapest, Hungary.
30. Q. Chaudhari* and E. Serpedin, "A new scheme for synchronization of inactive nodes in a sender-receiver protocol," ICASSP 2009 Conference, Taipei, Taiwan, April 2009.
31. Q. Chaudhari*, Y. C. Wu* and E. Serpedin, "Improved Estimation of Clock Offset in Sensor Networks," ICC 2009 Conference, Dresden, Germany, June 2009.

32. Q. Chaudhari*, E. Serpedin, and K. Qaraqe, "Minimal Cost Clock Synchronization Using a Sender-Receiver Protocol in Wireless Sensor Networks," SPECTS 2008 - 2008 International Symposium on Performance Evaluation of Computer and Telecommunication Systems, June 16-18, 2008, Edinburgh, UK.
33. J. Lee*, J. Kim*, K. Qaraqe, and E. Serpedin, "Clock offset estimation in wireless sensor networks using robust M-estimation," ATOM-N 2008 Conference, 4th edition of the International Conference on Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies, SPIE Proceedings, Sept. 2008.
34. A. Shapoury* and E. Serpedin, "Wideband array processing with constant beam pattern beyond the spatial sampling limit," ATOM-N 2008 Conference, 4th edition of the International Conference on Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies, SPIE Proceedings, Sept. 2008.
35. Q. M. Chaudhari* and E. Serpedin, "Estimation of Clock Parameters and Performance Benchmarks for Synchronization in Wireless Sensor Networks," The 6th ACS/IEEE International Conference on Computer Systems and Applications, March 2008, Doha, Qatar.
36. Y. Zhou*, H. Peksen*, and E. Serpedin, "The True and the Modified Cramer-Rao Bounds for SNR Estimate for BPSK Modulated Signal," WoSPA 2008 Conference, March 2008.
37. Q. Chaudhari* and E. Serpedin, "Maximum Likelihood Estimation of clock parameters for synchronization of wireless sensor networks," IEEE International Conference on Acoustics, Speech and Signal Processing, 2008. ICASSP 2008.
38. Q. Chaudhari* and E. Serpedin, "Clock Offset and Skew Estimation in Wireless Sensor Networks with Known Deterministic Delays and Exponential Nondeterministic Delays," The Third International Conference on Digital Telecommunications (ICDT 2008), June 29 - July 5, 2008. (**Best Paper Award**).
39. Q. Chaudhari* and E. Serpedin, "Estimation of Clock Parameters and Performance Benchmarks for Synchronization in Wireless Sensor Networks," IARIA-ICDT 2008 Conference, July 2008.
40. Q. Chaudhari*, E. Serpedin, and K. Qaraqe, "Statistical Signal Processing for Clock Synchronization in Wireless Sensor Networks," WoSPA 2008 Conference, March 2008.
41. Q. Chaudhari*, K. Noh*, and E. Serpedin, "Time Synchronization in Wireless Sensor Networks", 4th edition of the International Conference on Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies (ATOM-N), *Atom-n 2008*, SPIE Proceedings, Sept. 2008.
42. J. Lee*, J.S. Kim*, and E. Serpedin, "Robust bootstrap based clock offset estimators for wireless sensor networks," WASA 2008 The International Conference on Wireless Algorithms, Systems and Applications (WASA'08), October 26-28, 2008, Dallas.

43. Q. Chaudhari*, E. Serpedin, and K. Qaraqe, "Cramer-Rao Lower Bound for the Clock Offset of Silent Nodes Synchronizing through a General Sender-Receiver Protocol in Wireless Sensor Networks," EUSIPCO 2008 Conference, Lausanne, Switzerland, August 2008.
44. Q. Chaudhari* and E. Serpedin, "Clock Drift Estimation in Networks with Symmetric Exponential Link Delays," Proc. of the 4th Advanced International Conference on Telecommunications (AICT), Athens, Greece, June 2008.
45. Q. Chaudhari*, A. Shapoury, and E. Serpedin, "Estimation of Clock Parameters for Synchronization in Wireless Sensor Network," 2007 IEEE International Conference on Signal Processing and Communications (ICSPC 2007), Nov. 2007.
46. M. S. Al-Shoukairi*, M. S. Alouini, K. Qaraqe, and E. Serpedin, "Performance of hard handoff in 1xEV-DO REV A. systems with the presence of Rayleigh and correlated lognormal components," 5th IEEE Consumer Communications and Networking Conference, 2008. CCNC 2008. 10-12 Jan. 2008 Page(s):36 - 40.
47. A. Shapoury, Q. Chaudhari, and E. Serpedin, "On error magnitudes under spatial aliasing of wideband arrays with incoherent combining," 2007 IEEE International Conference on Signal Processing and Communications (ICSPC 2007), Nov. 2007.
48. Q. Chaudhari*, and E. Serpedin, "Clock Synchronization in Wireless Sensor Networks with Deterministic Part of Delays Unknown," ICASSP 2008, March 2008.
49. W. Zhao*, K. Ajepong*, E. Serpedin, and E. Dougherty, "Identifying Drosophila cell-cycle regulated genes from irregular microarray data," ICASSP 2008, March 2008.
50. Q. Chaudhari*, Y. Zhou*, and E. Serpedin, "Efficient Clock Synchronization in Wireless Sensor Networks," Asilomar 2007 Conference, Oct. 2007.
51. E. Serpedin, "Advances in Synchronization of Wireless Sensor Networks," 2007 Workshop on Recent Advances in Signal Processing, July 2007, Cluj-Napoca, Romania, (**Invited Paper**).
52. K. Noh* and E. Serpedin, "Adaptive Multi-hop Timing Synchronization for Wireless Sensor Networks," ISSPA 2007 Conference, Febr. 2007 (**Invited Paper**).
53. W. Zhao*, K. Ajepong*, E. Serpedin, E. Dougherty, "Reconstruction of genetic regulatory networks based on the posterior probabilities of gene regulations," ICASSP 2007, April 2007.
54. W. Zhao*, E. Serpedin, and E. Dougherty, "Recovering genetic regulatory networks by integrating multiple data sources," Gensips 2007, June 2007.
55. Q. Chaudhari* and E. Serpedin, "A Simple Algorithm for Clock Synchronization in Wireless Sensor Networks," IEEE T2PWSN 2007 (From Theory to Practice in Wireless Sensor Networks), June 2007, Helsinki, Finland.

56. K. Noh* and E. Serpedin, "Pairwise Broadcast Clock Synchronization for Wireless Sensor Networks," IEEE T2PWSN 2007 (From Theory to Practice in Wireless Sensor Networks), June 2007, Finland.
57. J. Kim*, Q. Chaudhari*, and E. Serpedin, "Particle Filtering Based Estimation of the Number of Competing Stations to Support Combined Access Modes in IEEE 802.11 Networks," IEEE Symposium on Signals, Circuits and Systems (ISSCS 2007), (**Invited Paper**).
58. W. Zhao*, E. Serpedin, and E. Dougherty, "Information theoretic inference of direct gene regulation from time series data," IEEE GENSIPS 2006 Conference, College Station, TX, May 2006.
59. K. Noh* and E. Serpedin, "Optimum Level of Cooperation for Cooperative Coding Schemes Using Rate Compatible Punctured Convolutional Codes," IEEE International Conference on Communications, June 2006 Bucharest, Romania.
60. K. Noh*, Q. Chaudhari*, E. Serpedin, and B. Suter "Analysis of Clock Offset and Skew Estimation in Timing-Sync Protocol for Sensor Networks," Globecom 2006 Conference, Dec. 2006, San Francisco, CA.
61. K. Shi*, B. Kelleci*, T. W. Fischer*, E. Serpedin and A. I. Karsilayan, "Impact of Narrowband Interference on Multi-Band OFDM Ultra Wideband Communication Systems," IEEE DSP 2006 Workshop, Jackson, Wyoming, Sept. 2006.
62. K. Shi*, B. Kelleci*, T. W. Fischer*, E. Serpedin* and A. I. Karsilayan, "Narrowband Interference Suppression in Multi-Band OFDM Ultra Wideband Communication Systems: A Mixed-Mode Approach," IEEE DSP 2006 Workshop, Jackson, Wyoming, Sept. 2006
63. K. Noh*, Q. Chaudhari*, E. Serpedin, and B. Suter, "Power-efficient Clock Synchronization Using Two-Way Timing Message Exchanges in Wireless Sensor Networks," IEEE MILCOM 2006 Conference, Oct. 2006, DC.
64. I. Sari* and E. Serpedin, "Application of Gibbs Sampler for Clock Synchronization in RBS-Protocol," IEEE MILCOM 2006 Conference, Oct. 2006, DC.
65. W. Zhao*, E. Serpedin, and E. Dougherty, "Inferring the Structure of Genetic Regulatory Networks Using Information Theoretic Tools," IEEE/NLM Life Science Systems and Applications Workshop 2006, July 2006.
66. K. Shi*, E. Serpedin, B. Kelleci*, T. Fischer*, and A. Karsilayan, "The Impact of Narrowband Interference on OFDM-UWB Receivers," International Conference on Computing, Communications and Control Technologies: CCCT'05, Austin, TX, July 2005.
67. T. Dureya* and E. Serpedin, "Optimal Blind Nonlinear Least-Squares Carrier Phase and Frequency Offset Estimation for Circular QAM," International Conference on Computing, Communications and Control Technologies: CCCT'05, Austin, TX, July 2005.
68. K. Shi* and E. Serpedin, "Downlink Joint Detection for TD-SCDMA Systems: SNR Estimation and Active Codes Detection," VTC Fall 2005 Conf., Dallas, TX, Sept. 2005.

69. Y.C. Wu* and E. Serpedin, "Non-data-aided ML Symbol Timing Estimation in MIMO Correlated Fading Channels," VTC Fall 2005 Conf., Dallas, TX, Sept. 2005.
70. K. Shi* and E. Serpedin, "Fast Timing Recovery for Linearly and Non-linearly Modulated Systems," Asilomar Conference, Pacific Grove, CA, Nov. 2004.
71. K. Shi* and E. Serpedin, "Decision-directed phase tracking and timing synchronization in OFDM systems," Iasted Signal and Image Processing (SIP 2005), Honolulu, Hawaii, Aug. 2005.
72. Y.C. Wu* and E. Serpedin, "Unified performance analysis of second-order statistics based feedforward timing delay estimators," ICASSP 2005, Philadelphia, PA, March 2005, Vol- ume 3, March 2005, pp. iii/801 - iii/804, Vol. 3.
73. Y. C. Wu* and E. Serpedin, "Training Sequences Design for Symbol Timing Estimation in MIMO Correlated Fading Channels," Globecom 2004 Conference, Dallas, TX, Dec. 2004.
74. Y. C. Wu* and E. Serpedin, "Feedforward Symbol Timing Estimator for Linear Modulations using Conditional Maximum Likelihood Principle," International Conference on Computing, Communications and Control Technologies: CCCT'04, Austin, TX, August 14-17, 2004 (**Best Paper Award**).
75. Y. C. Wu*, K.-W. Yip, T.-S. Ng, and E. Serpedin "Maximum-likelihood frame synchronization for IEEE 802.11a WLANs," (**Invited Paper**), Asilomar Conference, Pacific Grove, CA, Nov. 2004.
76. Y. C. Wu*, S. C. Chan, and E. Serpedin, "Symbol timing synchronization in space-time coding systems using orthogonal training sequences," IEEE Wireless Communications and Networking Conference (WCNC 2004), Atlanta, GA, March 21-25, 2004.
77. E. Serpedin, Y. C. Wu* and K. Shi* , "Design of digital blind feedforward self-noise free timing recovery schemes," SPIE International Symposium: Noise in Communications, Maspalomas, Gran Canaria Island, Spain, May 26-28, 2004 (**Invited Paper**).
78. K. Shi* and E. Serpedin, "On clock symbol rate offset estimation in single and multicarrier systems," Conference on Information Sciences and Systems, (CISS 2004), Princeton University, NJ, March 2004.
79. Y.C. Wu* and E. Serpedin, "Data-aided Maximum Likelihood Symbol Timing Estimation in MIMO Correlated Fading Channels," ICASSP 2004, Montreal, Canada, May 2004.
80. K. Shi* and E. Serpedin, "Decision-Directed Fine Synchronization for Coded OFDM systems," ICASSP 2004, Montreal, Canada, May 2004.
81. K. Shi* and E. Serpedin, "On the design of a digital blind feedforward jitter free timing recovery scheme for linear modulations," IEEE Communications 2004 Conference, Bucharest, Romania, June 2004.
82. A. Deleuze, C. Le Martret, P. Ciblat, E. Serpedin, "Cramer-Rao bound for channel parameters in ultra-wide band based system," IEEE 5th Workshop on Signal Processing Advances in Wireless Communications, 2004.

83. Y.C. Wu* and E. Serpedin, "Training sequence design for symbol timing estimation in MIMO correlated fading channels," *IEEE Communications 2004 Conference*, Bucharest, Romania, June 2004.
84. K. Shi* and E. Serpedin, "On the design of digital blind feedforward jitter free timing recovery schemes," *WCGN: Wireless Networking Symposium 2003*, Univ. of Texas, Austin, Oct. 2003.
85. Y. Wang* and E. Serpedin, "Continuous-mode Frame Synchronization for Frequency-selective Channels," *WNCG: Wireless Networking Symposium 2003*, Univ. of Texas, Austin, Oct. 2003.
86. K. Shi* and E. Serpedin, "Almost jitter free feedforward symbol timing recovery for GMSK modulations," *Asilomar Conference*, Nov. 2003.
87. Y. Wang*, E. Serpedin, and P. Ciblat, "Blind Feedforward Two-Sample-per-Symbol Based Timing Delay Estimation," *SCI 2003: The 7th World Multi - Conference on Systemics, Cybernetics and Informatics*, Orlando, FL, July 2003.
88. P. Ciblat, M.-L. Boucheret and E. Serpedin, "A blind frequency offset estimator for OFDM/OQAM systems," *SPAWC Conference*, Rome, Italy, July 2003.
89. K. Shi*, E. Serpedin, and P. Ciblat, "On the Optimal Metrics for Coarse Frame and Carrier Synchronization in OFDM systems," *Asilomar Conference*, Pacific Grove, CA, Nov. 2002.
90. Y. Wang*, E. Serpedin, and P. Ciblat, "Unified Performance Analysis of Blind Feedforward Timing Estimation," *Asilomar Conference*, Pacific Grove, CA, Nov. 2002.
91. Y. Wang*, E. Serpedin, and P. Ciblat, "Optimal Blind Feedforward Carrier Synchronization for General QAM Modulations," *Asilomar Conference*, Pacific Grove, CA, Nov. 2002.
92. P. Ciblat, E. Serpedin, and Y. Wang*, "On a fractionally-sampling based carrier frequency offset estimator for non-circular transmissions," *Asilomar Conference*, Pacific Grove, CA, Nov. 2002.
93. Y. Wang*, E. Serpedin, and P. Ciblat, "Non-Data Aided Feedforward Estimation of PSK-Modulated Carrier Frequency Offset," *ICC 2002*, May 2002, New York, NY.
94. Y. Wang*, E. Serpedin, and P. Ciblat, "Optimal Blind Carrier Synchronization for M-PSK Burst Transmissions," *ICASSP 2002*, June 2002, Orlando, FL.
95. Y. Wang* and E. Serpedin, "Optimal Matched Blind Carrier Phase Estimators for Star QAM Constellations," *CISS 2002*, Princeton University, March 2002.
96. Y. Wang* and E. Serpedin, "Optimal Blind Synchronization in Flat-Fading Channels," *CISS 2002*, Princeton University, March 2002.
97. E. Serpedin, Y. Wang*, P. Ciblat, and P. Loubaton, "Performance Analysis of a Class of Non-Data Aided Carrier Frequency Offset and Symbol Timing Delay Estimators For Flat-Fading Channels," *IEEE International Conference on Telecommunications (ICT'2001)*, Bucharest, Romania, June 2001.

98. Y. Wang*, E. Serpedin, and P. Ciblat, "Optimal blind nonlinear least-squares carrier phase and frequency offset estimation for burst QAM modulations," *Asilomar Conference*, vol. 2, pp. 1499-1503, Pacific Grove, CA, Nov. 2001.
99. Y. Wang*, E. Serpedin, P. Ciblat, and P. Loubaton, "Non-data aided feed-forward cyclostationary statistics based carrier frequency offset estimators for linear modulations" *GLOBECOM'01*, vol. 2, pp. 1386-1390, Nov. 2001, San Antonio, TX.
100. Y. Wang*, E. Serpedin, P. Ciblat, and P. Loubaton, "Non-Data Aided Carrier Frequency Offset and Symbol Timing Delay Estimators For Flat-Fading Channels," *MILCOM 2001*, McLean, VA, Oct. 2001.
101. Y. Wang*, E. Serpedin, P. Ciblat, and P. Loubaton, "Performance Analysis of Blind Carrier Frequency Offset and Symbol Timing Delay Estimators in Flat-Fading Channels," *International Conf. on Acoustics, Speech, and Signal Processing: ICASSP'2001*, vol. 4, pp. 2321-2324, Salt Lake City, UT, May 2001.
102. E. Serpedin, P. Ciblat, G. B. Giannakis, and P. Loubaton, "Performance Analysis of Blind Carrier Phase Estimators for General QAM Constellations," *The 10th IEEE Workshop on Statistical Signal and Array Processing: SSAP'00*, pp. 171-175, Pocono Manor, PA, August 2000.
103. P. Ciblat, P. Loubaton, E. Serpedin, and G. B. Giannakis, "Cyclic Correlation Based Symbol Rate Estimation: Asymptotic Analysis," *European Conference on Signal Processing, EUSIPCO'00*, Tampere, Finland, Sept. 2000.
104. P. Ciblat, P. Loubaton, E. Serpedin, and G. B. Giannakis, "Performance of Non-Data Aided Carrier Offset Estimation For Non-Circular Transmissions Through Frequency-Selective Channels," *International Conf. on Acoustics, Speech, and Signal Processing*, Istanbul, Turkey, June 2000.
105. E. Serpedin, A. Chevreuril, G. B. Giannakis, and P. Loubaton, "Non-data Aided Joint Estimation of Carrier Frequency Offset and Channel Using Periodic Modulation Precoders: Performance Analysis," *International Conf. on Acoustics, Speech, and Signal Processing*, Phoenix, AZ, March 1999.
106. E. Serpedin, "Semi-Blind Equalization of Nonlinear Communication Channels Using Transmitter Precoding," *Asilomar Conf. on Signals, Systems, and Computers*, Pacific Grove, CA, Nov. 1998.
107. E. Serpedin, G. B. Giannakis, A. Chevreuril, and P. Loubaton, "Blind Joint Estimation of Carrier Frequency Offset and Channel Using Non-Redundant Periodic Modulation Precoders," *The 9th IEEE Statistical Signal and Array Processing Workshop*, pp. 288-291, Portland, OR, Sept. 1998.
108. A. Chevreuril, E. Serpedin, P. Loubaton, and G. B. Giannakis, "Performance Analysis of Blind Channel Estimators Based on Non-Redundant Periodic Modulation Precoders," *Proc. of International Conf. on Acoustics, Speech, and Signal Processing*, Seattle, WA, vol. VI, pp. 3397-3401, Seattle, WA, May 1998.
109. E. Serpedin and G. B. Giannakis, "Blind Identification of ARMA Models with Periodically Modulated Inputs," *Asilomar Conf. on Signals, Systems, and Computers*, vol. II, pp. 1633-1637, Pacific Grove, Nov. 1997.

110. G. B. Giannakis and E. Serpedin, "Blind Channel Identification with Modulation Induced Cyclostationarity," *Proc. of the 13th International Conf. on Digital Signal Processing*, vol. 1, pp. 111-114, Santorini-Hellas, Greece, July 1997.
111. E. Serpedin, "On the Recovery of Missing Samples in Oversampled Band-limited Signals: A New Approach," *Proc. of the 31st Annual Conference on Information Sciences and Systems*, The John Hopkins Univ., vol. I, pp. 374-378, Baltimore, MD, March 1997.
112. E. Serpedin and G. B. Giannakis, "Blind Channel Identification and Equalization with Modulation Induced Cyclostationarity," *Proc. of the 31st Annual Conference on Information Sciences and Systems*, The John Hopkins Univ., vol. II, pp. 792-797, Baltimore, MD, March 1997.
113. E. Serpedin and G. B. Giannakis, "On Linear Equalization of Multiple FIR Volterra Channels," *Proc. of the 30th Asilomar Conf. on Signals, Systems, and Computers*, vol. 1, pp. 315-319, Pacific Grove, CA, Nov. 1996.
114. G. B. Giannakis and E. Serpedin, "Blind Equalizers of Multichannel Linear-Quadratic FIR Volterra Channels," *Proc. of the 8th IEEE Signal Processing Workshop on Statistical Signal and Array Processing*, pp. 371-374, Corfu, Greece, June 1996.
115. G. B. Giannakis and E. Serpedin, "Linear Multichannel Blind Equalizers of Nonlinear FIR Volterra Channels," *Proc. of the 30th Annual Conference on Information Sciences and Systems*, Princeton Univ., vol. II, pp. 1153-1158, Princeton, NJ, March 1996.
116. E. Serpedin, "On the Interpolation and Extrapolation of Band-limited Finite Dimensional Signals," *Proc. of the 10th International Conference on Control Systems and Computer Science*, vol. 1, pp. 102-105, Bucharest, Romania, May 1995.
117. E. Serpedin, "SVD-Based Identification of State-Space Models," 3rd Prize at the *1991 Annual Student Conference*, Polytechnic Inst. of Bucharest, Romania, 1991.
118. E. Serpedin, "An Extension of a Combinatorics Problem," Honorary Mention at the *1987 Annual Student Conference*, Section: Mathematics, Polytechnic Institute of Bucharest, Romania, 1987.

Lectures at Laboratories, Institutes and Industrial Seminars:

1. E. Serpedin, "Semi-blind estimation and equalization of radio communication channels," The 13th Texas Systems Day: Telecommunications Session, Sept. 11, 1999, College Station, TX.
2. E. Serpedin, "Non-data aided equalization of linear and nonlinear communication channels," Texas Instruments, Dallas, TX, January 21, 2000.
3. Y. Wang* and E. Serpedin, "Optimal blind carrier synchronization for M-PSK burst transmissions," Texas Telecommunication Engineering Consortium's (TxTEC) Annual Conference at the Bush Library, College Station, TX, Jan. 25, 2002.

4. E. Serpedin, "Advances in feedforward synchronization of digital receivers," Seagate Technologies, Pittsburgh, PA, June 26, 2002.
5. Y. Wang* and E. Serpedin, "On the Role of Cyclostationary Statistics in Design and Performance Analysis of Digital Synchronizers," Texas A&M University, Wireless Communications Laboratory Seminar, Oct. 29, 2002.
6. K. Shi* and E. Serpedin, "Design of robust maximum likelihood based carrier frequency offset and coarse frame synchronization schemes for OFDM systems," Texas Instruments Day Conference, College Station, TX, February 2003.
7. E. Serpedin, "Advanced signal processing technologies for homeland security," Texas A&M Univ., EE Dept. Seminar, May 21, 2003.
8. E. Serpedin, "Synchronization of single and multicarrier digital communication receivers," Nortel, Dallas, TX, October 2003.
9. Y. C. Wu* and E. Serpedin, "Tutorial on synchronization of space-time multi-antenna systems," Texas Instruments Conference, Texas instruments, Dallas, TX, Febr. 2004.
10. A. I. Karsilayan and E. Serpedin, "Design of robust high-performance ultra wideband transceivers," Alereon, Austin, TX, April 13, 2004.
11. K. Shi* and E. Serpedin, "Fast timing recovery for linearly and non-linearly modulations," Texas Systems Days, Univ. of Houston, Nov. 2004.
12. Y. C. Wu* and E. Serpedin, "Data-aided Maximum Likelihood Symbol Timing Estimation in MIMO Correlated Fading Channels," Texas Systems Days, Univ. of Houston, Nov. 2004.
13. E. Serpedin, "Synchronization of Airborne Networks," AFRL, Rome, NY, June-July 2006.
14. E. Serpedin, "Identification of RF Emitters," AFRL, Minority Program Review, Florida, March 2007.
15. E. Serpedin, "Synchronization of wireless airborne networks," AFRL, Rome, NY, May 2007.
16. E. Serpedin, "Advances in Synchronization of wireless airborne networks," AFRL, Rome, NY, October 2007.
17. E. Serpedin, "Advanced localization systems using wireless computer networks," AFRL, Rome, NY, June 2008.
18. E. Serpedin, "Clock synchronization algorithms for wireless airborne computer networks," AFRL, Rome, NY, June 2009.

Research Areas Addressed and Some Representative Papers in These Areas:

- **Bioinformatics, Genomics, Proteomics and Systems Biology**

1. W. Zhao*, E. Serpedin, and E. Dougherty, "Spectral Preprocessing for Clustering Time Series Gene Expressions," *Eurasip Journal on Bioinformatics and Systems Biology*, Volume 2009 (2009), Article ID 713248, 10 pages.
2. W. Zhao*, E. Serpedin, and E. Dougherty, "Inferring Connectivity of Genetic Regulatory Networks Using Information Theoretic Criteria,"

IEEE/ ACM Transactions on Computational Biology and Bioinformatics, vol. 5, no. 2, pp. 262 - 274, April-June 2008.

3. W. Zhao*, E. Serpedin, and E. Dougherty, "Identifying Cell Cycle Involved Genes By Combining Gene Expression Analysis and Prior Knowledge," *Journal on Bioinformatics and Systems Biology*, Volume 2009 (2009), Article ID 683463, 9 pages.
 4. W. Zhao*, E. Serpedin, and E. Dougherty, "Inferring gene regulatory networks from time series data using the minimum description length principle," *Bioinformatics*, 1 September 2006; 22: 2129 - 2135.
 5. W. Zhao*, K. Ajepong*, E. Serpedin, and E. Dougherty, "Detecting Periodic Genes from Irregularly Sampled Gene Expressions for *Drosophila Melanogaster*," *EURASIP Journal on Bioinformatics and Systems Biology*, Volume 2008, Article ID 769293, 8 pages.
 6. W. Zhao*, K. Ajepong*, E. Serpedin, and E. Dougherty, "Identifying *Drosophila* cell-cycle regulated genes from irregular microarray data," *ICASSP 2008*, March 2008.
 7. W. Zhao*, E. Serpedin, and E. Dougherty, "Recovering Genetic Regulatory Networks from Chromatin Immunoprecipitation and Steady-State Microarray Data," *EURASIP Journal on Bioinformatics and Systems Biology*, Volume 2008, Article ID 248747, 12 pages.
 8. W. Zhao*, K. Ajepong*, E. Serpedin, E. Dougherty, "Reconstruction of genetic regulatory networks based on the posterior probabilities of gene regulations," *ICASSP 2007*, April 2007.
 9. W. Zhao*, E. Serpedin, and E. Dougherty, "Recovering genetic regulatory networks by integrating multiple data sources," *Gensips 2007*, June 2007.
 10. W. Zhao*, E. Serpedin, and E. Dougherty, "Inference of Direct Gene Regulation from Time Series Data," *IEEE GENSIPS 2006 Conference*, College Station, TX, May 2006.
 11. W. Zhao*, E. Serpedin, and E. Dougherty, "Information Theoretic Inference of Genetic Networks," *IEEE/NLM Life Science Systems and Applications Workshop 2006*, July 2006.
- **Wireless Networks**
 1. J.S. Kim*, E. Serpedin, and D. R. Shin, "A Handoff Trigger and Network Selection Algorithms for Load-Balancing Handoff in CDMA-WLAN Integrated Networks," *EURASIP Journal on Wireless Communications and Networking*, vol. 2008, Article ID 136939, 14 pages, 2008. doi:10.1155/2008/136939, December 2008.
 2. Q. Chaudhari*, E. Serpedin, and K. Qaraqe, "On Maximum Likelihood Estimation of Clock Offset and Skew in Networks With Exponential Delays," *IEEE Trans. on Signal Processing*, vol. 56, no. 4, pp. 1685 - 1697, April 2008.
 3. Q. Chaudhari* and E. Serpedin, "Energy Efficient Estimation of Clock Offset for Inactive Nodes in Wireless Sensor Networks," *IEEE Transactions on Information Theory*, vol. 56, no. 1, Jan. 2010.

4. J. Kim* and E. Serpedin, "Improved Particle Filtering Based Estimation of the Number of Competing Stations in IEEE 802.11 Networks," *IEEE Signal Processing Letters*, vol. 15, no. 1, pp. 87-90, January 2008.
 5. J. Kim*, D.-R. Shi, and E. Serpedin, "Adaptive multiuser receiver with joint channel and time delay estimation of CDMA signals based on the square-root unscented filter," *Digital Signal Processing Journal*, Elsevier, Volume 19 , Issue 3 (May 2009), Pages 504-520, 2009 ISSN:1051-2004 .
 6. Q. Chaudhari*, E. Serpedin, and K. Qaraqe, "On minimum variance unbiased estimation of clock offset in wireless networks," *IEEE Trans. On Information Theory*, vol. 56, no. 6, June 2010.
 7. Y.C. Wu*, K.-W. Yip, T.-S. Ng, and E. Serpedin, "Maximum-likelihood frame synchronization for IEEE 802.11a WLANs on frequency-selective fading channels with unknown sampling phase offset," *IEEE Trans. on Wireless Communications*, Volume 4, Issue 6, Nov. 2005, pp. 2751 - 2763.
- **Wireless Sensor Networks**
 1. E. Serpedin and Q. Chaudhari*, *Clock Synchronization for Wireless Sensor Networks: Parameter Estimation, Performance Benchmarks and Protocols*, Cambridge University Press, 2009 IBSN: 9780521764421, 260 pages.
 2. K. Noh*, Y.C. Wu* and E. Serpedin, "Adaptive Signal Processing Techniques for Synchronization of Wireless Sensor Networks," Chapter in the *Handbook: Adaptive Processing in Wireless Communications*, (editor: M. Ibnkahla) CRC Press, pp. 373-410, 2008.
 3. I. K. Rhee, J. Lee*, J. Kim*, E. Serpedin, and Yik-Chung Wu, "Clock Synchronization in Wireless Sensor Networks: An Overview," *Sensors Journal*, 2009, 9, 1-x manuscripts; doi:10.3390/sensors90x0000x, ISSN 1424-8220.
 4. K. Noh* and E. Serpedin, "A New Approach for Time Synchronization in Wireless Sensor Networks: Pairwise Broadcast Synchronization," *IEEE Trans. on Wireless Communications*, vol. 7, no. 6, Sept. 2008.
 5. Q. Chaudhari* and E. Serpedin, "On maximum likelihood estimation of clock phase, skew and drift in networks with exponentially distributed delays," *EURASIP Journal on Advances in Signal Processing*, Volume 2008, Article ID 219458, 6 pages.
 6. I. Sari*, K. Noh*, Q. Chaudhari*, E. Serpedin, and B. Suter, "On the Joint Synchronization of Clock Offset and Skew in RBS-Protocol," *IEEE Trans. on Communications*, vol. 56, no. 5, pp. 500-503, May 2008.
 7. K. Noh*, Q. Chaudhari*, E. Serpedin, and B. Suter, "Novel Clock Phase Offset and Skew Estimation Using Two-Way Timing Message Exchanges for Wireless Sensor Networks," *IEEE Trans. on Communications*, Volume 55, Issue 4, April 2007, pp.: 766 - 777.
 - **Design of Ultra Wideband Transceivers**
 1. B. Kelleci*, T. Fischer*, A. Karsilayan, K. Shi* and E. Serpedin, "Adaptive Narrowband Interference Suppression in Multi-Band OFDM Re-

ceivers,” *Circuits, Systems and Signal Processing Journal*, Birkhauser, vol. 27, no. 4, August 2008, pp. 475-489.

2. T. Fischer*, B. Kelleci*, K. Shi*, E. Serpedin, and A. Karsilayan, “An Analog Approach to Suppressing In-Band Narrowband Interference in UWB Receivers,” *IEEE Trans. On Circuits and Systems-Part I*, Volume 54, Issue 5, May 2007, pp. 941 - 950.
3. K. Shi*, Y. Zhou*, B. Kelleci*, T. W. Fischer*, E. Serpedin and A. I. Karsilayan, “Impacts of Narrowband Interference on OFDM-UWB Receivers: Analysis and Mitigation,” *IEEE Trans. on Signal Processing*, Volume 55, Issue 3, March 2007, pp. 1118 - 1128.
4. Y. Zhou*, A. I. Karsilayan and E. Serpedin, “Sensitivity of Multi-Band ZP-OFDM Ultra Wideband Receivers to Synchronization Errors,” *IEEE Trans. on Signal Processing*, Volume 55, Issue 2, Jan. 2007, Page(s):729 - 734.
5. H.-G. Jeon and E. Serpedin, “Walsh Coded Training Signal Aided Time Domain Channel Estimation in MIMO-OFDM Systems,” *IEEE Trans. on Communications*, vol. 56, no. 9, pp. September 2008.
6. H.-G. Jeon and E. Serpedin, “A Novel Simplified Channel Tracking Method for MIMO-OFDM Systems with Null Sub-carriers,” *Signal Processing*, Elsevier, Volume 88, Issue 4, April 2008, Pages 1002-1016.
7. J. Chen, Y.C. Wu*, T.S. Ng and E. Serpedin, “Multi-user frequency offsets estimation in OFDMA systems,” book chapter in *Orthogonal Frequency Division Multiple Access (OFDMA)*, to be published by Auerbach Publications, CRC Press, Taylor&Francis Group, 2009.

- **MIMO Communications**

1. H.-G. Jeon and E. Serpedin, “Walsh Coded Training Signal Aided Time Domain Channel Estimation in MIMO-OFDM Systems,” *IEEE Trans. on Communications*, vol. 56, no. 9, pp. September 2008.
2. H.-G. Jeon and E. Serpedin, “A Novel Simplified Channel Tracking Method for MIMO-OFDM Systems with Null Sub-carriers,” *Signal Processing*, Elsevier, Volume 88, Issue 4, April 2008, Pages 1002-1016.
3. Y.C. Wu*, and E. Serpedin, “Data-aided Maximum Likelihood Symbol Timing Estimation in MIMO Correlated Fading Channels,” *Wireless Communications and Mobile Computing Journal (WCMC)*, Special Issue on “Multiple-Input Multiple-Output (MIMO) Communications”, Wiley, vol. 4, no. 7, pp. 773-791, Nov. 2004.
4. Y.-C. Wu*, S.-C. Chan, and E. Serpedin, “Symbol-Timing Estimation in Space-Time Coding Systems based on Orthogonal Training Sequences,” *IEEE Trans. on Wireless Communications*, Volume 4, Issue 2, March 2005, pp. 603 - 613.
5. Y. C. Wu* and E. Serpedin, “Design and Analysis of Feedforward Symbol Timing Estimators Based on the Conditional Maximum Likelihood Principle,” *IEEE Trans. on Signal Processing*, Volume 53, Issue 5, May 2005, pp. 1908 - 1918.

- **Synchronization of Communication Systems**

1. Y. Wang and E. Serpedin, *New Advances In Synchronization Of Digital Communication Receivers*, VDM Verlag, ISBN-10: 3639072103, 188 pages, Aug. 2008 (research monograph).
2. C. Georghiades and E. Serpedin, Synchronization, Book Chapter in *The Handbook of Communications*, CRC Press, 2nd edition, 2002.
3. Y.C. Wu*, and E. Serpedin, "Unified analysis of a class of blind feedforward symbol timing estimators employing second-order statistics," *IEEE Trans. on Wireless Communications*, Volume 5, Issue 4, April 2006, pp. 737 - 742.
4. K. Shi* and E. Serpedin, "Fast Timing Recovery for Linearly and Non-linearly Modulated Systems," *IEEE Trans. on Vehicular Technology*, Volume 54, Issue 6, Nov. 2005, pp. 2017 - 2023.
5. K. Shi*, Y. Wang*, and E. Serpedin, "On the Design of Digital Blind Feedforward Jitter Free Timing Recovery Schemes for Linear Modulations," *IEEE Trans. on Communications*, vol. 52, no. 9, Sept. 2004.
6. P. Ciblat, E. Serpedin, and Y. Wang*, "On a blind fractionally-sampled carrier frequency offset estimator for noncircular transmissions," *IEEE Signal Processing Letters*, vol. 10, no. 4, pp. 89-92, April 2003.
7. Y. Wang* and E. Serpedin, "A Class of Blind Phase Recovery Techniques for Large QAM Modulations: Estimators and Bounds," *IEEE Signal Processing Letters*, vol. 9, no. 10, pp. 301-304, Oct. 2002.
8. Y. Wang*, E. Serpedin, and P. Ciblat, "Optimal blind carrier recovery for burst M-PSK transmissions," *IEEE Transactions on Communications*, vol. 51, no. 9, pp. 1571-1581, Sept. 2003.

- **OFDM-Based Communication Systems**

1. J. Chen, Y.C. Wu, T.S. Ng and E. Serpedin, "Multi-user frequency offsets estimation in OFDMA systems," book chapter in *Orthogonal Frequency Division Multiple Access (OFDMA)*, to be published by Auerbach Publications, CRC Press, Taylor&Francis Group, 2009.
2. J. Chen, Y.C. Wu, T.S. Ng and E. Serpedin, "Training sequence design for channel and frequency estimation in multi-user OFDM systems," book chapter in *Orthogonal Frequency Division Multiple Access (OFDMA)*, to be published by Auerbach Publications, CRC Press, Taylor&Francis Group, 2009.
3. Y. Zhou, Y.C. Wu, and E. Serpedin, "Effects of diversity on carrier frequency acquisition in OFDM systems," invited book chapter in *OFDM and OFDMA with linear diversity for future wireless communications*, BenTham Science Publishing, ed. K. N. Le, 2009.
4. K. Shi* and E. Serpedin, "A Robust Metric for Coarse Frame and Carrier Synchronization for OFDM Systems" *IEEE Trans. on Wireless Communications*, vol. 3, no. 3, pp. 1271-1284, July 2004.
5. P. Ciblat and E. Serpedin, "A fine blind frequency offset estimator for OFDM /OQAM systems," *IEEE Trans. on Signal Processing*, vol. 52, no.1, pp. 291-296, January 2004.

6. H.-G. Jeon and E. Serpedin, "Walsh Coded Training Signal Aided Time Domain Channel Estimation in MIMO-OFDM Systems," *IEEE Trans. on Communications*, vol. 56, no. 9, pp. September 2008.
 7. H.-G. Jeon and E. Serpedin, "A Novel Simplified Channel Tracking Method for MIMO-OFDM Systems with Null Sub-carriers," *Signal Processing*, Elsevier, Volume 88, Issue 4, April 2008, Pages 1002-1016.
- **Electronic Interception and Recognition, and Cognitive Radios**
 1. P. Ciblat, P. Loubaton, E. Serpedin, and G. B. Giannakis, "Asymptotic Analysis of Blind Cyclic Correlation Based Symbol-Rate Estimators," *IEEE Trans. on Information Theory*, vol. 48, no. 7, pp. 1922-1934, July 2002.
 2. P. Ciblat, P. Loubaton, E. Serpedin, and G. B. Giannakis, "Performance analysis of blind carrier frequency offset estimators for noncircular transmissions through frequency-selective channels," *IEEE Transactions on Signal Processing*, vol. 50, no. 1, pp. 130-140, Jan. 2002.
 3. Y. Wang*, E. Serpedin and P. Ciblat, "An Alternative Blind Feedforward Symbol Timing Estimator Using Two Samples per Symbol," *IEEE Trans. on Communications*, vol. 51, no. 9, pp. 1451-1455, Sept. 2003.
 4. P. Ciblat and E. Serpedin, "A fine blind frequency offset estimator for OFDM /OQAM systems," *IEEE Trans. on Signal Processing*, vol. 52, no.1, pp. 291-296, January 2004.
 5. K. Shi*, Y. Wang*, and E. Serpedin, "On the Design of Digital Blind Feedforward Jitter Free Timing Recovery Schemes for Linear Modulations," *IEEE Trans. on Communications*, vol. 52, no. 9, Sept. 2004.
 6. Y. Wang*, E. Serpedin, and P. Ciblat, "Blind Feedforward Cyclostationarity Based Timing Estimation for Linear Modulations," *IEEE Trans. on Wireless Communications*, vol. 3, no. 3, pp. 709-715, May 2004.
 7. P. Ciblat, E. Serpedin, and Y. Wang*, "On a blind fractionally-sampled carrier frequency offset estimator for noncircular transmissions," *IEEE Signal Processing Letters*, vol. 10, no. 4, pp. 89-92, April 2003.
 8. Y. Wang*, E. Serpedin, and P. Ciblat, "Optimal blind carrier recovery for burst M-PSK transmissions," *IEEE Transactions on Communications*, vol. 51, no. 9, pp. 1571-1581, Sept. 2003.
 9. Y. Wang*, E. Serpedin and P. Ciblat, "Optimal Blind Nonlinear Least-Squares Carrier Phase and Frequency Offset Estimation for General QAM Modulations," *IEEE Trans. on Wireless Communications*, vol. 2, no. 5, pp. 1040-1054, Sept. 2003.
 - **Antenna Array Signal Processing**
 1. A. Reza* and E. Serpedin, "Incoherent DOA estimation in uniform antenna arrays with inordinate spacing using a subband hopping approach," *Circuits, Systems, and Signal Processing*, Birkhauser, vol. 27, no. 3, ISSN 0278-081X (print), 1531-5878 (online), June 2008.
 2. A. Shapoury* and E. Serpedin, "Wideband array processing with constant beam pattern beyond the spatial sampling limit," *ATOM-N 2008*

Conference, 4th edition of the International Conference on Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies, SPIE Proceedings, Sept. 2008.

3. A. Shapoury, Q. Chaudhari, and E. Serpedin, "On error magnitudes under spatial aliasing of wideband arrays with incoherent combining," 2007 IEEE International Conference on Signal Processing and Communications (ICSPC 2007), Nov. 2007.
 4. H.-G. Jeon and E. Serpedin, "Walsh Coded Training Signal Aided Time Domain Channel Estimation in MIMO-OFDM Systems," *IEEE Trans. on Communications*, vol. 56, no. 9, pp. September 2008.
 5. H.-G. Jeon and E. Serpedin, "A Novel Simplified Channel Tracking Method for MIMO-OFDM Systems with Null Sub-carriers," *Signal Processing*, Elsevier, Volume 88, Issue 4, April 2008, Pages 1002-1016.
 6. Y.-C. Wu*, S.-C. Chan, and E. Serpedin, "Symbol-Timing Estimation in Space-Time Coding Systems based on Orthogonal Training Sequences," *IEEE Trans. on Wireless Communications*, Volume 4, Issue 2, March 2005, pp. 603 - 613.
- **Nonlinear Signal Processing**
 1. G. B. Giannakis and E. Serpedin, "Linear Multichannel Blind Equalizers of Nonlinear FIR Volterra Channels," *IEEE Transactions on Signal Processing*, vol. 45, no. 1, pp. 67-81, January 1997.
 2. G. B. Giannakis and E. Serpedin, "A Bibliography on Nonlinear System Identification," *Signal Processing*, Elsevier Science, vol. 81, no. 3, pp. 533-580, March 2001.
 3. E. Serpedin and G. B. Giannakis, "On Linear Equalization of Multiple FIR Volterra Channels," *Proc. of the 30th Asilomar Conf. on Signals, Systems, and Computers*, vol. 1, pp. 315-319, Pacific Grove, CA, Nov. 1996.
 4. G. B. Giannakis and E. Serpedin, "Blind Equalizers of Multichannel Linear-Quadratic FIR Volterra Channels," *Proc. of the 8th IEEE Signal Processing Workshop on Statistical Signal and Array Processing*, pp. 371-374, Corfu, Greece, June 1996.
 5. G. B. Giannakis and E. Serpedin, "Linear Multichannel Blind Equalizers of Nonlinear FIR Volterra Channels," *Proc. of the 30th Annual Conference on Information Sciences and Systems*, Princeton Univ., vol. II, pp. 1153-1158, Princeton, NJ, March 1996.
 - **Cyclostationary Signal Processing**
 1. P. Ciblat, P. Loubaton, E. Serpedin, and G. B. Giannakis, "Asymptotic Analysis of Blind Cyclic Correlation Based Symbol-Rate Estimators," *IEEE Trans. on Information Theory*, vol. 48, no. 7, pp. 1922-1934, July 2002.
 2. A. Chevreuil, E. Serpedin, P. Loubaton, and G. B. Giannakis, "Blind Channel Identification and Equalization Using Non-Redundant Periodic Modulation Precoders: Performance Analysis," *IEEE Transactions on Signal Processing*, vol. 48, no. 6, pp. 1570-1586, June 2000.

3. G. B. Giannakis and E. Serpedin, "Blind Identification of ARMA Channels with Periodically Modulated Inputs," *IEEE Transactions on Signal Processing*, vol. 46, no. 11, pp. 3099-3104, Nov. 1998.
 4. E. Serpedin and G. B. Giannakis, "Blind Channel Identification and Equalization with Modulation Induced Cyclostationarity", *IEEE Transactions on Signal Processing*, vol. 46, no. 7, pp. 1930-1944, July 1998.
 5. Y. Wang*, E. Serpedin, P. Ciblat, and P. Loubaton, "Performance Analysis of a Class of Non-Data Aided Carrier Frequency Offset and Symbol Timing Delay Estimators For Flat-Fading Channels," *IEEE Transactions on Signal Processing*, vol. 50, no. 9, pp. 2295-2305, Sept. 2002.
 6. E. Serpedin, F. Panduru*, I. Sari* and G. B. Giannakis, "A bibliography on cyclostationary signal processing," *Signal Processing*, Elsevier, Volume 85, Issue 12, December 2005, Pages 2233-2303.
- **Spectral Estimation and Analysis**
 1. Y. Wang*, E. Serpedin, and P. Ciblat, "Optimal blind carrier recovery for burst M-PSK transmissions," *IEEE Transactions on Communications*, vol. 51, no. 9, pp. 1571-1581, Sept. 2003.
 2. Y. Wang*, E. Serpedin and P. Ciblat, "Optimal Blind Nonlinear Least-Squares Carrier Phase and Frequency Offset Estimation for General QAM Modulations," *IEEE Trans. on Wireless Communications*, vol. 2, no. 5, pp. 1040-1054, Sept. 2003.
 3. Y. Wang*, E. Serpedin, P. Ciblat, and P. Loubaton, "Performance Analysis of a Class of Non-Data Aided Carrier Frequency Offset and Symbol Timing Delay Estimators For Flat-Fading Channels," *IEEE Transactions on Signal Processing*, vol. 50, no. 9, pp. 2295-2305, Sept. 2002.
 4. P. Ciblat, P. Loubaton, E. Serpedin, and G. B. Giannakis, "Asymptotic Analysis of Blind Cyclic Correlation Based Symbol-Rate Estimators," *IEEE Trans. on Information Theory*, vol. 48, no. 7, pp. 1922-1934, July 2002.
 5. P. Ciblat, P. Loubaton, E. Serpedin, and G. B. Giannakis, "Performance analysis of blind carrier frequency offset estimators for noncircular transmissions through frequency-selective channels," *IEEE Transactions on Signal Processing*, vol. 50, no. 1, pp. 130-140, Jan. 2002.
 6. E. Serpedin, P. Ciblat, and G. B. Giannakis, "Performance Analysis of Blind Carrier Phase Estimators for General QAM Constellations," *IEEE Trans. on Signal Processing*, vol. 49, no. 8, pp. 1816-1823, August 2001.

EDITORIAL and REVIEWER SERVICE:

- **Associate Editor** for the journal *IEEE Transactions on Information Theory* (March 2009-Present).
- **Member of Editorial Board** for the journal *Signal Processing*, Elsevier-Academic Press, (Febr. 2009-Present).
- **Associate Editor** for the journal *EURASIP Journal on Bioinformatics and Systems Biology*, (May 2007-Present).

- **Associate Editor** for the journal EURASIP Journal on Advances in Signal Processing (Jan. 2007 - Present).
- **Associate Editor** for the journal IEEE Transactions on Communications (June 2005-Present).
- **Associate Editor** for the journal EURASIP Journal on Applied Signal Processing (Jan. 2006 - Dec. 2006).
- **Associate Editor** for the journal IEEE Transactions on Signal Processing (April 2005-June 2008).
- **Associate Editor** for the journal IEEE Transactions on Wireless Communications (Dec. 2004 - July 2008).
- **Associate Editor** for the journal IEEE Communications Letters (October 2001-April 2008).
- **Associate Editor** for the journal IEEE Signal Processing Letters (December 2002-Aug. 2005).
- **Guest Editor** for the Special Issue on Cognitive Radio: The Road for its Second Decade of ELSEVIER Physical Communication Journal (October 2011-September 2012).
- **Lead Editor** for the Special Issue on “Sequence and Genome Analysis” of Eurasip Journal on Bioinformatics and Systems Biology (September 2011-September 2012).
- **Guest Editor** for the Special Issue on Modeling of Proteomic and Gene Regulatory Networks,” International Journal of Quality, Statistics, and Reliability, Hindawi (Jan. 2012-Dec. 2012).
- **Leading Editor** for a Special Issue of the journal EURASIP Journal on Advances on Signal Processing on the topic “Distributed Signal Processing Techniques in Wireless Sensor Networks” (Sept. 2006-March 2008). Guest co-editors Profs. H. Li, A. Dogandzic, P. Cotae, and H. Dai.
- **Leading Editor** for a Special Issue of the journal EURASIP Journal on Bioinformatics and Systems Biology on the topic “Applications of Digital Signal Processing Techniques in Bioinformatics and Genomics” (Dec. 2007-Dec. 2008). Guest co-editors Profs. J. Garcia-Frias, Y. Huang, and U. Braga-Neto.
- **Guest Editor** for a Special Issue of the journal EURASIP Journal on Wireless Communications and Networking on the topic “Synchronization in Wireless Communications” (Febr. 2008-Present). Guest Leading Editor: Prof. H. Steendam (guest co-editors: Profs. M. Luise, E. Panayirci, and M. Ghogho).
- Reviewer for the NSF Panel on Signal Processing Systems, CISE Program, March 2001 (15 proposals).
- Reviewer for the NSF Panel on Advanced Technologies for Internet, June 2002, CISE Division (12 proposals).
- Reviewer for the NSF Career Panel: Networking Research Program, Division of Advanced Networking Infrastructure and Research (ANIR), Nov. 2002 (12 proposals).

- Reviewer for the NSF ITR Program, CISE Division, May 2004 (12 proposals).
- Reviewer for NSF GRFP Program, January 2008 (12 proposals).
- Reviewer for NSF GRFP Program, February 2009 (15 proposals).
- Reviewer for NSF CCF (CIF) Program, April 2009 (12 proposals).
- Reviewer for Research Foundations of Hong-Kong, Saudi Arabia, City University of Hong-Kong
- Reviewed numerous journal papers (more than 500 papers) for the past five years: *IEEE Trans. on Signal Processing* (120), *IEEE Signal Processing Letters* (80), *IEEE Trans. on Communications* (60), *IEEE Communications Letters* (200), *IEEE Trans. on Information Theory* (10), *IEEE Trans. on Wireless Communications* (50), *IEEE Trans. on Automatic Control* (5), *Automatica* (2), *IEEE Trans. on Neural Networks* (5), *IEEE Trans. on Vehicular Technology* (12), *IEEE Trans. on Circuits and Systems-Part I* (5), *Applied and Computational Harmonic Analysis* (2), *Signal Processing, Elsevier* (5), *Applied Signal Processing, Elsevier* (10), *IEE Proceedings* (1), *European Transactions on Communications* (1), *Wireless Communications Networks* (3), etc., and numerous conference papers: *ICASSP* (120), *SSAP* (30), *ICC* (50), *GLOBECOM* (100), *ASILOMAR* (10), *ISCC* (20), *Information Theory Workshop* (5), etc. Every year, usually I review about 100 journal papers, and 50 conference papers.
- Reviewed two textbooks on signal processing, and several book chapters:
 - * S. K. Mitra, *Digital Signal Processing: A Computer-Based Approach*, McGraw-Hill. Reviewed both the 2nd edition (2001) and the 3rd edition (2004).
 - * T. Bose, *Digital Signal and Image Processing*, Wiley, 2004.
 - * M. Ibnkahla (Editor), *Signal Processing for Mobile Communications Handbook*, CRC Press, 2004.
 - * E. Dougherty (Editor), *Genomic signal processing and statistics*, Elsevier, 2005.

PROFESSIONAL SERVICE:

MAJOR CONFERENCE ORGANIZATION SERVICE:

- **Technical Chair** of the Wireless Access Symposium at the IEEE Vehicular Technology Conference (VTC 2005), Dallas, TX, 2005.
- **Technical co-Chair** of Communication Theory Symposium, Globecom, Nov. 2006.
- **Chair of the Signal Processing Track** at ICT 2010 (International Conference on Telecommunications), Doha, Qatar, April 2010.
- **Technical co-Chair** of the IEEE Signal Processing for Wireless Communications Workshop (SPAWC), June 2012, Cesme, Turkey.
- **Technical Chair** for Signal processing and Adaptive Systems Area at Asilomar 2012 Conference, Pacific Grove, California.

OTHER PROFESSIONAL SERVICES:

- Elected Member of IEEE SPTM (Signal Processing Theory and Methods) Committee
- Elected Member of IEEE Sensor Array and Multichannel Committee.
- Local organizer for the 8th IEEE Signal Processing Workshop on Statistical Signal and Array Processing, June 24-26, 1996, Corfu, Greece.
- Session Chair: Globecom 2001 Conference, Session: Channel Equalization, San Antonio, TX, Nov. 2001.
- Local organizer for the Workshop on Discrete Models for Genetic Regulatory Networks, College Station, TX, Nov. 2003.
- Member in the technical program and session chair for the SPIE Symposium: Noise in Communications, Canary Islands, Spain, May 2004.
- Treasurer and Registration Chair for the IEEE Information Theory Workshop, San Antonio, TX, October 2004.
- Session Chair for the 2nd International Conference on Computing, Communication and Control Technologies: CCCT '04, Austin, TX, August 14-17, 2004.
- Member of the Technical Program Committee for the IEEE Signal Processing Advances in Wireless Communications Workshop (SPAW 2005), New York, NY, June 5-8, 2005.
- Member in the Technical Program Committee and Session Chair for the SPIE Fluctuations and Noise Symposium to be held in Austin, Texas 23-26 May 2005.
- Member of the Technical Program Committee and Session Chair at IEEE Vehicular Technology Conference (VTC 2005), Dallas, TX, 2005.
- Member of Technical Program Committee, Globecom, Saint Louis, Dec. 2005.
- Chair of Local Arrangements, GENSIPS, May 2006, College Station, TX.
- Chair of Local Arrangements, Workshop of Genomic Regulatory Networks, Nov. 2005, College Station, TX.
- Member in the Technical Program Committee and Session Chair for the Communication Theory Symposium, Globecom, Nov. 2006.
- Member of Technical Program Committee, ICC, Glasgow, UK, June 2007.
- Member of Technical Program Committee, IEEE WCNC, Hong Kong, March 2007.
- Member of Technical Program Committee, ICC 2008.
- Member of Technical Program Committee, WCNC 2008.
- Member of Technical Program Committee, 24th Biennial Symposium on Communications Department of Electrical and Computer Engineering Queen's University, Kingston, Ontario, Canada June 24 - June 26, 2008.

- Member of Technical Program Committee, Globecom 2007.
- Member of Technical Program Committee, Globecom 2008.
- Member of Technical Program Committee, VTC 2008.
- Member of Technical Program Committee, Gensips 2007.
- Session Chair, Gensips 2007.
- Session Chair and Member of Technical Program Committee, ISSPA 2007.
- Member of Technical Program Committee, Communications 2008 Conference, Bucharest.
- Member of Technical Program Committee, WoSPA 2008.
- Member of Technical Program Committee, ICC 2009.
- Member of Technical Program Committee, Atom 2008.
- Member of Technical Program Committee, Globecom 2009.
- Member of Technical Program Committee, VTC 2009.
- Member of Technical Program Committee, SpeD 2009, June 2009.
- Member of Technical Program Committee, WCNC 2010.
- Member of Technical Program Committee, ICC 2010.
- Member in the Technical Program Committee and Session Chair at ICT 2010, Doha, Qatar, April 2010.
- Member in the Technical Program Committee, Wireless Communications Symposium, Globecom 2011.
- Member in the Technical Program Committee, GENSIPS 2011, San Antonio, TX, Dec. 2011.
- Member in the Technical Program Committee, Wireless Communications Symposium, ICC 2011, June 2011, Kyoto, Japan.
- Member of the Technical Program Committee, International Workshop on Genomic Signal Processing, Bucharest, Romania, June 2011.
- Member of the Technical Program Committee, The 7th IEEE Sensor Array and Multichannel Signal Processing Workshop, June 2012, Hoboken, NJ.
- Member of the Technical Program Committee, 2011 DSP/SPE Workshop - IEEE Signal Processing Society 14th DSP Workshop and the 6th SPE Workshop Enchantment Resort, Sedona, Arizona, USA January 4-7, 2011
- Member of the Technical Program Committee, 2012 IEEE Statistical Signal Processing Workshop (SSP 2012), Ann Arbor, Michigan, August 2012.
- Member of the Technical Program Committee, SpeD 2011 - The 6th Conference on Speech Technology and Human-Computer Dialogue, Brasov, Romania, May 18-21, Romania.
- Member of the Technical Program Committee, 10th International Symposium on Signals, Circuits and Systems, ISSCS 2011, 30 June - 1 July 2011, Iasi, Romania.

- Member of the Technical Program Committee, Signal Processing and Applied Mathematics for Electronics and Communications Conference (SPAMEC 2011), August 26-28, 2011, Cluj-Napoca, Romania.
- Member of the Technical Program Committee, Advanced Topics in Optoelectronics Microelectronics and Nanotechnologies ATOM-N 2012, August 23 - 26, 2012, Maritime University of Constanta, Romania.
- Publicity Chair, 19th International Conference on Neural Information Processing (ICONIP2012), Doha, Qatar, Nov. 26-29, 2012.
- Created the most complete database of references: “A bibliography on non-linear system identification,” *Signal Processing*, Elsevier, NL, vol. 81, pp. 533-580, 2001, which proved to be a very valuable tool for the researchers working in the field. This database was one of the most downloaded references during the period January 2003 - December 2003 among all the papers published in the journal *Signal Processing*, Elsevier, NL.
- Created the most complete database of references on cyclostationarity: “A bibliography on cyclostationary signal processing,” *Signal Processing*, Elsevier, NL, Volume 85, Issue 12, pp. 2233-2418, Dec. 2005. This represented one of the top 25 most downloaded papers from the journal EURASIP Signal Processing, Elsevier, for the period Jan. 2006-Dec. 2006.

UNIVERSITY SERVICE:

- Mar. 2005-2007: Member in the EE Dept. Graduate Teaching Committee.
- Sept. 2005-June 2006: Reviewer for the Graduate Admission Committee. Reviewed applications for graduate admission in the group of Telecommunications and Signal Processing.
- Jan. 2001-Dec. 2002: Reviewer for the Graduate Admission Committee. Reviewed applications for graduate admission in the group of Telecommunications and Signal Processing.
- Oct. 2000-Oct. 2002: ATM-Mentor for Texas A&M University students. Provided help and advice to students for various professional and non professional problems.
- Graduate Committee Member for the following students: Ritesh Chaturbedi (MSc., EE Dept.), Xiaoyong Zhang (MSc., EE Dept.), Xuechao Du (MSc., EE Dept.), Hui Liu (MSc., EE Dept.), Yu Zhang (Ph.D., EE Dept.), Wei Zhou (Ph.D., EE Dept.), Mohammed Abdelhakam Ibrahim Mostafa (Ph.D., EE Dept.), Mary Oxford (Ph.D., Dept. of Psychology), Min Dai (Ph.D., EE Dept.), Peng Xu (Ph.D., EE Dept.), Daryl Morell (Ph.D., EE Dept.), Ching Fu Lan (Ph.D., EE Dept.), Sanju Nair Attoor (MSc., EE Dept.), Francisco Jaramillo Jr. (PhD, Wild Life and Fisheries Sciences), Min Dai (EE Dept.), Yufei Xiao (ECE Dept.).
- Member in the Faculty Advisory Committee of the Vice President for Student Affairs (2002-2004).
- Member in the Student Recruiting Committee (Special Task Force), chaired by the Graduate Admission Coordinator Prof. G. Huang, EE Dept., TAMU.

- Member in several Faculty Recruiting Committees.
- July 2007-Dec. 2010: Member of ABET Committee, TAMUQ.
- July 2007-Dec. 2010: Member of Graduate Admission and Advising Committees, TAMUQ.
- July 2007-Dec. 2010: Member of Industry Relations and Internship Program Committee, TAMUQ.
- March 2009-Present: Member of FA-SC, Promotion and Rolling Contract Committees at TAMUQ.
- September 2011-June 2012: Reviewer of Graduate Admission Committee, TAMU-CS.

SOCIETY MEMBERSHIPS:

Elected Member of IEEE Signal Processing Society (SPS) Signal Processing Theory and Methods Technical Committee (SPTM TC) and Sensor Array and Multichannel Committee

IEEE Senior Member.

Membership in IEEE Signal Processing Society, IEEE Communications Society, and IEEE Information Theory Society.

EURASIP Member

Past Society Memberships: ASEE, AMS, MAA, SIAM, TAMU-ATM Mentors.

INVITED TALKS:

Bell Laboratories: Mathematical Research Center for Communications, Arizona State University, University of Connecticut, State University of New York, University of Texas, Polytechnic University of Bucharest, Asilomar 2004 Conference, SPIE 2004 Conference: Noise in Communications, Air Force Research Laboratory, International Symposium on Signals, Circuits and Systems: ISSCS 2007, ISSPA 2007, AFRL 2004-2009.

STUDENT ADVISING:

Doctoral Students: I graduated 9 (nine) PhD students. At present, I am serving as the Chair of the Graduate Committee for 8 (eight) PhD students.

List of Graduated PhD Students

- **Dr. Yan Wang:** graduated in December 2003. Thesis: “New Advances in Synchronization of Digital Communication Receivers.” Currently: Full-time researcher with Nokia Research Center, San Diego, CA. Publication record: 10 (ten) IEEE journal papers accepted, and 14 conference papers accepted. During his third (and last) year of graduate studies, Yan won a prestigious fellowship from the ECE Dept., TAMU.
- **Dr. Yik-Chung Wu:** graduated in Aug. 2005. Thesis: “Synchronization of space-time multi-antenna communication systems”. Current Publication Record:

20 (twenty) IEEE journal papers accepted, 5 journal papers under review (submitted), 2 book chapters, and 34 conference papers accepted. Yik-Chung is currently **an assistant professor at the University of Hong Kong**. He already won a prestigious research grant from the Hong-Kong National Research Foundation, won also two conference best paper awards and established a good track to receive his tenure at the University of Hong Kong. He received a number of awards and patents, and is currently serving also as associate editor for IEEE Communications Letters. His website is <http://www.eee.hku.hk/~ycwu/>

- **Dr. Kai Shi:** graduated in August 2005. Thesis: “New advances in synchronization of single and multi-carrier communication systems”. Current publication record: 10 (ten) IEEE journal papers, and 9 conference papers. Kai is working as R&D engineer for Atheros Inc., CA, a start-up company having Prof. T. Meng from Stanford Univ., and Prof. R. Broderon from Berkeley Univ. as key founders.

- **Dr. Eddie Kyoung Noh:** graduated in August 2007. Eddie is currently working as R&D engineer for Samsung Electronics, Seoul, Korea, Publication record: 7 (seven) journal papers and 9 (nine) conference papers.

- **Dr. Ali-Reza Shapouri:** joined the group in June 2004 and graduated in August 2007. Ali-Reza is currently working as Research Scientist for Physics Optics Corp., Los Angeles, CA. Publication record: 1 journal paper and 10 conference papers.

- **Dr. Qasim Chaudhari:** came in Aug. 2005 with a MSc degree from USC, Los Angeles. He graduated the PhD Program in August 2008. Current publication record: 5 (five) journal papers accepted, 2 journal paper submitted (under review), and 13 conference papers. Qasim accepted the job offer of **assistant professor** at Iqra University, Islamabad, Pakistan.

- **Dr. Wentao Zhao** came with a BSc degree from Tsinghua Univ., and MSc from TAMU, joined the group in May 2005. Wentao graduated the PhD Program in Aug. 2008. Current Publication Record: 6 (six) journal papers accepted, and 8 conference papers. Wentao accepted the position of data analyst at Philipps-Conoco Company in Houston, TX.

- **Dr. Jaehan Lee** joined the group in Dec. 2006, and completed his PhD degree in August 2010. Current Publication record: 3 journal papers published, 1 journal paper submitted and 3 conference papers. Current position: research engineer with Samsung Electronics.

- PhD Student **Yi Zhou**, joined the group in Aug. 2004 with a MSc degree from Southeast Univ., China. Expected graduation date: December 2010. Date of PhD defense: Fall 2010. Current Publication Record: 3 Journal papers published/accepted for publication, 1 journal paper submitted, 1 book chapter and 5 conference papers. Yi Zhou is currently working for a company in Houston.

List of Current PhD Students

- PhD Student: **Kwadwo Agyepong** joined the group in Summer 2006. I succeeded to obtain for Kwadwo a research assistantship under the program **Path-**

ways to Doctorate, sponsored by the Dean's Office. Expected graduation date: August 2012. Current Publication Record: 1 Journal paper, and 2 conference papers.

- PhD Student: **Sangwoo Park** upon completing his MSc thesis defense in Dec. 2007, is currently working towards his PhD degree. Current Publication record: 3 journal papers submitted.
- PhD Student: **Sabit Ekin** joined the group in Aug. 2008, and is currently working towards his PhD degree. Current Publication record: 3 journal papers submitted.
- PhD Student: **Aitzaz Ahmad** joined the group in Aug. 2008, and is currently working towards his PhD degree.
- PhD Student: **Amina Noor** joined the group in Aug. 2008, and is currently working towards her PhD degree.
- PhD Student: **Bilal Wajid** joined the group in Nov. 2009, and is currently working towards his PhD degree.
- PhD Student: **Fang-Han Hsu** joined the group in Aug. 2009, and is working towards his PhD degree.
- PhD Student: **Ali Riza Ekti** joined the group in Jan. 2010, and will be working towards his PhD degree.
- PhD Student: **Hyun Cheol Jo** joined the group in Sept. 2011, and is working towards his PhD degree.

Masters Students: I graduated 10 (ten) MSc students.

- **Ilkay Sari:** graduated in August 2006. Thesis: "Joint Synchronization of Clock Phase Offset, Skew and Drift in Reference Broadcast Synchronization (RBS) Protocol." Currently, Ilkay is an engineer working for Schlumberger, R&D Center, Sugar Land, TX.
- **Jason Gardner:** graduated in May 2003. Thesis: "Novel Wrapper Algorithms for High Dimensionality Gene Space Reduction," At present, Jason holds the position of engineer with Schlumberger, Sugar Land, TX.
- **Pradeep Kiran Sarvepalli:** graduated in May 2003. Thesis: "Non-data aided synchronization of digital receivers," At present, Pradeep is a PhD graduate student in the CS Dept., TAMU.
- **Flaviu Panduru:** graduated in August 2004. Thesis: "Performance bounds and synchronization algorithms for multi-antenna communications systems". At present, Flaviu is working as full-time engineer for T-Mobile, Seattle.
- **Maher S. Al-Shoukairi** (co-advised with Dr. K. Qaraqe) defended successfully his MSc thesis in January 2008. Publication record: 1 journal paper. At present, Maher is working as a full-time engineer for Qualcomm, San Diego, CA.
- **Sang Woo Park** defended successfully his MSc thesis in December 2008. Pub-

lication record: 1 journal paper submitted. Currently, Sang is working towards his PhD degree under my supervision.

- MSc student **Huseyin Peksen** joined the group in Summer 2006 and graduated in the Fall 2008 semester. Huseyin is currently working for an engineering company in Turkey.
- MSc student **Sawin Saibua** joined the group in Summer 2009 and graduated in Summer 2010.
- MSc student **Mohammad Muneer** joined the group in Summer 2008 and graduated in Fall 2009.
- MSc student **Amina Noor** joined the group in Summer 2008 and graduated in Summer 2010.

Undergraduate Students: 1 honors student graduated

- **Timothy P. Dureya:** honors student. Graduated: May 2005. Senior Thesis: “Estimation of Signal to Noise Ratio in Digital Communication Receivers”. Timothy won the **Best Senior Thesis Award in the College of Engineering** at his graduation ceremony in May 2005. Tim was an exceptional undergraduate who produced one solid journal paper and a conference paper. Timothy is currently working for Texas Instruments, Dallas, TX.
- **Kyle Lueckemeyer:** honors student. Directed Studies: “Channel Estimation for Ultra WideBand Communication Systems”. Duration: Spring 2004 Semester.
- **Jimmy Zorkani:** Directed Studies: “Introduction in the design of digital communication transceivers”. Duration: Spring 2004 Semester.
- **Luke McKay:** Directed Studies: “Design and Implementation of Multicarrier Communication Systems”. Duration: Spring 2004 Semester.
- **Steven Gregor** (external undergraduate student from MSU): Research Training under the NSF REU Grant Proposal, “Design and Implementation of a Signal-to-Noise Ratio Estimator.” Duration: Summer 2004 Semester.

Other External Students:

- Supervised two visiting MSc students: M. Huber and C. Lesage-Mathieu, Ecole Navale et Groupes des Ecoles du Poulmic, Brest, France, to complete their Final Graduation Project for the Degree of Engineer. Title of Project: Blind Estimation of Deterministic Parameters in Burst Transmissions, Fall 2001 Semester.