Erchin Serpedin

Address:
Texas A&M University at Qatar
ECEN Dept., Room 246K
Education City
Doha, Qatar
Office Tel.: (974) 4423 0426
email: eserpedin@qatar.tamu.edu

Texas A&M University
ECEN Dept., TAMUS 3128
College Station TX 77843
email: eserpedin@tamu.edu

RESEARCH INTERESTS:

Signal Processing, Wireless Communications, Machine Learning, Cybersecurity, Smart Grids and Bioinformatics

EDUCATION:

Sep.'95-Jan.'99 **Ph.D., Electrical Engineering**, Jan. 1999: University of Virginia, Charlottesville. Advisor: Prof. Georgios B. Giannakis, University of Minnesota, Minneapolis, USA.

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.

1986 - 1991 **Diploma of Electrical Engineer**, July 1991: Polytechnic Institute of Bucharest, Departments of Computer Science and Automatic Control, Bucharest, Romania. Advisor: Prof. Petre Stoica, Uppsala University, Sweden.

ACADEMIC EXPERIENCE:

Sept'19-Present **Program Chair** - Electrical and Computer Engineering Program, Texas A&M University at Qatar.

Aug'15-Present **Full Professor** - Electrical and Computer Engineering Program, Texas A&M University at Qatar.

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.

Sep.'95-Jan.'99 **Research Assistant** for Prof. Georgios B. Giannakis.

Sep.'95-May'96 **Teaching Assistant** - EE 208 Digital Logic Design Lab, EE 614 Estimation and Detection, EE 724 Advanced Digital Signal Processing, 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. 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, 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. Analyzed and tested statistical signal processing algorithms for estimation of state-space representations of linear systems.

AWARDS:

Oct.'22 **Best Presentation Award** - CleftGAN: Leveraging A Style-Based Generative Adversarial Network To Create New and Unique Cleft Lip Images, Plastic Surgery The Meeting (PSTM), American Society of Plastic Surgeons, Boston, MA, USA.

Apr.'22 Faculty of the Year (TAMUQ students award).

Mar.'22 **Best Paper Award** - 3rd International Conference on Smart Grid and Renewable Energy (SGRE), Doha, Qatar.

Aug.'20 **Best Paper Award** - 10th IEEE International Conference on Intelligent Systems (IS'20), Varna, Bulgaria.

Nov.'19 **Best Paper Award** - 25th Asia-Pacific Conference on Communications (APCC), Ho Chi Minh, Vietnam.

Jun.'19 **Best Paper Award** - IEEE International Conference on Communications (ICC), Shanghai, China.

Dec.'18 **IEEE Signal Processing Magazine Best Column Award** for year 2018.

Jul.'16 **Best Paper Award** - Green 2016 Conference, Nice, France.

Apr.'16 ECEN Program-TAMUQ, Faculty Teaching Award.

Jan.'16 TAMUQ Faculty Excellence Award.

Mar.'15 **Best Paper Award** - IEEE First Workshop on Smart Grid and Renewable Energy, Doha, Qatar.

Dec.'14 **Best Paper Award** - Globecom 2014: IEEE Global Communications Conference.

Mar.'14 Editor-in-Chief for EURASIP Journal on Bioinformatics and Computational Biology, Springer (Online Journal).

Nov.'13 **Best Paper Award** - 2013 IEEE Gensips (IEEE International Workshop on Genomic Signal Processing and Statistics).

Apr.'13 William Keeler Faculty Fellow Award

Jan.'13 Elected IEEE Fellow

Jul.'08 **Best Paper Award** - ICDT (International Conference in Digital Communications) 2008.

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
Aug.'04	**Best Paper Award** - 2004 CCCT (Communications, Computing and Control Technologies) Conference.
Jan.'01	US National Science Foundation (NSF) Career Award.
Sep.'95-May'96	University of Virginia Departmental Fellowship (GPA= 4.00/4.00).
June'91	Graduated at the top of the class at Polytechnic Institute of Bucharest, Departments of Computer Science and Automatic Control, Bucharest, Romania, Rank: 1/400, GPA= 9.97/10.00.
Sep.'89-June'91	National Merit Fellowship.
Apr.'85	Romanian Mathematical Society Prize at the National Mathematical Olympiad (ranked on 4th place).

Accomplishments of Dr. Serpedin's students:

Aug.'23	Abdulrahman Takiddin will graduate and join the State University of Florida, Tallahassee, as a tenure-track assistant professor.
Jul.'23	Dr. Qammer Abbasi is promoted to the rank of full professor and receives the Chair Professor of Applied Electromagnetics and Sensing at the University of Glasgow, UK. He is the first professor in the 500 years of University of Glasgow history to receive a chaired professorship in this area.
Jul.'23	Dr. Muhammad Ismail receives tenure and promoted to the rank of associate professor at TTU.
Jan.'23	Dr. Sabit Ekin receives the position of Associate Professor with Tenure at Texas A&M University-College Station.
Dec.'22	Promotion to Associate Professor for Dr. Marwa Qaraqe at HBKU.
Nov.'22	U.S. Department of Energy (DOE) Early CAREER Award for Dr. Sabit Ekin.
Jun.'20	Yik-Chung Wu receives Best Paper Award at ICC 2020.
Apr.'19	Senior Design Project **Fast EEG Diagnose** of undergraduate students: Fatima Hassen, Lolwa Al-Majid, Ameera Al-Shahwani, Al-Reem Al-Abdullah won the **Best Student Design Project Award**, April 2019.
Dec.'18	Sangwoo Park received the **IEEE Signal Processing Magazine Best Column Award** for year 2018.
Jul.'16	Muhammad Ismail received the **Best Paper Award** for his paper: "Enabling Green Heterogeneous Wireless Networks", at Green 2016 Conference, Nice, France, July 2016.

Dec.'14 Muhammad Ismail received the **Best Paper Award** for his paper: "A semi-distributed V2V fast charging strategy based on price control", at Globecom 2014 Conference

Jun.'14 Muhammad Ismail received the **Best Paper Award** for his paper: "Energy efficient uplink resource allocation in a heterogeneous wireless medium", at IEEE ICC 2014 Conference (International Communications Conference).

Nov.'13 Marwa Qaraqe received the **Student Best Poster Award** (First Prize Award) for her paper, "MIMO Radio Channel Characterization for UWB Body-Centric Wireless Networks", at the Qatar Foundation-Annual Research Conference (QF-ARC 2013).

Aug.'12 Yik-Chung Wu promoted to Associate Professor with tenure at the University of Hong-Kong.

2010-2012 Marwa Qaraqe received the **TAMU Diversity Fellowship**, Texas A&M University, College Station, Texas, USA

Nov.'13 Amina Noor received the 2013 IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS 2013) **Best Paper Award** for her paper: "ROBNCA: Robust Network Component Analysis for Recovering Transcription Factor Activities".

May.'12 Marwa Qaraqe received **Richard E. Ewing Award for Excellence in Research**, TAMUQ.

Apr.'11 Fang-Han Hsu won the **Best Poster Presentation Award** at MCBIOS 2011: "Stochastic Modeling of the Relationship between Copy Number and Gene Expression Based on Transcriptional Logic," *MCBIOS 2011: Eighth Annual Conference of the MidSouth Computational Biology and Bioinformatics Society.*

Aug.'10 Marwa Qaraqe received **TAMU Diversity Fellowship** 2010-2012.

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 researcher at Melbourne University, Australia (first position: 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 a **tenured associate 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 papers. He is also serving as associate editor for IEEE Communications Letters and IEEE Transactions on Communications. He is also the author of 9 patents.

Aug.'02 Yan Wang received the **ECEN Departmental Fellowship** for his PhD studies. Dr. Yan Wang graduated in December 2003, and currently works for Nokia.

EDITORIAL and REVIEWER SERVICE:

- IEEE Signal Processing Societys Representative on the IEEE Smart Grid Initiative Steering Committee
- **Member of Editorial Board** for IEEE Transactions on Smart Grid Journal (Jan. 2023-Present).
- **Member of Editorial Board** for Electronics and Signal Processing Journal, (Nov. 2022-Present).
- **Member of Editorial Board** for Biomedical Informatics, (Dec. 2022-Present).
- **Associate Editor** for the journal IEEE Signal Processing Magazine, (April 2014-Apr. 2018).
- **Lead Guest Editor** for the special issue "Advances of Fronthaul and Backhaul for 5G and Beyond" of the journal ELSEVIER Physical Communication (2017-2019).
- **Editor-in-Chief** for the journal EURASIP Journal on Bioinformatics and Systems Biology, Springer, (March 2014-March 2017).
- **Associate Editor** for the journal Physical Communications-Elsevier, (Oct. 2012-Nov. 2014).
- **Associate Editor** for the journal IEEE Transactions on Information Theory (March 2009-Dec. 2012).
- **Member of Editorial Board** for the journal Signal Processing, Elsevier-Academic Press, (Febr. 2009-July 2013).
- **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 - Apr. 2014).
- **Associate Editor** for the journal IEEE Transactions on Communications (June 2005-March 2013).
- **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 a special issue of the journal Algorithms (ISSN 1999-4893). The special issue was called "Algorithms for Sensor Networks" (2014-2015).
- **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 "Computational and Statistical Approaches for Modeling of Proteomic and Genomic Networks," Advances in Bioinformatics (Jan. 2012-March 2013).
- **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 NSF CCF (CIF) Program, April 2016 (12 proposals).
- Reviewer for NSF CCF Program, April 2017 (7 proposals).
- Reviewer for NSF SaTC Small - Wireless Networking Program, April 2018 (6 proposals).
- Reviewer for NSF CCSS Signal Processing and Learning (SPL) Panel, June 2020 (7 proposals).
- Reviewer for Research Foundations of Hong-Kong, Saudi Arabia, City University of Hong-Kong, European Research Council.
- 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 50 journal papers, and 150 conference papers.

- Reviewed several textbooks on signal processing, and several other book chapters:

  ∗ Signals and Systems, Dr. Sanjit K. Mitra, Oxford University Press, 2016.

  ∗ Solution Manual for the textbook: Signals and Systems, Dr. Sanjit K. Mitra, Oxford University Press, 2016.

  ∗ 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:

- **General co-Chair** of the Artificial Intelligence in Medicine Symposium to be organized in Doha, Qatar, May 2023.
- **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 - Global Communications Conference, 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 on Signals, Systems, and Computers*, Pacific Grove, California.
- **Co-Chair** of Windale 2013 Workshop on Recent Advances in Information Sciences, hosted jointly by UT Austin, TAMU and Rice Univ., TX, Oct. 2013.

OTHER PROFESSIONAL SERVICES:

- Elected Member 2019-2022 of IEEE Signal Processing Society's: Biomedical and Image Processing Committee.
- Elected Member 2019-2021 of IEEE Signal Processing Society's Machine Learning Committee.

- Elected Member 2008-2012 of IEEE Signal Processing Society's SPTM (Signal Processing Theory and Methods) Committee.
- Elected Member 2012-2016 of IEEE Signal Processing Society's 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 (Global Communications 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 (Global Communications Conference), Saint Louis, Dec. 2005.
- Chair of Local Arrangements, GENSIPS: IEEE International Workshop on Genomic Signal Processing and Statistics, 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 (Global Communications Conference), Nov. 2006.
- Member of Technical Program Committee, ICC (International Conference on Communications), Glasgow, UK, June 2007.
- Member of Technical Program Committee, IEEE WCNC (Wireless Communications and Networking Conference), Hong Kong, March 2007.
- Member of Technical Program Committee, ICC (International Conference on Communications) 2008.
- Member of Technical Program Committee, WCNC (Wireless Communications and Networking Conference) 2008.
- Member of Technical Program Committee, 24th Biennial Symposium on Communications, ECEN Dept., Queen's University, Kingston, Canada, June 2008.

- Member of Technical Program Committee, Globecom (Global Communications Conference) 2007.
- Member of Technical Program Committee, Globecom (Global Communications Conference) 2008.
- Member of Technical Program Committee, VTC 2008: IEEE Vehicular Technology Conference.
- Member of Technical Program Committee, Gensips (IEEE Genomic Signal Processing and Statistics Workshop) 2007.
- Session Chair, Gensips (IEEE Genomic Signal Processing and Statistics Workshop) 2007.
- Session Chair and Member of Technical Program Committee, ISSPA: International Symposium on Signal Processing and its Applications, Sharjah, UAE, 2007.
- Member of Technical Program Committee, Communications 2008 Conference, Bucharest.
- Member of Technical Program Committee, WoSPA 2008: International Workshop on Signal Processing and its Applications, Sharjah, UAE.
- Member of Technical Program Committee, ICC (International Conference on Communications) 2009.
- Member of Technical Program Committee, Atom 2008 - SPIE Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies Conference.
- Member of Technical Program Committee, Globecom (Global Communications Conference) 2009.
- Member of Technical Program Committee, VTC 2009: IEEE Vehicular Technology Conference.
- Member of Technical Program Committee, SpeD 2009: 5th Conference on Speech Technology and Human - Computer Dialogue, Constanta, Romania, June 2009.
- Member of Technical Program Committee, WCNC (Wireless Communications and Networking Conference) 2010.
- Member of Technical Program Committee, ICC (International Conference on Communications) 2010.
- Member in the Technical Program Committee and Session Chair at ICT (International Conference on Telecommunications) 2010, Doha, Qatar, April 2010.
- Member in the Technical Program Committee, Wireless Communications Symposium, Globecom (Global Communications Conference) 2011.
- Member in the Technical Program Committee, GENSIPS 2011: IEEE International Workshop on Genomic Signal Processing and Statistics, San Antonio, TX, Dec. 2011.
- Member in the Technical Program Committee, Wireless Communications Symposium, ICC 2011: IEEE International Conference on Communications, 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, 7th IEEE Sensor Array and Multichannel Signal Processing Workshop, June 2012, Hoboken, NJ.
- Member of the Technical Program Committee, 2011 DSP/SPE Workshop - IEEE Digital Signal Processing Workshop and the Signal Processing Education 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, 2011, Romania.
- Member of Technical Program Committee, ICC (International Conference on Communications) 2012.
- Member of Technical Program Committee, Globecom (Global Communications Conference) 2012.
- Member of Technical Program Committee, Gensips (IEEE Genomic Signal Processing and Statistics Workshop) 2012.
- Member of Technical Program Committee, Asilomar 2012: Asilomar Conf. on Signals, Systems, and Computers, Pacific Grove, California.
- 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, "SPIE: Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies Workshop - ATOMN 2012", August 23 - 26, 2012, Constanta, Romania.
- Publicity Chair, 19th International Conference on Neural Information Processing (ICONIP2012), Doha, Qatar, Nov. 26-29, 2012.
- Member of Technical Program Committee, ICC (IEEE International Conference on Communications) 2013.
- Member of Technical Program Committee, Globecom (Global Communications Conference) 2013.
- Member of Technical Program Committee, CAMSAP 2013: Computational Advances in Multi-Sensor Adaptive Processing Workshop.
- Member of Technical Program Committee, SAM 2014: Sensor Array and Multichannel Signal Processing Workshop.
- Member of Technical Program Committee, WCNC (Wireless Communications and Networking Conference) 2014, Istanbul, Turkey.
- co-chair of the International Advisory Committee, IEEE MTT-S International Microwave Workshop Series on RF and Wireless Technologies for Biomedical and Healthcare Applications (IMWS-Bio 2014), London, UK, Dec. 2014.

- Member of Technical Program Committee, COMM 2014: Communications Conference, Bucharest, Romania.
- Member of Technical Program Committee, ICASSP 2014: IEEE International Conference on Acoustics, Speech, and Signal Processing, Florence, Italy.
- Member of Technical Program Committee, ICASSP 2015: IEEE International Conference on Acoustics, Speech, and Signal Processing, Brisbane, Australia.
- Member of Technical Program Committee, CSCC 2015: International Conference on Circuits, Systems, Communications and Computers, Zakynthos, Greece.
- Member of Technical Program Committee, ISSCS 2015: International Symposium on Signals, Circuits and Systems, Iasi, Romania.
- Member of Technical Program Committee, Globecom (Global Communications Conference) 2014, Austin, TX.
- Member of Technical Program Committee, ICC (IEEE International Conference on Communications) 2014.
- Member of Technical Program Committee, ICC 2015 (IEEE International Conference on Communications), London, UK.
- Member of the Technical Program Committee of Globecom 2015.
- Member the Technical Program Committee (TPC) of the 2nd International Workshop on Computational Network Biology: Modeling, Analysis, and Control (CNB-MAC 2015).
- ACM-BCB 2015: ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (ACM BCB)
- Member of the Technical Program Committee for IEEE CAMSAP 2015 (2015 6th IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP)
- Served as reviewer for Australian National Research Foundation, European Research Committee, and several faculty promotion cases.
- Served as Chair of the Awards Committee: Detection and Estimation, IEEE Signal Processing Society-SAM Technical Committee: 2013-2016.
- Reviewer for European Research Council: Advanced Grant 2013 Program.
- Area Chair in Bio-informatics and Genomics, TPC Member of Eusipco 2017 Conference, Kos, Greece, Aug. 2017.
- Reviewer for ICASSP 2017
- TPC Member and Reviewer for Globalsip 2016
- Reviewer for ICASSP 2018
- Member of Technical Program Committee, ICC 2017 (IEEE International Conference on Communications), Missouri, US.
- Member of the Technical Program Committee of Globecom 2017, Singapore.
- Member of Technical Program Committee, ISSCS 2017: International Symposium on Signals, Circuits and Systems, Iasi, Romania.

- Reviewer for ICASSP 2019.
- Member of the Technical Program Committee of Globecom 2019.
- Member of the Technical Program Committee of ICC 2018.
- Member of the Technical Program Committee of ICC 2019.
- Member of Technical Program Committee, ISSCS 2019: International Symposium on Signals, Circuits and Systems, Iasi, Romania.
- Member of Technical Program Committee, COMM2020: 13th International Conference on Communications COMM2020, Bucharest, Romania, June 2020.
- Member of Technical Program Committee, SPAWC 2020.
- Member of Technical Program Committee for 2020 IEEE Statistical Signal Processing Workshop (SSP)
- Reviewer and Session Chair for ICASSP 2020 (20 papers).
- Reviewer for ISBI 2020 (5 papers).
- Reviewer for CAMSAP 2019.
- Keynote Speaker & International Advisory Committees-ICDSP2019—Feb.23-25—Jeju Island
- Reviewer for 2019 IEEE Data Science Workshop - DSW 2019 (5 papers), Minneapolis, Minnesota, 2019.
- Reviewer for MLSP 2020.
- Reviewer and Session Chair for ICASSP 2021.
- Reviewer for ISIB 2021.
- Reviewer for MLSP 2021.
- Reviewer for SSP 2021.
- Reviewer for EMBC 2021.
- Reviewer for ISSCS 2021.
- Program Chair Committee, ICDSP 2021 and ICCGV 2021 Conference, February 26-28, 2021, Chengdu, China.
- Reviewer for 2022 IEEE Data Science & Learning Workshop (DSLW 2022).
- Reviewer for ICASSP 2022.
- Reviewer for ISBI 2022.
- Reviewer for promotion and tenure: USF 2022
- Chair of Petroleum Engineering Program Chair Recruiting Committee 2021
- Reviewer for Dutch Research Council (NWO) 2021.
- Reviewer for IEEE Signal Processing Magazine 2022
- IEEE Trans. on Smart Grid 2022
- TPC member for ISSCS 2023, Iasi, Romania
- Reviewer for ICASSP 2023
- Reviewer for promotion and tenure: MSU 2022
- Reviewer for UAEU Research Office: June 2022

- Reviewer for IEEE Trans. on AI: 2022
- Reviewer for IEEE Communications Letters 2022
- Reviewer for COMM 2022
- Created the most complete database of references: "A bibliography on nonlinear 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:

- 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.
- In general, I serve as member of the Graduate Committee for five or six students every year. These are just a few students during the period 1999-2003 for whom I served as member of their committees: 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 Phsycology), Min Dai (Ph.D., EE Dept.), Peng Xu (Ph.D., EE Dept.), Daryl Reynolds (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.), and many others for the period 2004-2022. I cannot keep track of their names since they are too many.
- Member of the Graduate Committee for these PhD students who graduated in 2021: Ameema Zainab (ECEN), Xu Duang (ECEN), Dabeeruddin Syed (ECEN), Sezer Tokgoz (ECEN), Nassma Mohands (ECEN)
- External Examiner for MSc Student from Qatar University: Sohaila S. Eltanbouly
- 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, ECEN Dept., TAMU (2001-2003).
- Member in several Faculty Recruiting Committees.
- Mar. 2005-2007: Member in the ECEN 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.
- 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.
- Sept. 2011-June 2014: Reviewer of Graduate Admission Committee, TAMU.
- Sept. 2013-Present: Member of Graduate Curriculum Committee, TAMU.
- Sept. 2013-Aug. 2014: Member of Graduate Studies Committee, TAMU.
- Member in TAMU Faculty Senate (Nov. 2015-Sept. 2016).
- Member of Bylaw Committee of TAMU Faculty Senate (Nov. 2015-Sept. 2016).
- Chair of Awards Committee, ECEN Program, TAMUQ: Aug. 2015-Present.
- Member of PIC, TAMUQ: Sept. 2018-Present.
- ECEN Program Interim Chair, TAMUQ: Sept. 2019-Dec. 2019.
- ECEN Program Chair, TAMUQ: Jan. 2020-Present.

SOCIETY MEMBERSHIPS:

Elected Member of IEEE Signal Processing Society (SPS) Biomedical Signal and Image Processing Technical Committee, Signal Processing Theory and Methods Technical Committee (SPTM TC) and Sensor Array and Multichannel Committee IEEE Fellow.
Membership in IEEE Signal Processing Society, IEEE Communications Society, IEEE Bioengineering 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, University of Minnesota, 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 2004-2012, etc.

STUDENT ADVISING:

Doctoral Students: I graduated 21 PhD students. Served as member in the committee of more than fifty PhD students.

List of Graduated PhD Students

1. • **Dr. Yan Wang**: graduated in December 2003. Thesis: "New Advances in Synchronization of Digital Communication Receivers." Currently: Senior Patent Agent at Nokia Research Center, San Diego, CA. Graduation 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.
2. • **Dr. Yik-Chung Wu:** graduated in Aug. 2005. Thesis: "Synchronization of space-time multi-antenna communication systems". Current Publication Record: 100+ IEEE journal papers, 9 book chapters, and 120+ conference papers. Yik-Chung is currently **a tenured associate professor at the University of Hong Kong**. He already won several prestigious research grants from the Hong-Kong National Research Foundation, won also three conference best paper awards and established a good track. He received a number of awards and patents, and is currently serving also as associate editor for IEEE Transactions on Signal Processing, IEEE Communications Letters, IEEE Trans. on Communications, Journal on Communications and Networks, etc. His website is http://www.eee.hku.hk/∼ycwu/
3. • **Dr. Kai Shi:** graduated in August 2005. Thesis: "New advances in synchronization of single and multi-carrier communication systems". Graduation publication record: 10 (ten) IEEE journal papers, and 9 conference papers. Kai Shi's first job: R&D engineer for Atheros Inc. and Qualcomm. Currently, Kai Shi is with Android Connectivity-Google, Mountain View, California.
4. • **Dr. Eddie Kyoung Noh:** graduated in August 2007. Eddie's first job R&D engineer for Samsung Electronics, Seoul, Korea. Currently, he is serving as Director of Samsung's Home IoT Division. Graduation publication record: 7 (seven) journal papers and 9 (nine) conference papers.
5. • **Dr. Ali-Reza Shapouri:** joined the group in June 2004 and graduated in August 2007. Ali-Reza's first job Research Scientist for Physics Optics Corp., Los Angeles, CA. Publication record: 1 journal paper and 10 conference papers.
6. • **Dr. Qasim Chaudhari:** came in Aug. 2005 with a MSc degree from USC, Los Angeles. He graduated the PhD Program in August 2008. Graduation publication record: a research monograph at Cambridge Univ. Press, 8 (eight) journal papers accepted, and 13 conference papers. Qasim's first job: **assistant professor** at Iqra University, Islamabad, Pakistan. Currently, Qasim is working as researcher at Melbourne University, Australia.
7. • **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 with the dissertation *Genomic Applications of Statistical Signal Processing*. Graduation publication Record: 6 (six) journal papers, and 8 conference papers. Current position: Quantitative Analytics Manager at Exxon Mobile, Houston and Adjunct Assistant Professor at Rice University, School of Engineering, Houston. TX.
8. • **Dr. Jaehan Lee** joined the group in Dec. 2006, and completed his PhD degree in August 2010. Graduation publication record: 3 journal papers published, and 3 conference papers. Current position: Senior Manager at SK Telecom, Seoul, South Korea.
9. • PhD Student **Yi Zhou,** joined the group in Aug. 2004 with a MSc degree from Southeast Univ., China. Graduation date: December 2010. Gradua-

tion publication Record: 3 journal papers, 1 book chapter and 5 conference papers. Yi Zhou' first job: data analyst for CGG Veritas. Currently, Yi is serving as Senior Data Scientist at Ericsson, Plano, Texas,

10. • PhD Student: **Sangwoo Park** upon completing his MSc thesis defense in Dec. 2007, completed his PhD degree in Dec. 2012. Graduation publication record: 4 journal papers submitted, and 5 conference papers. Graduation date: Fall 2012 semester. Sangwoo is serving as Senior Principal Research Engineer at KT, Seoul, South Korea.

11. • PhD Student: **Sabit Ekin** joined the group in Aug. 2008, and completed his PhD degree in Dec. 2012. His PhD dissertation was entitled: *Random Subcarrier Allocation in OFDM-based Cognitive Radio Networks and Hyper Fading Channels*. Graduation publication record: 6 journal papers, and 9 conference papers. Graduation date: Fall 2012 semester. Sabit's first job Qualcomm, San Diego, CA, and then as assistant professor at OSU. Currently, Sabit's position is tenured associate professor at Texas A&M University in College Station.

12. • PhD Student: **Aitzaz Ahmad** joined the group in Aug. 2008, and defended his PhD thesis *Timing Synchronization and Node Localization in Wireless Sensor Networks: Efficient Estimation Approaches and Performance Bounds* in Dec. 2012. Graduation publication record: 4 journal papers and 7 conference papers. Graduation date: Fall 2012 semester. Aitzaz first job at Qualcomm, San Diego, CA. He is currently serving as Senior Applied Scientist at Amazon, Seattle, WA.

13. • PhD Student: **Fang-Han Hsu** joined the group in Aug. 2009, and defended successfully his PhD thesis *Copy Number and Gene Expression: Stochastic Modeling and Therapeutic Intervention* in March 2013. Graduation date: Spring 2013 semester. Graduation publication record: 7 journal papers, and 7 conference papers. Fang-Han's is serving as Applied Science Manager for Uber, San Francisco Bay Area.

14. • PhD Student: **Amina Noor** joined the group in Aug. 2008, and defended successfully her PhD thesis *Efficient and robust algorithms for statistical inference in gene regulatory networks* in October 2013. Graduation publication record: 6 journal papers and 9 conference papers. Graduation date: Fall 2013 semester. First position: Postdoc at the University of California at San Diego - Center of Genomics. Currently, data scientist at Meta Reality Labs.

15. • PhD Student: **Bilal Wajid** joined the group in Nov. 2009, and graduated in Summer 2015. Graduation publication record: 5 journal paper submissions, 3 journal papers accepted, and 8 conference papers. Bilal's first (and current) position: assistant professor at the University of Lahore, Pakistan.

16. • PhD Student: **Ali Riza Ekti** joined the group in Jan. 2010, and graduated in Summer 2015. Graduation publication record: 4 journal papers published, 2 journal papers submitted and 5 conference papers. Ali's first position: assistant professor at Baliksehir University, Turkey. Currently, Ali is serving as senior R&D staff member at Oak Ridge National Lab and as Associate Professor at University Tennessee-Bredesen Center.

17. • PhD Student: **Marwa Qaraqe** joined the group in Sept. 2012, and defended successfully her PhD dissertation *Epileptic Seizure Onset Detection Algorithms* on January 19, 2016. Graduation publication record: include 5 journal papers, 1 submitted journal paper and 20 conference papers. Graduation date: Spring 2016. Marwa is currently an associate professor at HBKU, Doha, Qatar.

18. • PhD Student: **Xu Wang** joined the group in Sept. 2012 and graduated in Aug. 2017. He is serving as Senior Data Science manager for LeanTaaS, San Francisco Bay Area. Graduation publication record: 4 journal papers, and 8 conference papers.

19. • PhD Student: **Mustafa Alshawaqfeh** joined the group in Sept. 2012 and graduated in May 2017. He is currently working as an associate professor at German-Jordanian University in Amman, Jordan. Graduation publication record: 7 journal papers and 10 conference papers.

20. • PhD Student: **Osman Boyaci** joined the group in Oct. 2018 and graduated in Aug. 2022. He is currently working as senior engineer at Intel, Portland, Oregon. Graduation publication record: 4 journal papers, 4 conference papers.

21. • PhD Student: **Abdulrahman Takiddin** joined the group in Aug. 2020 and is planning to graduate by August 2023. Current publication record: 10+ journal papers, 5+ conference papers, 1 book chapter. Abdulrahman will join the State University of Florida, Tallahassee, as a tenure-track assistant professor, in August 2023.

22. • PhD Student: **Cihat Kececi** joined the group in Jan. 2020.

23. • PhD Student: **Abdullah Hayajneh** joined the group in Jan. 2021.

24. • PhD Student: **Md Rabiul Islam** joined the group in May 2022.

25. • PhD Student: **Shahriar Rahman** joined the group in Aug. 2022.

26. • PhD Student: **Mariam Elnour** will join the group in Aug. 2023.

27. • PhD Student: **Hasan Cetinkaya** will join the group in Aug. 2023.

List of Current and Former PostDoc Students:

1. • Dr. Parvez Shaik, Sept. 2022-Present.

2. • Dr. Sadia Din, Aug. 2022-Present.

3. • Dr. Mohammed Shafekh, Nov. 2019-June 2022. Currently, serving as lab coordinator at TAMUQ.

4. • Dr. Qian Gao, Mar. 2019-Feb. 2020. Dr. Qian joined Futurewei Technologies Inc., Chicago.

5. • Dr. Muhammad Ismail, Dec. 2013-Aug. 2019. Currently, Dr. Ismail is serving as an associate professor at TTU.

6. • Dr. Rachad Atat, Jan. 2018-Present.

7. • Dr. Mustafa Alshawaqfeh, May 2017-Sept. 2017. Currently, Dr. Alshawaqfeh is an associate professor at the German-Jordanian University in Amman, Jordan.

8. • Dr. Osman Boyaci, Sept. 2018-Jul. 2019. Dr. Osman joined Intel, Portland, Oregon.

9. • Dr. Justin Kong, Mar. 2018-Feb. 2019. Dr. Justin joined the US Army Research Lab.

10. • Dr. Redha Radayeh, Jun. 2017-Dec. 2017. Starting with Jan. 2018, Dr. Radayeh assumed a position of associate professor at TAMU-Commerce.

11. • Dr. Qammer Abbasi, 2013-2015. Currently, Dr. Abbasi is a chaired professor at the University of Glasgow, UK.

12. • Dr. Muhammad Z. Shakir, 2012-2015. Currently, Dr. Shakir is a Professor at the University of West Scotland, UK.

13. • Dr. Jansung Kim, 2009-2011. In 2011, Dr. Kim is employed by a company in Houston.

<u>Masters Students:</u> I graduated 16 MSc students.

1. • **Ilkay Sari:** graduated in August 2006. Thesis: "Joint Synchronization of Clock Phase Offset, Skew and Drift in Reference Broadcast Synchronization (RBS) Protocol." First job: Schlumberger, R&D Center, Sugar Land, TX. Recent job: FPGA IP Software Architect, Intel, San Jose.
2. • **Jason Gardner:** graduated in May 2003. Thesis: "Novel Wrapper Algorithms for High Dimensionality Gene Space Reduction." First job: engineer with Schlumberger, Sugar Land, TX. Currently, Electrical Engineer at Reliable Robotics Corporation, Houston, TX.
3. • **Pradeep Kiran Sarvepalli:** graduated in May 2003. Thesis: "Non-data aided synchronization of digital receivers." Pradeep defended his PhD degree in the CS Dept., TAMU, and currently holds the position of **associate professor at the Indian Institute of Technology**, Madras, India.

4. • **Flaviu Panduru:** graduated in August 2004. Thesis: "Performance bounds and synchronization algorithms for multi-antenna communications systems". At present, Flaviu is working as Senior Performance & Planning Engineer for T-Mobile, Seattle. Publication record: 1 journal paper.
5. • **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.
6. • **Sang Woo Park** defended successfully his MSc thesis in December 2008. Publication record: 1 journal paper. First job, senior engineer with KT, South Korea.
7. • MSc student **Huseyin Peksen** joined the group in Summer 2006 and graduated in the Fall 2008 semester. Huseyin is currently working as Technology Support Services Country Sales Leader - IBM, Istanbul, Turkey.
8. • MSc student **Sawin Saibua** joined the group in Summer 2009 and graduated in Summer 2010. Currently, Sawin is with True Digital Group, Bangkok, Thailand.
9. • MSc student **Mohammad Muneer** joined the group in Summer 2008 and graduated in Fall 2009. Mohammad is serving as Principal Product Manager at Verizon, Seattle.
10. • MSc student **Amina Noor** joined the group in Summer 2008 and graduated in Summer 2010 with a thesis dealing with *Inference of Gene Regulatory Networks*. Amina completed also her PhD thesis under my supervision. First job: Postdoc at UC-San Diego. Currenty, with Meta.
11. • MSc Student: **Kwadwo Agyepong** joined the group in Summer 2006. I succeeded to obtain for Kwadwo a research assistantship under the program **Pathways to Doctorate**, sponsored by the Dean's Office. Graduation date: August 2012. Kwadwo worked in the meantime for a number of companies. Therefore, his graduation date was delayed. Current Publication Record: 1 Journal paper, and 2 conference papers. Kwadwo's thesis dealt with *Detection of Periodic Gene Expression Profiles*.
12. • MSc Student: **Marwa Qaraqe** joined the group in Fall 2010, and graduated during Spring 2012 semester. Marwa completed her PhD thesis under my supervision, on a topic dealing with the *Prediction of the Onset of Seizures in Epileptic Patients.*. She is currently an associate professor at HBKU.
13. • MSc Student: **Meltem Apaydin** joined the group in Fall 2012, and graduated during Summer 2014 semester, with a thesis titled *Phase Retrieval of Sparse Signals from Magnitude Information*.
14. • MSc student: **Celal Bilgi** joined the group in Fall 2013, and completed his MSc thesis during Summer 2015 semester. He is working for a company in Turkey.
15. • MSc student: **Mahesh Naidu** joined the group in Jan. 2017 and completed his MSc thesis in May 2019. First job: Scientific Engineering Associate at Berkeley Lab, Berkeley, California.
16. • MSc student: **Arnav Kundu** completed his MSc thesis in Summer 2019. First job, senior machine learning engineer at Apple, San Francisco area.

Undergraduate Students: 1 honors student graduated

• 2015-Present: Each year I have supervised a capstone senior design project team consisting of 4 senior students

• **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.
• Supervised many undergraduates (40+) for their Capstone Senior Design Project. Each year about 4 seniors completed their Capstone Senior Design Project under my supervision.

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.

• Supervised a visiting MSc student from China: Xu Ding, Oct. 2011-Oct. 2012.
• Supervised two visiting professors from Korea: H. Jeon and I.K. Rhee, Sept. 2003-Febr. 2011.
• Supervised a visiting PhD student from China: Yangyang Zhang, Sept. 2017-Aug. 2018.

FUNDED RESEARCH PROJECTS:

1. PI: E. Serpedin, "An integrated cyclostationary framework for non-data aided synchronization of digital receivers," NSF Career Award. Amount: $ 300,000. Active: 03.01.2001-02.29.2006. Students supported: Yan Wang, Kai Shi, Guang Zeng, Pradeep K. Servapalli, and Flaviu Panduru.
2. PI: E. Serpedin, "Research Experience for Undergraduates," Supplement to the NSF Career Award. Amount: $ 18,000. Duration: 01.01.2004-02.29.2005. Undergraduate students supported: Tim Dureya, Jim Zorkani, and Kyle Lueckemeyer.
3. PI: E. Serpedin, TxTeC Support of $25,000 for Summer salary support. Duration 2002-2003.
4. co-PI: E. Serpedin (PI/co-PIs Profs. C. Georghiades, S. Miller, K. Narayanan, Z. Xiong), "TITF: The Texas A&M Advanced Wireless Communications Ini-

tiative," TITF Program-Texas A&M University. Amount: $ 486,000. Active: 09/01/2001-09/01/2004. Support for one student.

5. PI: E. Serpedin (co-PI Prof. A. Karsilayan): "ARP: Design of High Performance Architectures for Efficient Reception of Ultra Wideband Signals," Active: 01.15.2004-12.30.2005. Amount: $108,000. Support for two students.
6. Senior Personnel: E. Serpedin: " NSF: Fellows Integrate Science/Math in Rural Middle Schools," PI/co-Pis: Professors L. Johnson, W. Klemm, J. Kracht, R. Miranda, and J. Lindner. NSF. Amount: $ 500,000.
7. Senior Personnel: E. Serpedin: "NSF: REU SITE-Electrical Engineering Research Applications in Homeland Security," PI/co-PIs: Professors: K. Butler-Purry, D. Kundur, N. Reddy, P. Hemmer, T. Zourntos. NSF. Amout: $ 500,000.
8. PI: E. Serpedin: Research Gift from The Croucher Foundation, Hong Kong. Support for a PhD student for a period of 3 years. Amount: $100,000. Duration 2002-2005.
9. PI: E. Serpedin: Research Gift from AFOSR. Amount: $10,000. Duration: May 2004
10. PI: E. Serpedin, NIH-NCRI: Bioinformatics Trainee, June 2005- June2007. Amount: $75,000 per year. Total Amount Awarded: $ 150,000.
11. PI: E. Serpedin: Research Gift from NRC. Amount: $10,000. Duration: May 2005.
12. co-PI: E. Serpedin, (PI: E. Dougherty, A. Datta, Z. Xiong), "NSF: A Systems Approach to Genomic Signal Processing: From Signal Extraction to Regulatory Intervention," 2005-2008, Amount: $ 790,000.
13. PI: E. Serpedin, "Synchronization of Wireless Airborne Networks," Sponsor: State University of New York at Albany, Duration: 09.01.06-12.31.06. Amount $ 20,000.
14. PI: E. Serpedin, "Pathways to Doctorate" offered by Dean's Office to direct the graduate research work of PhD student Kwadwo Ajepong. Amount: $ 35,000. Duration: Sept. 2006-Dec. 2007.
15. co-PI: E. Serpedin, "Sensors Technical Thurst", Clarkson Aerospace Inc., Duration: Nov. 2006-Aug. 2008. Amount: $30,000.
16. PI: E. Serpedin, " Design of Efficient Synchronization Protocols for Wireless Airborne Networks," Air Force Research Laboratory (AFRL), Amount: $65,000. Duration: February 1, 2007-January 30, 2008.
17. co-PI: E. Serpedin, (PI: K. Qaraqe, co-PI: Z. Xiong), "Scalable wireless multimedia in Qatar (and the rest of the world)," QNRF, March 2008-Febr. 2011, Amount: $615,000. Pro-rated: $225,000.
18. co-PI: E. Serpedin, (PI: K. Qaraqe, co-PIs: M.S. Alouini, J. Boutros, H. Alnuweri), "Efficient Technologies for the Deployment of 4-G Telecommunications Systems," Q-Tel, September 2008-March 2011, Amount: $ 1,300,000. Pro-rated: $160,000.
19. PI: E. Serpedin, "High performance synchronization algorithms for wireless computer networks," AFRL, Rome, NY. Amount $ 40,000. Project Duration July 2009-January 2010.
20. PI: E. Serpedin, "Efficient signal processing algorithms for inference of gene

regulatory networks," NSF, Amount $ 313,000. Projected Duration September 2009-August 2012. This single-investigator project is funded NSF for a period of 3 years.

21. co-PI: E. Serpedin, "Assessing the Genomic Signature of Breast Cancer in Qatar," QNRF-NPRP, Amount $ 1,075,000. Projected Duration September 2010-August 2013. Pro-rated: 275, 000.
22. PI: E. Serpedin, "Sparsity-Aware Spectrum Cartography for Cognitive Networks," QNRF-NPRP, Amount $ 1,050,000. Projected Duration September 2010-August 2013. Pro-rated: 600, 000.
23. PI: E. Serpedin, "Enabling Interference Tolerant Wireless Communication Networks: Principles of Synchronization, Channel Estimation and Coding," Amount $ 1,050,000. Projected Duration January 2012-December 2014. Pro-rated: 600,000.
24. PI: E. Serpedin, NSF: Aspects of the Interplay Between Information Theory and Signal Processing: Extremal Problems and Applications, Submitted December 2012. Awarded in May 2013. Duration July 1, 2013-June 30, 2016. Amount: $ 250,000.
25. PI: E. serpedin, Research Gift from QNRF. Awarded: Aug. 2013. Amount: $ 25,000.
26. PI: E. Serpedin, QNRF-NPRP: Channel modeling and optimized radio access design for in vivo wireless communication, Submitted December 2012 (awarded in May 2013). Duration: November 1, 2013-October 30, 2016. Amount: $ 1,047,000.
27. co-PI: E. Serpedin, TEES-TAMU: A systems biology approach to understand the role of microbiota and metabolites in inflammatory bowel disease (submitted Nov. 2013). Awarded: April 2014. Amount: $ 25,000.
28. PI: E. serpedin, Research Gift from QNRF. Awarded: Aug. 2014. Amount: $ 25,000.
29. PI: E. Serpedin, Research Gift: VISTA Univ Software Donation from Company WesternGeco LLC, Houston, TX (Schlumberger Petro-technical Services): value $ 300,000. Awarded: February 2015.
30. PI: K. Narayanan (co-PIs E. Serpedin, J. Silva-Martinez and A. Karsilayan): "Enhancing Radio-Frequency Spectrum Through Interference Resilient Cognitive Radio Systems: Design, Performance Analysis and Optimization," NSF: EARS: Enhancing Radio-Frequency Spectrum Through Interference Resilient Cognitive Radio, Amount: $ 440,000. Duration 4 years: November 1, 2015-October 30, 2019. Awarded: November 2015.
31. E. Serpedin (LPI): "NPRP 9-055-2-022: Hybrid AC/DC Islanded Micro-grids in Qatar: Planning, Operation, and Cyber Security". Amount: $ 700,000. Duration: 3 years November 1, 2016- October 30, 2019. Status: Awarded.
32. E. Serpedin (LPI): Computational Genomics Tools For Personalized Medicine, TAMUQ Proof-of-Concept Grant. Amount: $ 70,000. Duration: 1 year, July 2016-June 2017. Status: Awarded.
33. Ooredoo Research Gift: $ 40,000, April 2016.
34. M. Abdallah (LPI), E. Serpedin (PI: 2016-2017), K. Qaraqe, N. El-Dahrir and A. Tajer: A Signal Processing Framework for Secure Monitoring, Power-Line

Communications, and Energy Management in Energy Grids. Amount: US$ 1,000,000 (2014-2017).

35. M. Ismail (LPI), E. Serpedin (PI), Efficient Energy Management System with Integrated Cybersecurity Measurement in Qatars Smart Grid, Qatar National Research Fund NPRP10-1223-160045. Awarded in June 2017 for 3 years. A fund of 600,000 USD.

36. E. Serpedin (PI), O. Bouhali, and K. Davis, Efficient Detection of Cyber-Physical Attacks in Qatars Smart Grid via Deep Machine Learning. TAMUQ Responsive Research Seed Grants. Competition-based grant. Awarded 236,000 USD for two years: Jan. 2018 Dec. 2029.

37. E. Serpedin (PI), J. Ji and K. Qaraqe, "Engineering Wellbeing and Happiness for Self and Society", Competitive Teaching Grant offered by TAMUQ. Awarded 14,000 USD to develop a novel cross-disciplinary cross-EC course. Duration: Jul. 2017-Aug. 2018.

38. K. Davis, E. Serpedin, and T. Overbye, Deep Learning-based Detection of Stealth False Data Injection Attacks in Large-Scale Synthetic Power Grids. The proposal submitted to the National Science Foundation (NSF) in Nov. 2017, asked budget: 1,100,000 USD. Adwarded: 330,000 USD. Duration: Sept. 2018-Aug. 2021.

39. K. Qaraqe, E. Serpedin, A. Retnanto, M. Fadlelmula, S. Miller, and I. Alves, "Visible Light Communications for Downhole Monitoring Systems in Oil and Gas Industry," TAMUQ Responsive Research Seed Grants. Competition-based grant. Awarded 200,000 USD for two years: Jan. 2019 – Dec. 2020.

40. E. Serpedin, M. Ismail, M. Mahmoud, I. Shabaan, "Enabling Efficient Integration of Electric Vehicles In Qatars Smart Grid: Planning, Operation, and Cybersecurity," QNRF-NPRP, Jan. 2020-Dec. 2022. Awarded: 600,000 USD.

41. K. Qaraqe (LPI), E. Serpedin, A. Ghrayeb, M. Hasna, A. Gorcin, AR Ekti, H. Arslan, "Towards Intelligent Next Generation Wireless Systems: Multi-Dimensional Intelligent Sensing and Signal Identification, NPRP12S-0225-190152. Submitted March 2019. Awarded: 400,000 USD. Duration: 2020-2023. I asked to withdraw from this project.

42. E. Serpedin (PI) and K. Davis, "Efficient Integration of Electric Vehicles into the Power Grid of Qatar. TAMUQ Responsive Research Seed Grant. Competitive grant. Awarded 236,000 USD for two years: Jan. 2020 – Dec. 2021.

43. M. Shaqfeh, E. Serpedin (PI), M. Ismail and A. Boyaci, "Machine Learning-Based Design and Operation of Next Generation Software-Defined Heterogeneous Networks, QNRF-NPRP cycle 13, Sept. 2021-Aug. 2024. Awarded: 510,000 USD.

44. M. Stotland (LPI), E. Serpedin (PI) and M. Shaqfeh, "Development of Novel Machine Learning Applications for the Assessment of Congenital and Acquired Facial Deformity and Reconstructive Surgical Outcomes, QNRF-NPRP cycle 13, Sept. 2021-Aug. 2024. Awarded: 510,000 USD.

45. E. Serpedin (PI) and K. Davis, "Defense Strategies Against Joint Cascading Failures in Interconnected Smart Power Grids," TAMUQ, Febr. 2022-Febr. 2023, Awarded: $ 120,000.

46. E. Serpedin, Conference Grant Application: "Artificial Intelligence in Medicine", TAMUQ, Nov. 2022, Amount: $ 25,000.
47. M. Ismail (PI), K. Davis, E Serpedin (co-PI), T. Overbye, "Collaborative Research: SHIELD: Strategic Holistic Framework for Intrusion Prevention Using Multi-modal Data in Power Systems," NSF, Sept. 2022-Aug. 2025, Amount: $ 750,000.
48. M. Stotland (PI), E. Serpedin (co-PI), QNRF-CWSP, Artificial Intelligence in Medicine, Oct. 2021. Amount: $25,000.
49. E. Serpedin (PI), ECEN Faculty (co-PIs), "Artificial Intelligence-Driven Innovative and High Impact Engineering Solutions for Qatars Economy and Society," TAMUQ. May 2022-Dec. 2027, Amount: $ 3,600,000.

PENDING RESEARCH PROPOSALS:

1. R. Atat, M. Ismail and E. Serpedin, "Intrusion Detection, Localization, and Prevention Strategy in Water-Energy-Gas Nexus System Against Cyber- Physical Attacks," QRDI, Amount $ 739,000.
2. E. Serpedin, Q. Abbassi, A. A. Imran, M. Qaraqe, D. Althani, and M. Cardinale, "Transforming Health and Athletic Monitoring with Intelligent Reconfigurable Walls and AI-Enhanced Contactless Sensing," QRDI, Amount $ 739,000.

TEACHING:

Educational Development:

- Proposed and developed the new course ECEN 429: Machine Learning for Signal Processing.
- Developed a new textbook entitled *Mathematical Foundations for Signal Processing, Communications and Networks* for teaching the course ECEN 601. I used this new textbook for teaching ECEN 601 during the past four years. Also, I developed the Solution Manual and prepared a set of viewgraphs (slides) for the instructors who choose to adopt this 20-chapter textbook. This edited textbook has already been adopted for teaching by many universities in USA, Finland, Taiwan, Pakistan, Romania, China, Turkey.
- Developed from scratch the new course and lab materials for ECEN 482: Real-Time Digital Signal Processing class at TAMUQ. Involved in all the aspects pertaining to setting-up the Real-Time DSP Laboratory starting with the visits to TI, National Instruments, etc., to evaluate the best possible options for equipment purchasing and the development of all the materials (lab manual, simulation projects, homework assignments) necessary for teaching the course and laboratory of this class.
- Taught twice (during Fall 2015 and Fall 2016 semester, respectively) the course ECEN 601 remotely (although teaching this course was not part of this official teaching duties) from TAMU-Qatar to the students in College Station via a flipped-classroom approach. These efforts assumed video recording of all his lectures, storing them into eCampus to enable students access, and conducting seminar-style lectures in real-time in College Station where only applications, exercises and problems were solved by his TA.

- Developed the new course: ECEN 489 Biomedical Signal and Image Processing, Fall 2015 semester
- Developed the new course: ECEN 447 Digital Image Processing, Fall 2016
- Developed a new course: ELEN 689 Optimal Adaptive Signal Processing.
- Developed the course materials for the new course ECEN 489 Machine Learning for Electrical and Computer Engineering offered during Spring 2018 semester at TAMUQ.
- Participated in the development and teaching of the new multi-university and inter-disciplinary course "Wellbeing and Happiness for Self and Society" offered during Spring 2018 and Fall 2018 semesters across multi-universities in Education City, Doha, Qatar.
- Developed from scratch a completely new course ELEN 644: Discrete-time Systems (renamed Advanced Digital Signal Processing)
- Developed from scratch a completely new course ELEN 601 Linear Network Systems (renamed Mathematical Methods in Signal Processing),
- Developed the new course: ELEN 649: Pattern Recognition.
- Creation of the largest data base of references ($\sim$ 1,500) on nonlinear system identification: "A Bibliography on Nonlinear System Identification," Signal Processing, Elsevier, vol. 81, no. 3, March 2001, pp. 533-580. This reference represented one of the most downloaded papers from the journal Signal Processing in the year 2003.
- Together with my former PhD student Q. Chaudhari, I succeeded to complete the writing of the research monograph *Clock Synchronization for Wireless Sensor Networks: Parameter Estimation, Performance Benchmarks and Protocols,* Cambridge University Press, 2009, 260 pages.
- Creation of the largest database of references on cyclostationarity: "A Bibliography on Cyclostationary Signal Processing," Signal Processing, Elsevier, vol. 85, Issue 12, Dec. 2005, Pages 2233-2303.
- Participated in two NSF sponsored educational projects to teach and train undergraduate students in research activities.
- Received an NSF supplement grant to help introduce three undergraduate students in research activities.
- Received a grant from Texas Coordinating Board for Education to improve the science curriculum of a minority high-school "Harmony Science Academy", 5435 S. Braeswood, Houston, TX 77096, and to facilitate the training of a high-school teacher (Mr. Tewfik Eski) in electronics, telecommunications, and signal processing. During the Summer 2004, I designed several strategies to improve the science curriculum of this minority high-school and helped its high-school students to develop good projects for various science competitions.
- Served as a judge for the 2004 Undergraduate Summer Research Grant Poster Session.
- Teaching Improvement: During the period Dec. 1-2, 2000, I attended the Teaching Portfolio Workshop, organized by the Center for Teaching Excellence, Texas A&M University, in Del Lago Resort, Conroe, TX. During the

Summer of 1999, I attended also several local teaching workshops organized by the Center for Teaching Excellence.

PUBLICATIONS: (* shows current and former students)

Author or co-author of the following publications:

- 4 research monographs
- 1 edited textbook and its solution manual
- 17 book chapters
- 200 journal papers
- 300 conference papers
- 1 US patent

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, IBSN: 9780521764421, 260 pages (research monograph). (Chinese Edition 2012 ISBN-13 : 978-7560543833).
3. E. Serpedin, T. Chen, and R. Dinesh, *Mathematical Foundations for Signal Processing, Communications and Networks,* CRC Press/Francis & Taylor, 2012, 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, 2012.
5. M. Ismail, M. Shakir, E. Serpedin, and K. Qaraqe, *Green Heterogeneous Wireless Networks*, Wiley-IEEE Press, ISBN 978-1-119-08805-9, Oct. 2016.
6. Z.Y. Wu, M. Ismail, J. Kong, E. Serpedin and J. Wang, *Efficient Integration of 5G and Beyond Heterogeneous Networks*, Springer, ISBN 978-981-15-6937-1, DOI: 10.1007/978-981-15-6938-8, 2020.

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, "Time Synchronization for 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, "Multiusers carrier frequency offsets estimation in OFDMA uplink systems," book chapter in *Orthogonal Frequency Division Multiple Access: Fundamentals and Applications*, CRC Press, Taylor&Francis Group, 2009, ISBN-10: 1420088246.
4. J. Chen, Y.C. Wu*, T.S. Ng and E. Serpedin, "Training sequence design in multiuser OFDM systems," book chapter in *Orthogonal Frequency Division Multiple Access: Fundamentals and Applications*, CRC Press, Taylor&Francis Group, ISBN-10: 1420088246, 2010.
5. Y. Zhou*, Y.C. Wu*, E. Serpedin, and K. Qaraqe, "The Effects of Spatial Diversity on the Synchronization of MIMO-OFDM Systems," book chapter in *Orthogonal Frequency Division Multiplexing with Diversity for Future Wireless Systems*, BenTham Science Publishing, ed. K.N. Le, 2011, ISBN: 978-1-60805-546-3.

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, ISBN 1439817235.
9. M. Z. Shakir, H. Tabassum, K. Qaraqe, M.-S. Alouini, and E. Serpedin, "Green Heterogeneous Small-cell Networks," book chapter in Green Networking and Communications: ICT for Sustainability, (Eds. S. Khan. and J. L. Mauri), Auerbach Publications, Taylor & Francis Group, USA, 2013, ISBN 9781466568747.
10. Q. H. Abbasi, M. Qaraqe, E. Serpedin and A. Alomany, "Ultra wideband radio channel characterisation for body-centric wireless communication" book chapter in *Advances in Body-Centric Wireless Communication: Applications and State-of-the-art*, IET Digital Press, UK, 2016, ISBN: 978-1-84919-989-6.
11. X. Yang, S. Yang, Q. H. Abbasi, E. Serpedin and A. Ren, "Broadband Antennas," book chapter approved for publication in the book *Wideband, Multiband, and Smart Reconfigurable Antennas for Modern Wireless Communications,* IGI Global, 2015, ISBN-13: 978-1466686458.
12. A. Demir, Q. Abbasi, R. Gitlin, H. Arslan, E. Serpedin, "In Vivo Wireless Channel Modeling," book chapter in *Advances in Body-Centric Wireless Communication: Applications and state-of-the-art*, IET Press, 2016, ISBN: 978-1-84919-989-6.
13. M. Kashef, M. Ismail, M. Abdallah, K. Qaraqe, and E. Serpedin, "Visible light communications for energy efficient heterogeneous networks," book chapter in *Energy Management in Wireless Cellular and Adhoc Networks,* Springer, 2016, ISBN 3319275666, 10.1007/ $978-3-319-27568-013$.
14. A.B.T Sherif, M. Ismail, M. Mahmoud, K. Akkaya, E. Serpedin, K. Qaraqe, Privacy preserving power charging coordination scheme in the smart grid, *Transportation and Power Grid in Smart Cities: Communication Networks and Services*, Wiley, 2017, pp. 555-576. DOI: 10.1002/9781119360124.ch21.
15. M. Ismail, M. Kashef, E. Serpedin, and K. Qaraqe, Enabling green heterogeneous cellular networks via balanced dynamic planning, in *Wireless Information and Power Transfer: A New Paradigm for Green Communications,* Springer, ISBN 978-3-319-56668-9, pp. 323-358, July 2017.
16. M. Ismail, I. S. Bayram, K. Qaraqe, and E. Serpedin, "5G-Enhanced Smart Grid Services," book chapter in *Enabling 5G Communication System to Support Vertical Industries*, Editors: M. A. Imran, Y. Sambo and Q. H. Abbasi, Wiley, 2019. 10.1002/9781119515579.ch4.
17. M. Nabil, M. Mahmoud, M. Ismail, E. Serpedin, K. Qaraqe, "Deep Learning-based Detection of Electricity Theft Cyber-attacks in Smart Grid AMI Networks," in *Deep Learning Applications for Cyber Security*, Springer, 2019, pp. 73-102, DOI: $10.1007/\ 978-3-030-13057-24$.

Patents:

1. Q. Chaudhari, K. Qaraqe and E. Serpedin, "Cross Layer Time Synchroniza-

tion Scheme," US Patent Filled (Oct. 2013). Granted Dec. 3, 2019. Patent no. 10,498,474.

2. J. Suchodolski, M. AlShawaqfeh, B. Wajid, J. Lidbury, E. Serpedin, "A fecal dysbiosis index for assessment of gecal microbiota in dogs," Invention Disclosure (Filled, Nov. 2018). Invention to be licensed by IDEXX Laboratories, USA.

Journals:

1. C Keeci, M Shaqfeh, H Mbayed, E Serpedin, "Multi-Task and Transfer Learning for Federated Learning Applications," arXiv preprint arXiv:2207.08 147, IEEE Trans. on Emerging Topics in Computational Intelligence (submitted July 2022).
2. A. Hayajneh, M. Shaqfeh, E. Serpedin, M. Stotland, "Unsupervised Anomaly Appraisal of Cleft Faces Using a StyleGAN2-based Model Adaptation Technique," Plos One 18(8): e0288228., Aug. 2023, https://doi.org/10.1371/journal.pone.0288228.
3. R. Atat, M. Shabaan, M. Ismail and E. Serpedin, "Efficient UAV Paths Design for Post-Disaster Damage Assessment of Overhead Transmission Lines," IET Smart Grid, July 2023, https://doi.org/10.1049/stg2.12120.
4. A. Takiddin, M. Ismail, R. Atat, K. R. Davis and E. Serpedin, "Robust Graph Autoencoder-Based Detection of False Data Injection Attacks Against Data Poisoning in Smart Grids," in IEEE Transactions on Artificial Intelligence, doi: 10.1109/TAI.2023.3286831.
5. C Kececi, M. Shaqfeh, F Qahtani and E Serpedin, "Clustered Scheduling and Communication Pipelining For Efficient Resource Management Of Wireless Federated Learning", IEEE Internet of Things Journal, vol. 10, no. 15, pp. 13303-13316, 1 Aug.1, 2023, doi: 10.1109/JIOT.2023.3262620.
6. A. Takiddin, O. Boyaci, R. Atat, M. Ismail, E. Serpedin, "Generalized Graph Neural Network-Based Detection of False Data Injection Attacks in Smart Grids," IEEE Trans. on Emerging Topics in Computational Intelligence, vol. 7, no. 3, pp. 618-630, June 2023, doi: 10.1109/TETCI.2022.3232821.
7. M Alshawaqfeh, S Rababah, A Hayajneh, A Gharaibeh and E Serpedin, "MetaAnalyst: a user-friendly tool for metagenomic biomarker detection and phenotype classifcation," BMC Medical Research Methodology, (2022) 22:336, https://doi.org/10.1186/s12874-022-01812-5.
8. A. Takiddin, M. Ismail and E. Serpedin, "Robust Data-Driven Detection of Electricity Theft Adversarial Evasion Attacks in Smart Grids," in IEEE Transactions on Smart Grid, vol. 14, no. 1, pp. 663-676, Jan. 2023, doi: 10.1109/TSG.2022.3193989.
9. O. Boyaci, A. Umunnakwe, A. Sahu, M. R. Nariman, M. Ismail, K. Davis and E. Serpedin, "Graph Neural Networks Based Detection of Stealth False Data Injection Attacks in Smart Grids," in IEEE Systems Journal, vol. 16, no. 2, pp. 2946-2957, June 2022, doi: 10.1109/JSYST.2021.3109082.
10. A. Takiddin, M. Ismail, U. Zafar and E. Serpedin, "Deep Autoencoder-Based Anomaly Detection of Electricity Theft Cyberattacks in Smart Grids," in IEEE Systems Journal, vol. 16, no. 3, pp. 4106-4117, Sept. 2022, doi: 10.1109/JSYST.2021.3136683.
11. O. Boyaci, M. R. Narimani, K. R. Davis, M. Ismail, T. J. Overbye and E. Serpedin, "Joint Detection and Localization of Stealth False Data Injection Attacks in Smart Grids Using Graph Neural Networks," in IEEE

Transactions on Smart Grid, vol. 13, no. 1, pp. 807-819, Jan. 2022, doi: 10.1109/TSG.2021.3117977.

12. R. Atat, M. Ismail and E. Serpedin, "Limiting the Failure Impact of Interdependent Power-Communication Networks via Optimal Partitioning," in IEEE Transactions on Smart Grid, vol. 14, no. 1, pp. 732-745, Jan. 2023, doi: 10.1109/TSG.2022.3188648.
13. R. Atat, M. Ismail, S. S. Refaat, E. Serpedin and T. Overbye, "Cascading Failure Vulnerability Analysis in Interdependent Power Communication Networks," in IEEE Systems Journal, vol. 16, no. 3, pp. 3500-3511, Sept. 2022, doi: 10.1109/JSYST.2021.3128698.
14. A. Takiddin, M. Shaqfeh, O. Boyaci, E. Serpedin, and M.A. Stotland, "Toward a Universal Measure of Facial Difference Using Two Novel Machine Learning Models," Plastic and Reconstructive Surgery - Global Open; January 2022, Vol. 10, Issue 1, p e4034, doi: 10.1097/GOX.0000000000004034.
15. R. Atat, M. Ismail, S. S. Refaat, E. Serpedin and T. Overbye, "Cascading Failure Vulnerability Analysis in Interdependent Power Communication Networks," in IEEE Systems Journal, 2021, doi: 10.1109/JSYST.2021.3128698.
16. O. Boyaci, A. Umunnakwe, A. Sahu, M R Narimani, M Ismail, K R Davis, and E Serpedin, "Graph Neural Networks Based Detection of Stealth False Data Injection Attacks in Smart Grids," in IEEE Systems Journal, 2021, doi: 10.1109/JSYST.2021.3109082.
17. A. Takiddin, M. Ismail, U. Zafar and E. Serpedin, "Deep Autoencoder-Based Anomaly Detection of Electricity Theft Cyberattacks in Smart Grids," in IEEE Systems Journal, 2021, doi: 10.1109/JSYST.2021.3136683.
18. C. Keeci, M. Ismail and E. Serpedin, "Analysis of EV Charging Coordination Efficiency in Presence of Cheating Customers," in IEEE Access, vol. 9, pp. 153666-153677, 2021, doi: 10.1109/ACCESS.2021.3128399.
19. H. Abuella, M. Elamassie, M. Uysal, Z. Xu, E. Serpedin, K. Qaraqe and S. Ekin, "Hybrid RF/VLC Systems: A Comprehensive Survey on Network Topologies, Performance Analyses, Applications, and Future Directions," in IEEE Access, vol. 9, pp. 160402-160436, 2021, doi: 10.1109/ACCESS.2021.3129154.
20. A. Takiddin, M. Ismail, U. Zafar and E. Serpedin, "Robust Electricity Theft Detection Against Data Poisoning Attacks in Smart Grids," in IEEE Transactions on Smart Grid, vol. 12, no. 3, pp. 2675-2684, May 2021, doi: 10.1109/TSG.2020.3047864.
21. O. Boyaci, M. R. Narimani, K. R. Davis, M. Ismail, T. J. Overbye and E. Serpedin, "Joint Detection and Localization of Stealth False Data Injection Attacks in Smart Grids Using Graph Neural Networks," in IEEE Transactions on Smart Grid, vol. 13, no. 1, pp. 807-819, Jan. 2022, doi: 10.1109/TSG.2021.3117977.
22. A. Takiddin, M. Ismail, M. Nabil, M. M. E. A. Mahmoud and E. Serpedin, "Detecting Electricity Theft Cyber-Attacks in AMI Networks Using Deep Vector Embeddings," in IEEE Systems Journal, vol. 15, no. 3, pp. 4189-4198, Sept. 2021, doi: 10.1109/JSYST.2020.3030238.
23. Z. -Y. Wu, M. Ismail, E. Serpedin and J. Wang, "Efficient Prediction of Link Outage in Mobile Optical Wireless Communications," in IEEE Transactions on Wireless Communications, vol. 20, no. 2, pp. 882-896, Feb. 2021, doi: 10.1109/TWC.2020.3029029.

24. Z. -Y. Wu, M. Ismail, E. Serpedin and J. Wang, "Artificial Intelligence for Smart Resource Management in Multi-User Mobile Heterogeneous RF-Light Networks," in IEEE Wireless Communications, vol. 28, no. 4, pp. 152-158, August 2021, doi: 10.1109/MWC.001.2000424.

25. A. Kundu, A. Sahu, K. Davis and E. Serpedin, "A3D: Attention-based Autoencoder Anomaly Detector for False Data Injection Attacks," Power Systems Computation Conference (PSCC) 2020.

26. A. Takiddin, M. Ismail, M. Nabil, M. M. E. A. Mahmoud and E. Serpedin, "Detecting Electricity Theft Cyber-Attacks in AMI Networks Using Deep Vector Embeddings," in *IEEE Systems Journal*, doi: 10.1109/JSYST.2020.3030238, 2020.

27. R. Atat, M. Ismail, M. F. Shaaban, E. Serpedin, T. Overbye, "Stochastic Geometry-Based Model for Dynamic Allocation of Metering Equipment in Spatio-Temporal Expanding Power Grids," *IEEE Trans. on Smart Grid*, vol. 11, no. 3, pp. 2080-2091, May 2020, doi: 10.1109/TSG.2019.2947148.

28. Z. -Y. Wu, M. Ismail, J. Kong, E. Serpedin and J. Wang, "Channel Characterization and Realization of Mobile Optical Wireless Communications," in *IEEE Transactions on Communications*, vol. 68, no. 10, pp. 6426-6439, Oct. 2020, doi: 10.1109/TCOMM.2020.3009256.

29. Q. Gao, K. Qaraqe and E. Serpedin, "Rotated Color Shift Keying for Visible Light Communications With Signal-Dependent Noise," in *IEEE Communications Letters*, vol. 24, no. 4, pp. 844-848, April 2020, doi: 10.1109/LCOMM.2020.2967377.

30. Q. Gao, K. Qaraqe and E. Serpedin, "Improving the Modulation Designs for Visible Light Communications with Signal-Dependent Noise," in *IEEE Communications Magazine*, vol. 58, no. 5, pp. 26-32, May 2020, doi: 10.1109/MCOM.001.1900610.

31. M. Alshawaqfeh, A. Al Kawam, E. Serpedin and A. Datta, "Robust Recurrent CNV Detection in the Presence of Inter-Subject Variability," in *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, vol. 17, no. 3, pp. 1056-1067, 1 May-June 2020, doi: 10.1109/TCBB.2018.2878560.

32. R. Atat, M. Ismail, E. Serpedin and T. Overbye, "Dynamic Joint Allocation of EV Charging Stations and DGs in Spatio-Temporal Expanding Grids," in *IEEE Access*, vol. 8, pp. 7280-7294, 2020, doi: 10.1109/ACCESS.2019.2963860.

33. J. Kong, Z. Wu, M. Ismail, E. Serpedin and K. A. Qaraqe, "Q-Learning Based Two-Timescale Power Allocation for Multi-Homing Hybrid RF/VLC Networks," in *IEEE Wireless Communications Letters*, vol. 9, no. 4, pp. 443-447, April 2020, doi: 10.1109/LWC.2019.2958121.

34. Z. Wu, M. Ismail, E. Serpedin and J. Wang, "Data-Driven Link Assignment With QoS Guarantee in Mobile RF-Optical HetNet of Things," in *IEEE Internet of Things Journal*, vol. 7, no. 6, pp. 5088-5102, June 2020, doi: 10.1109/JIOT.2020.2975851.

35. M. Ismail, M. F. Shaaban, M. Naidu and E. Serpedin, "Deep Learning Detection of Electricity Theft Cyber-Attacks in Renewable Distributed Generation," in *IEEE Transactions on Smart Grid*, vol. 11, no. 4, pp. 3428-3437, July 2020, doi: 10.1109/TSG.2020.2973681.

36. A. Kundu, A. Sahu, E. Serpedin, and K. Davis, "A3D: Attention-based auto-encoder anomaly detector for false data injection attacks", *Electric Power Systems Research*, Elsevier, vol. 189, Dec. 2020, 106795. https://doi.org/10.1016/j.epsr.2020.106795. ISSN 0378-7796.

37. O. Boyaci, E. Serpedin, and M. A. Stotland, "Personalized quantification of facial normality: a machine learning approach," *Nature-Scientific Reports*, 2020 Dec 7; 10 (1): 21375. doi: 10.1038/s41598-020-78180-x. PMID: 33288815; PMCID: PMC7721909.

38. M. Nabil, M. Ismail, M. M. E. A. Mahmoud, W. Alasmary and E. Serpedin, "PPETD: Privacy-Preserving Electricity Theft Detection Scheme With Load Monitoring and Billing for AMI Networks," *IEEE Access*, vol. 7, pp. 96334-96348, 2019.

39. J. Kong, M. Ismail, E. Serpedin and K. A. Qaraqe, "Energy Efficient Optimization of Base Station Intensities for Hybrid RF/VLC Networks," *IEEE Transactions on Wireless Communications*, vol. 18, no. 8, pp. 4171-4183, Aug. 2019.

40. Osorio D, Yu X, Yu P, Serpedin E, Cai JJ., "Single-cell RNA sequencing of a European and an African lymphoblastoid cell line.," Nature-Scientific Data, 2019 Jul 4; 6(1):112. doi: 10.1038/s41597-019-0116-4.

41. E. Serpedin, A. Ekti, A. Boyaci, M. Imran, M. Ali Aydin, M.Ali and S. Yarkan, (2019). "The advances of fronthaul and backhaul communication for 5G and beyond." (editorial), *Physical Communication*, 36. 100819. 10.1016/j.phycom.2019.100819.

42. L. N. Aljihmani, L. Alic, K. Qaraqe, E. Serpedin, B. Mansoor, Y. Boudjem, Z. M. Hijazi, "Magnesium-based biodegradable stent materials: Review of reviews," *Journal of Bio- and Tribo-Corrosion*, Springer, 5, 26 (2019) doi:10.1007/s40735-019-0216-x.

43. D. Osorio, X. Yu, Y. Zhong, G. Li, P. Yu, E. Serpedin, JZ Huang, JJ. Cai, "Single-Cell Expression Variability Implies Cell Function," Cells. 2019 Dec 19; 9(1). pii: E14. doi: 10.3390/cells9010014.

44. M. Shaaban, M. Sayed, M. Ismail, E. Serpedin and K. Qaraqe, "Joint Planning of Smart EV Charging Stations and DGs in Eco-friendly Remote Hybrid Microgrids," *IEEE Transactions on Smart Grid*, vol. 10, no. 5, pp.: 5819 - 5830, 2019.

45. Q. Gao, S. Hu, C. Gong, E. Serpedin, K. Qaraqe and Z. Xu, "Distance-Range-Oriented Constellation Design for VLC-SCMA Downlink With Signal-Dependent Noise," in *IEEE Communications Letters*, vol. 23, no. 3, pp. 434-437, March 2019, doi: 10.1109/LCOMM.2019.2892122.

46. H.-B. Kong, S. Ekin, E. Serpedin, and K. Qaraqe, "Uplink Capacity in Underlay Random Access OFDM-Based Cognitive Radio Networks," Eurasip Journal on Wireless Communications and Networking, 2019, 22 (2019) doi: 10.1186 /s13638-019-1339-y.

47. M. Alshawaqfeh, A. Al Kawam, E. Serpedin, A. Datta, "Robust Recurrent CNV Detection in the Presence of Inter-Subject Variability," *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, (Early Access), DOI: 10.1109/ TCBB.2018.2878560, Oct. 2018.

48. M. Mahmoud, K. Rabieh, A. Sherif, E. Oriero, M. Ismail, K. Qaraqe, E. Serpedin, "Privacy-Preserving Fine-Grained Data Retrieval Schemes For Mobile

Social Networks," *IEEE Transactions on Dependable and Secure Computing,* vol. 15, no. 5, 2019.

49. S. Mohamed, M. Shaaban, M. Ismail, E. Serpedin, and K. Qaraqe, An efficient planning algorithm for hybrid remote microgrids, IEEE Trans. Sustainable Energy, vol. 10, no. 1, pp. 257 - 267, 2019.
50. Y. Zhang, R. Radayeh, E. Serpedin and J. Hu, "On Cooperative NOMA Relay Selection Under Nakagami-m Fading and Imperfect Channel Estimation," *Transactions on Emerging Telecommunications Technologies*, vol. 29, no. 12, Dec. 2018.
51. X. Wang, S. Ekin, E. Serpedin, "Joint Spectrum Sensing and Resource Allocation in Multi-Band-Multi-User Cognitive Radio Networks, *IEEE Trans on Communications*, Year: 2018, Volume: 66 , Issue: 8, Pages: 3281 - 3293.
52. A. Noor, A. Ahmad and E. Serpedin, "SparseNCA: Sparse Network Component Analysis for Recovering Transcription Factor Activities with Incomplete Prior Information," *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, Year: 2018, Volume: 15, Issue: 2, Pages: 387 - 395, DOI: 10.1109/ TCBB.2015.2495224.
53. M. AlShawaqfeh, Wajid B, Minamoto Y, Markel M, Lidbury JA, Steiner JM, Serpedin E, Suchodolski JS., "A dysbiosis index to assess microbial changes in fecal samples of dogs with chronic inflammatory enteropathy," FEMS Microbiol Ecol., 2017 Oct 11. doi: 10.1093/femsec/fix136. [Epub ahead of print] PMID: 29040443
54. M. Alshawaqfeh, Bashaireh A, Serpedin E, Suchodolski J., "Reliable Biomarker discovery from Metagenomic data via RegLRSD algorithm," BMC Bioinformatics, 2017 Jul 10;18 (1):328. doi: 10.1186/s12859-017-1738-1. PMID: 28693478
55. M. Alshawaqfeh, Serpedin E, Younes AB, "Inferring microbial interaction networks from metagenomic data using SgLV-EKF algorithm," BMC Genomics, 2017 Mar 27;18(Suppl 3):228. doi: 10.1186/s12864-017-3605-x. PMID: 28361680
56. M. Alshawaqfeh, Bashaireh A, Serpedin E, Suchodolski J., "Consistent metagenomic biomarker detection via robust PCA," Biology Direct, 2017 Jan 31; 12 (1):4. doi: 10.1186/s13062-017-0175-4. PMID: 28143486
57. Al Kawam, A., Alshawaqfeh, M., Cai, J., Serpedin, E., Datta A., Simulating variance heterogeneity in quantitative genome wide association studies. BMC Bioinformatics 19, 72 (2018) doi:10.1186/s12859-018-2061-1
58. AF Demir, Abbasi QH, Ankarali ZE, Alomainy A, Qaraqe K, Serpedin E, Arslan H, "Anatomical Region-Specific In Vivo Wireless Communication Channel Characterization," IEEE J Biomed Health Inform., 2017 Sep; 21(5):1254-1262. doi: 10.1109/JBHI.2016.2618890. Epub 2016 Oct 18. PMID: 27810839.
59. M. Wang, M. Ismail, R. Zhang, X. Shen, E. Serpedin, K. Qaraqe, "Spatio-Temporal Coordinated V2V Fast Charging Strategy for Mobile PEVs," IEEE Transactions on Smart Grid Year: 2018, Volume: 9, Issue: 3, PP. 1566 - 1579. DOI 10.1109/TSG.2016.2593667.
60. MZ Shakir, M. Ismail, X. Wang, K.A. Qaraqe, E. Serpedin, "From D2D to Ds2D: Prolonging the Battery Life of Mobile Devices via Ds2D Communications," IEEE Wireless Communications, Year: 2017, Volume: 24, Issue: 4 Pages: 55 - 63. DOI: 10.1109/MWC.2017.1600348. Impact Factor: 8.972.

61. Y. Zhang, J. Ge, E. Serpedin, "Performance Analysis of Non-Orthogonal Multiple Access for Downlink Networks with Antenna Selection Over Nakagamim Fading Channels," IEEE Transactions on Vehicular Technology Year: 2017, Volume: 66, Issue: 11. DOI 10.1109/TVT.2017.2756442.

62. M. Mahmoud, K. Rabieh, A. Sherif, E. Oriero, M. Ismail, K. Qaraqe, E. Serpedin, "Privacy-Preserving Fine-Grained Data Retrieval Schemes For Mobile Social Networks," IEEE Transactions on Dependable and Secure Computing Year: 2018, Volume: PP, Issue: 99.

63. Y. Zhang, J. Ge, and E. Serpedin, "Performance Analysis of a 5G Energy-Constrained Downlink Relaying Network With Non-Orthogonal Multiple Access", IEEE Trans. on Wireless Communications, Year: 2017, Volume: 16, Issue: 12, Dec. 2017, pp. 8333-8346.

64. Y. Zhang, J. Ge, and E. Serpedin, "On the Performance of a Non-orthogonal Multiple Access Technique for Downlink MIMO Cooperative Networks", Transactions on Emerging Telecommunications Technologies, Wiley, 2017; e3225. https://doi.org/10.1002/ett.3225.

65. M. Kashef, M. Ismail, E. Serpedin, and K. Qaraqe, Balanced dynamic planning in green heterogeneous cellular networks, *IEEE Journal on Selected Areas of Communications*, Series on Green Communications and Networking. Year: 2016, Volume: 34, Issue: 12 Pages: 3299 - 3312, DOI: 10.1109/ JSAC.2016.2624098. Impact Factor: 8.085.

66. A. Ekti, X. Wang, M. Ismail, E. Serpedin, and K. Qaraqe, "Joint User Association and Data Rate Allocation in Heterogeneous Wireless Networks" , *IEEE Trans. On Vehicular Technology,* Volume: 65, Issue: 9, Sept. 2016, pp. 7403 - 7414.

67. AF Demir, Z. Ankarali, QH Abbasi, Y Liu, E Serpedin, H Arslan, and RD Gitlin, "State of the Art of In Vivo Wireless Communication Channels", *IEEE Vehicular Technology Magazine,* Year: 2016, Volume: 11, Issue: 2, Pages: 32 - 42, DOI: 10.1109/ MVT.2016.2520492.

68. B. Wajid and E. Serpedin, "Do it yourself guide to genome assembly," *Briefings in Functional Genomics,* Oxford University Press, 2016 Jan; 15(1):1-9. doi: 10.1093/bfgp/elu042.

69. M. Alshawaqfeh, A. Bani Younes, E. Serpedin, 'Inferring Microbial Interaction Networks from Metagenomic Data Using SgLV-EKF Algorithm," *BMC Genomics*, 2016 Aug 22;17 Suppl 7:549. doi: 10.1186/s12864-016-2903-z. PMID: 27556419.

70. X. Wang and E. Serpedin, "An Overview on the Applications of Matrix Theory in Wireless Communications and Signal Processing," *Algorithms*, 2016, 9(4), 68; doi:10.3390/ a9040068.

71. M. Kashef, M. Ismail, M. Abdallah, K. Qaraqe, E. Serpedin, "Energy Efficient Resource Allocation for Mixed RF/VLC Heterogeneous Wireless Networks", *IEEE Journal on Selected Areas for Communications (015 JSAC Energy-Efficient Techniques for 5G Wireless Communication Systems special issue)* vol. 34, no. 4, pp. 883-893.

72. S. Park, E. Serpedin and K. Qaraqe, Correction to A Unifying Variational Perspective on Some Fundamental Information Theoretic Inequalities, *IEEE Transactions on Information Theory*, Year: 2016, Volume: 62, Issue: 7 Pages: 4356 - 4357, DOI: 10.1109/ TIT.2016.2568208

73. AF Demir, QH Abbasi, ZE Ankarali, K Qaraqe, E Serpedin, A Alomainy, and H Arslan, "Anatomical Region Specific In Vivo Wireless Channel Characterization", *IEEE Journal of Biomedical and Health Informatics*, Year: 2016, Volume: PP, Issue: 99 Pages: 1 - 1, DOI: 10.1109/JBHI.2016.2618890.

74. M. Wang, M. Ismail, R. Zhang, X. Shen, E. Serpedin, and K. Qaraqe, Spatio-temporal coordinated V2V fast charging strategy for mobile GEVs via price control, IEEE Trans. Smart Grid, available online: 21 March 2016. DOI: 10.1109/TSG.2016.2593667. Accepted for publication. Impact Factor: 6.645.

75. M. Kashef, M. Ismail, M. Abdallah, K. Qaraqe, and E. Serpedin, Energy Efficient Resource Allocation for Mixed RF/VLC Heterogeneous Wireless Networks, IEEE Journal on Selected Areas of Communications, vol. 34, no. 4, pp. 883-893, April 2016. DOI: 10.1109/JSAC.2016.2544618.

76. M. Qaraqe, M. Ismail, E. Serpedin, and Haneef Zulfi, Epileptic seizure onset detection based on EEG and ECG data fusion, Epilepsy and Behavior, Elsevier, vol. 58, pp. 48-60, Feb. 2016. DOI: 10.1016/j.yebeh.2016.02.039.

77. B. Wajid, MU Sohail, AR Ekti and E Serpedin, "A, C, G, T of genome assembly," *BioMed Research International,* 2016, ID 6329217. doi: 10.1155/2016/ 6329217. Epub 2016 May 10.

78. M. Alshawaqfeh, B. Wajid, M. Guard, Y. Minamoto, JA Lidbury, JM Steiner, E. Serpedin, JS. Suchodolski, "Development of a dysbiosis index to assess microbial changes in fecal samples of dogs with chronic enteropathy", *Journal of Veterinary Internal Medicine*, 2016 Jul-Aug; 30(4): 15201551. doi: 10.1111/jvim.13963

79. C. Ma, Sastry K.S., Flore M., Gehani S., Al-Bozom I., Feng Y., Serpedin E., Chouchane L., Chen Y., Hwang Y., "CrossLink: A novel method for cross-condition classification of cancer subtypes," *BMC Genomics*, 2016 17(Suppl 7):549, GICS-D-12-00099, DOI: 10.1186/ s12864-016-2903-z

80. M. Ismail, E. Serpedin, and K. Qaraqe, "Cooperation incentives and downlink radio resource allocation for green communications in a heterogeneous wireless environment," *IEEE Trans. Vehicular Communications,* 2016, vol. 65, no. 3, DOI: 10.1109/ TVT.2015.2409191.

81. X. Wang, M. Alshawaqfe, X. Dang, B. Wajid, A. Noor, M. Qaraqe, and E. Serpedin, "An overview of NCA-based algorithms for transcriptional regulatory network inference," *Microarrays,* vol. 4, no. 4, pp. 596-617, 2015, ISSN 2076-3905.

82. B. Wajid, E. Serpedin, M. Nounou, and H. Nounou, "MARAGAP - A Modular Approach to Reference Assisted Genome Assembly Pipeline", *International Journal Computational Biology and Drug Design,* Interscience Publishers, 8 (3), 226-250, 2015.

83. M. Ismail, W. Zhuang, E. Serpedin, and K. Qaraqe, "A Survey on Green Mobile Networking: From the Perspectives of Network Operators and Mobile Users," *IEEE Communications Surveys & Tutorials,* vol. 17, no. 3, pp. 1535-1556, 2015.

84. M. Wang, M. Ismail, X. Shen, E. Serpedin, and K. Qaraqe, "Spatial and temporal online charging/discharging coordination of mobile PEVs" , *IEEE Wireless Communications,* vol. 22, no. 1, 2015, DOI: 10.1109/ MWC.2015. 7054726.

85. L. Yang, K. Qaraqe, E. Serpedin, and X. Gao, "Performance Analysis of Two-Way Relaying Networks with the Nth Worst Relay Selection Over Various Fading Channels," *IEEE Trans. on Vehicular Technology,* vol. 64, no. 7, pp. 3321-3327, 2015.

86. M. Ismail, M. Kashef, E. Serpedin, and K. Qaraqe, "On balancing energy efficiency for network operators and mobile users in dynamic planning," *IEEE Communications Magazine, Green Communications and Computing Networks Series,* 2015, Volume: 53, Issue: 11, Pages: 158 - 165, DOI: 10.1109/ MCOM.2015.7321986.

87. M. Ismail, Amila T. Gamage, W. Zhuang, X. Shen, E. Serpedin, and K. Qaraqe, "Uplink decentralized joint bandwidth and power allocation for energy-efficient operation in a heterogeneous wireless medium", *IEEE Trans. Communications,* vol. 63, no. 4, pp. 1483-1495, 2015.

88. M. Marzban, M. Ismail, M. Abdallah, M. Khairy, K. Qaraqe, and E. Serpedin, "IDC interference-aware resource allocation for LTE/WLAN heterogeneous networks," *IEEE Wireless Communications Letters,* vol. 4, no. 6, pp. 581-584, 2015.

89. AR Ekti, M Shakir, E Serpedin, K Qaraqe and M Imran, "On the Traffic Offloading in Wi-Fi Supported Heterogeneous Wireless Networks," *Springer Journal of Signal Processing Systems-Special Issue for Ultra High Performance and High Efficiency in 5G Mobile Networks,* October 2015. , pp. 1-16, Online ISSN 1939-8115. DOI 10.1007/s11265-015-1064-7, Print ISSN 1939-8018.

90. Wang, X.; Jeske, D.; Serpedin, E. "An Overview of a Class of Clock Synchronization Algorithms for Wireless Sensor Networks: A Statistical Signal Processing Perspective." *Algorithms* 2015, 8, 590-620.

91. M. Qaraqe, M. Ismail, and E. Serpedin, "Band-sensitive seizure onset detection via CSP-enhanced EEG features," *Epilepsy and Behavior,* no. 50, pp. 77-87, 2015.

92. M. Z. Shakir, H. Tabassum, K. Qaraqe, E. Serpedin, and M.-S. Alouini, "Spectral and energy efficiency analysis of uplink heterogeneous network with cells on edge," *Physical Communications*, Elsevier Journal Special Issue on Heterogeneous Networks, Volume 13, Part B, December 2014, Pages 27-41.

93. M. Wang, M. Ismail, X. Shen, E. Serpedin, and K. Qaraqe, "Spatial and temporal online charging/discharging coordination of mobile PEVs," *IEEE Wireless Communications,* Year: 2015, Volume: 22, Issue: 1 Pages: 112 - 121, DOI: 10.1109/ MWC.2015.7054726.

94. L. Yang, K. Qaraqe, E. Serpedin, and X. Gao, "Performance Analysis of Two-Way Relaying Networks with the N^{th} Worst Relay Selection Over Various Fading Channels," *IEEE Trans. on Veh. Technology*, Year: 2015, Volume: 64, Issue: 7 Pages: 3321 - 3327, DOI: 10.1109/ TVT.2014.2352252.

95. M. Qaraqe, Abbasi, Q.H., Alomainy A., and Serpedin, E., "Experimental Evaluation of MIMO Capacity for Ultrawideband Body-Centric Wireless Propagation Channels," *IEEE Antennas and Wireless Propagation Letters*, vol. 13, 2014, pp. 495 - 498.

96. L. Yang, K. Qaraqe, E. Serpedin, S. Alouini, "Capacity analysis of spectrum sharing spatial multiplexing MIMO systems," *Physical Communications*, Elsevier, Volume 13, Part C, December 2014, Pages 109-119.

97. X. Wang, E. Serpedin, and K. Qaraqe, "A Variational Approach for Assessing the Capacity of a Memoryless Nonlinear MIMO Channel," *IEEE Communications Letters*, Volume: 18 , Issue: 8, 2014, pp. 1315 - 1318.

98. M.Z. Shahir, E. Serpedin etal., "Expanding Cellular Coverage via Small-Cell Deployment in Heterogeneous Networks: Spectral Efficiency and Backhaul Power Consumption Perspectives," *IEEE Communications Magazine*, Volume: 52, Issue: 6, DOI: 10.1109/MCOM.2014.6829956, 2014, pp.: 140 - 149.

99. M. Qaraqe*, M. Abdallah, E. Serpedin and M-S. Alouini, "Performance Analysis of Switch-Based Multiuser Scheduling Schemes with Adaptive Modulation in Spectrum Sharing Systems," *Mobile Communications and Wireless Computing-Wiley*, April 2014, DOI: 10.1002/wcm.2480.

100. B. Wajid and E. Serpedin, "Life sciences driven customized Linux distributions," *OA Bioinformatics*, 2014 Jan 18; 2(1):1.

101. Q. Abbasi, MU Rehman, X. Yang, A. Alomainy, K. Qaraqe and E. Serpedin, "Ultra Wideband Band-notched Flexible Antenna for Wearable Applications," *IEEE Antennas and Wireless Propagation Letters*, vol. 12, pp. 1606 - 1609, doi: 10.1109/LAWP.2013.2294214, Dec. 2013.

102. A. Noor*, A. Ahmad, E. Serpedin, M. Nounou and H. Nounou, "ROBNCA: Robust Network Component Analysis for Recovering Transcription Factor Activities," *Bioinformatics*, Oxford, 2013 Oct 1;29(19):2410-8. doi: 10.1093/bioinformatics/btt433. Epub Aug. 2013.

103. F. Hsu*, E. Dougherty, Y. Chen, and E. Serpedin, "Estimating conditional probabilities for the detection of unfavorable copy number alterations in targeted therapy," *IEEE Trans. on Biomedical Engineering* vol. 60, no. 10, October 2013 . Digital Object Identifier: 10.1109/TBME.2013.2266356

104. A. Ahmad, E. Serpedin, H. Nounou and M. Nounou, "Joint Node Localization and Time-Varying Clock Synchronization in Wireless Sensor Networks," *IEEE Transactions on Wireless Communications*, vol. 12, no. 10, Oct. 2013, pp. 5322-5333. DOI: 10.1109/TWC.2013.090413.130324.

105. S. Park*, E. Serpedin, and K. Qaraqe, "A Unifying Variational Perspective on Some Fundamental Information Theoretic Inequalities," *IEEE Trans. on Information Theory*, vol. 59, no. 11, 2013, pp. 7132-7148. DOI: 10.1109/TIT.2013.2274514.

106. A. Noor*, E. Serpedin, M. Nounou, and H. Nounou, "Reverse Engineering Sparse Gene Regulatory Networks using Cubature Kalman Filter and Compressed Sensing," *Advances in Bioinformatics,* vol. 2013, Article ID 205763, 11 pages, 2013. doi:10.1155/2013/205763.

107. D. Zennaro, A. Ahmad, L. Vangelista, E. Serpedin and H. Nounou, "Network-Wide Clock Synchronization via Message Passing with Exponentially Distributed Link Delays," *IEEE Trans. on Communications*, vol. 61, no. 5, May 2013, pp. 2012-2024. Digital Object Identifier: 10.1109/TCOMM.2013.021913.120595.

108. M. Nounou, H. Nounou, E. Serpedin, A. Datta, and Y. Huang, "Computational and Statistical Approaches for Modeling of Proteomic and Genomic Networks," (Editorial), *Advances in Bioinformatics*, Volume 2013, Article ID 561968, 2 pages. http://dx.doi.org/10.1155/2013/561968

109. M. Z. Shakir*, H. Tabassum, K. Qaraqe, E. Serpedin, M. A. Imran, and M.-S. Alouini, "Green heterogeneous small-cell networks: toward reducing the CO_2 emissions of mobile communications industry using uplink power adaptation," *IEEE Communications Magazine*, vol. 51, no. 6, June 2013.

110. A. Noor*, E. Serpedin, M. Nounou, and H. Nounou, "An Overview of the Statistical Methods for Inferring Gene Regulatory Networks and Protein-Protein Interaction Networks," *Advances in Bioinformatics*, Volume 2013 (2013), Article ID 953814, 12 pages. http://dx.doi.org/10.1155/2013/953814

111. L. Yang*, K. Qaraqe, E. Serpedin, M.S. Alouini, "Performance Analysis of Amplify-and-Forward Two-Way Relaying with Co-Channel Interference and Channel Estimation Error," *IEEE Trans. on Communications*, vol. 61, no. 6, June 2013, pp. 2221-2231.

112. L. Yang*, K. Qaraqe, E. Serpedin, M.S. Alouini, "Cognitive Radio Networks with Orthogonal Space-Time Block Coding and Multiuser Diversity," *IEEE Communications Letters*, vol. 17, no. 4, April 2013, pp. 685-688.

113. S. Ekin*, M. M. Abdallah, K. A. Qaraqe, and E. Serpedin, "A Study on Inter-cell Subcarrier Collisions in OFDM-Based Cognitive Radio Networks," *IEEE Trans. on Communications*, vol. 61, no. 5, May 2013, pp. 1695 - 1707.

114. Khalid A. Qaraqe, Sabit Ekin, Tarun Agarwal and Erchin Serpedin, "Performance Analysis of Cognitive Radio Multiple-Access Channels Over Dynamic Fading Environments," *Wireless Personal Communications*, February 2013, Volume 68, Issue 3, pp 10311045.

115. K. S. Agyepong*, F.-H. Hsu*, E. R. Dougherty, and E. Serpedin, "Spectral analysis on time-course expression data: detecting periodic genes using a real-valued iterative adaptive approach," *Advances in Bioinformatics*, Volume 2013 (2013), Article ID 171530, 10 pages. http://dx.doi.org/10.1155/2013/171530

116. B. Wajid* and E. Serpedin, "Optimal Reference Selection for Genome Assembly using Minimum Description Length Principle", *EURASIP Journal on Bioinformatics and Systems Biology,* Springer, 2012 (1):18.

117. L. Yang, K. Qaraqe, E. Serpedin, M. Alouini, "Performance Analysis of Distributed Beamforming in a Spectrum Sharing System," *IEEE Trans. on Vehicular Technology*, vol. 62, no. 4, April 2013, pp. 1655 - 1666.

118. F.H. Hsu*, E. Serpedin, Y. Chen and E. Dougherty, "Evaluating Dynamic Effects of Copy Number Alterations on Gene Expression Using a Single Transcription Model," *IEEE Trans. on Biomedical Engineering*, vol. 59, no. 10, pp. 2726-2736, Oct. 2012.

119. 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,* vol. 60, no. 9, pp. 4758 - 4774, Sept. 2012.

120. 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,* vol. 58, no. 7, pp. 4244 - 4260, July 2012.

121. A. Ekti*, S. Yarkan, K. A. Qaraqe, E. Serpedin, and O. Dobre, "Analysis of mobility impact on interference in cognitive radio networks", *Elsevier Physical Communication Journal*, Special Issue-Cognitive Radio: The Road for its Second Decade, July 2012.

122. S. Park*, E. Serpedin, and K. Qaraqe, "Gaussian Assumption: the Least Favorable but the Most Useful," *IEEE Signal Processing Magazine*, vol. 30, no. 3, May 2013, pp. 183-186, DOI: 10.1109/MSP.2013.2238691. **IEEE Signal Processing Magazine - Best Column Award for year 2018.**
123. S. Park, E. Serpedin, and K. Qaraqe, An alternative proof of an extremal inequality, Available online: arxiv.org/pdf/1201. 6681v5.pdf
124. S. Park*, E. Serpedin, and K. Qaraqe, "On the equivalence between Stein identity and de Bruijn identity," *IEEE Trans. On Information Theory,* vol. 58, no. 12, pp. 7045 - 7067, Dec. 2012.
125. FH Hsu*, Serpedin E, Hsiao TH, Bishop AJ, Dougherty ER, Chen Y, "Reducing confounding and suppression effects in TCGA data: an integrated analysis of chemotherapy response in ovarian cancer," *BMC Genomics*, 2012; 13 Suppl 6:S13. doi: 10.1186/1471-2164-13-S6-S13. Epub 2012 Oct 26.
126. 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,* vol. 9, no. 4, pp. 1203-1211, 2012.
127. 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.
128. B. Wajid* and E. Serpedin, "Review of General Algorithmic Features for Genome Assemblers for Next Generation Sequencers," *Genomics, Proteomics & Bioinformatics,* Elsevier, 2012 Apr; 10(2): 58-73. doi: 10.1016/j.gpb.2012.05.006. Epub 2012 Jun 9.
129. 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, pp. 272 - 280.
130. 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*, 2011, Wiley Online. DOI: 10.1002/wcm.1082.
131. 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.
132. 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.
133. 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, DOI 10.1007/s11277-011-0497-y.
134. 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.
135. 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, Article ID 132381, 8 pages.

136. 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.

137. 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.

138. W. Zhao*, E. Serpedin, and E. Dougherty, "Spectral Preprocessing for Clustering Time-Series Gene Expressions," *EURASIP Journal on Bioinformatics and Systems Biology,* Springer OA, Vol. 2009, Article ID 713248, 10 pages.

139. 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.

140. 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.

141. W. Zhao, E. Serpedin, E. Dougherty, "Identifying Cell Cycle Involved Genes By Combining Gene Expression Analysis and Prior Knowledge," *Eurasip Journal on Bioinformatics and Systems Biology,* Springer, Vol. 2009, Article ID 683463, 9 pages.

142. E. Serpedin, J. Garcia-Frias, Y. Huang, and U. Braga-Neto, "Applications of Signal Processing Techniques to Bioinformatics, Genomics, and Proteomics, (Editorial)" *Eurasip Journal on Bioinformatics and Systems Biology*, Springer, Vol. 2009, Article ID 250306.

143. H. Steendam, M. Ghogho, M. Luise, E. Panayirci, E. Serpedin, "Synchronization in Wireless Communications (Editorial)," *EURASIP Journal on Wireless Communications and Networking,* Springer, Vol. 2009, Article ID 568369, March 2009, doi:10.1155/2009/568369.

144. 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.

145. I. K. Rhee, J. Lee*, J. Kim*, E. Serpedin, and Yik-Chung Wu, "Clock Synchronization in Wireless Sensor Networks: An Overview," *Sensors Journal*, MDPI, Switzerland, 2009, 9, doi:10.3390/sensors90x0000x, ISSN 1424-8220.

146. 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.

147. 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,* Springer, vol. 2008, Article ID 136939, 14 pages, 2008. doi:10.1155/2008/136939, December 2008.

148. 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), pp. 1531-5878 (online), June 2008.

149. 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,* Springer, Vol. 2008, Article ID 769293, 8 pages.

150. 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,* Springer, Vol. 2008, Article ID 248747, 12 pages.

151. 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.

152. 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.

153. 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, Sept. 2008.

154. 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.

155. 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, Vol. 19 , Issue 3 (May 2009), Pages 504-520, 2009, ISSN: 1051-2004.

156. 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, pp. 1002-1016.

157. 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,* Springer, Vol. 2008, Article ID 219458, 6 pages.

158. 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.

159. E. Serpedin, H. Li, A. Dogandzic, H. Dai and P. Cotae, "Signal Processing Techniques for Wireless Sensor Networks (Editorial)," *EURASIP Journal on Advances in Signal Processing,* Springer, vol. 2008, Article ID 540176, 2008.

160. 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.

161. 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.

162. 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.

163. 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.

164. 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.

165. 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, pp. 729 - 734.

166. 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.

167. 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.

168. 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, pp. 358-368.

169. 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.

170. K. Shi* and E. Serpedin, "Fast Timing Recovery for Linearly and Nonlinearly Modulated Systems," *IEEE Trans. on Vehicular Technology,* Volume 54, Issue 6, Nov. 2005, pp. 2017 - 2023.

171. 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, pp. 2233-2303.

172. 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.

173. 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*, Vol. 4, Issue 6, Nov. 2005, pp. 2751 - 2763.

174. 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.

175. 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.

176. 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.

177. 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.

178. 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.

179. 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.

180. 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.

181. 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.

182. 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.

183. 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.

184. 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*, Springer, no. 13, pp. 1993-2001, Nov. 2004.

185. 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.

186. 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.

187. 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.

188. 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.

189. 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.

190. 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.

191. 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.
192. 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.
193. 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.
194. 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.
195. 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.
196. 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.
197. 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.
198. 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.
199. 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.
200. 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.
201. 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.
202. 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.
203. 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/Accepted/Under Review:

204. P. Shaik, S. Majhi, K. Garg, M. Ismail, E. Serpedin, "Performance of MIMO/TAS UAV based Multi-User systems with Outdated CSI," IEEE Transactions on Vehicular Technology (submitted Aug. 2023).

205. O. Boyaci, R. Narimani, K. Davis, E. Serpedin, "Cyberattack Mitigation in Large-Scale Smart Grids: Spatio-Temporal Graph Neural Network Approach," IEEE Transactions on Industrial Informatics, July 2022 (submitted).
206. S. Din, M. Qaraqe, O. Mourad, K. Qaraqe, and E. Serpedin, "ECG-based Cardiac Arrhythmias Detection through Ensemble Learning and Fusion of Deep Spatial-Temporal and Long-Range Dependency Features," Artificial Intelligence in Medicine (submitted), Apr. 2023.
207. S. Din, M. Qaraqe, O. Mourad, K. Qaraqe, and E. Serpedin, "EFNet: Ejection Fraction Prediction using 3D Residual and Transformer Modules in Cardiac Ultrasound Videos," BMC on Medical Imaging (submitted Jul. 2023).
208. Md Rabiul Islam, M. Qaraqe, K. Qaraqe, and E. Serpedin, "An Efficient CNN-LSTM and Attention-based Hybrid Model for Single-Lead ECG Arrhythmia Classification," IEEE Transactions on Measurement and Instrumentation, (submitted March 2023).
209. R. Atat, M. Ismail, and E. Serpedin, "Joint Cascade Vulnerability Assessment of Interdependent Power-Water Infrastructures", IEEE Systems Journal, (under review), July 2023.

Conferences:

1. R. Atat, K. Davis, M. Ismail, E Serpedin, "Large-Scale Cascading Failure Mitigation in Power Systems via Typed-Graphlets ," 2023 North American Innovative Smart Grid Technologies Conference - ISGT 2023, Washington DC, Jan. 2023, pp. 1-5, doi: 10.1109/ISGT51731.2023.10066436.
2. R. Atat, M. Ismail, E. Serpedin, "Cascading Failures Mitigation Strategy for Resilient Water Infrastructures", IFAC Word Congress 2023, Yokohama, Japan, July 2023 (accepted).
3. R. Atat, M. Ismail, E. Serpedin, "Graphon-based Synthetic Power System Model and its Application in System Risk Analysis," 9th IEEE International Smart Cities Conference (ISC2-2023), Sept. 2023.
4. P. Shaik, C. Kececi, K. Garg, E. Serpedin, "Performance Analysis of Satellite-UAV Relaying based Multi-User Systems with Outdated CSI," IEEE Balkan Communications Conference, July 2023 .
5. A. Takiddin, K. Davis, R. Atat, M. Ismail and E. Serpedin, "A Graph Neural Network Multi-task Learning-Based Approach for Detection and Localization of Cyberattacks in Smart Grids," ICASSP 2023.
6. A. Takiddin, K. Davis, R. Atat, M. Ismail and E. Serpedin, "Graph Autoencoder-Based Detection of Unseen False Data Injection Attacks in Smart Grids," IntelliSys2023, Amsterdam, Sept. 2023.
7. A Hayajneh, M Shaqfeh, E Serpedin, MA Stotland, "Unsupervised Anomaly Appraisal of Cleft Faces Using a StyleGAN2-based Model Adaptation Technique," arXiv preprint arXiv:2211.06659, CVPR 2024 (to be submitted).
8. A. Hayajneh, M Shaqfeh, E Serpedin, MA Stotland, "CleftGAN: Leveraging A Style-Based Generative Adversarial Network To Create New and Unique Cleft Lip Images," Plastic Surgery 2022 October 28 - 31, 2022, Boston, MA **Best Presentation Award**.
9. A. Hayajneh, M Shaqfeh, E Serpedin, MA Stotland, "Anomaly Detection And Appraisal Of Cleft Faces Using A Pixel-wise Machine Learning Technique," Plastic Surgery 2022 October 28 - 31, 2022, Boston, MA.

10. O. Boyaci, M. R. Narimani, K. Davis and E. Serpedin, "Cyberattack Detection in Large-Scale Smart Grids using Chebyshev Graph Convolutional Networks," ICEEE 2022, Alanya, Turkey, Mar. 2022.
11. R. Atat, M. Ismail and E. Serpedin, "Most Critical Nodes-Based Attack Strategies Comparison in Interdependent Power-Communication Networks," 2022 3rd International Conference on Smart Grid and Renewable Energy (SGRE), 2022, pp. 1-6, doi: 10.1109/SGRE53517.2022.9774057.
12. O. Boyaci, M. R. Narimani, K. Davis and E. Serpedin, "Generating Connected, Simple, and Realistic Cyber Graphs for Smart Grids," 2022 IEEE Texas Power and Energy Conference (TPEC), 2022, pp. 1-6, doi: 10.1109/TPEC54980.2022.9750688.
13. A. Takiddin, M. Shaqfeh, O. Boyaci, E. Serpedin and M. Stotland, "Gauging Facial Abnormality Using Haar-Cascade Object Detector," 2022 44th Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC), 2022, pp. 1448-1451, doi: 10.1109/EMBC48229.2022.9871337.
14. O. Boyaci, M. R. Narimani, K. Davis and E. Serpedin, "Spatio-Temporal Failure Propagation in Cyber-Physical Power Systems," 2022 3rd International Conference on Smart Grid and Renewable Energy (SGRE), 2022, pp. 1-6, doi: 10.1109/SGRE53517.2022.9774040. **Best Paper Award.**
15. A. Takiddin, M. Ismail and E. Serpedin, "Detection of Electricity Theft False Data Injection Attacks in Smart Grids," 2022 30th European Signal Processing Conference (EUSIPCO), 2022, pp. 1541-1545, doi: 10.23919/EUSIPCO55093.2022.9909779.
16. O. Boyaci, M. R. Narimani, K. Davis and E. Serpedin, "Cyberattack Detection in Large-Scale Smart Grids using Chebyshev Graph Convolutional Networks," 2022 9th International Conference on Electrical and Electronics Engineering (ICEEE), 2022, pp. 217-221, doi: 10.1109/ICEEE55327.2022.9772523.
17. R. Atat, M. Ismail, and E. Serpedin, "On the Impact of Control Center Allocation on Power-Communication Network Vulnerability," ISGT-Europe 2021 Conference -IEEE PES Innovative Smart Grid Technologies (ISGT) Europe 2021 Conference, Espoo, Finland, Oct. 2021.
18. O. Boyaci, M. Rasoul Narimani, R. Guthrie, K. Davis, E. Serpedin, "Spatio-Temporal Failure Propagation in Cyber-Physical Power Systems," 13th ACM/IEEE International Conference on Cyber-Physical Systems (ICCPS 2022) .
19. O. Boyaci, M. Rasoul Narimani, K. Davis, E. Serpedin, "Generating Connected, Simple, and Realistic Cyber Graphs for Smart Grids," TPEC 2022.
20. O. Boyaci, M. Rasoul Narimani, K. Davis, E. Serpedin, "Infinite Impulse Response Graph Neural Networks for Cyberattack Localization in Smart Grids," EUSIPCO 2022.
21. A. Takiddin, M. Shaqfeh, O. Boyaci, E. Serpedin and M. Stotland, "Gauging Facial Abnormality Using Haar-Cascade Object Detector," IEEE EMBC - The Engineering in Medicine and Biology Conference 2022.
22. O. Boyaci, M. Rasoul Narimani, K. Davis and E. Serpedin, "Spatio-Temporal Failure Propagation in Cyber-Physical Power Systems," SGRE 2022.
23. A. Takiddin, M. Ismail, U. Zafar and E. Serpedin, "Variational Auto-encoder-based Detection of Electricity Stealth Cyber-attacks in AMI Networks," 28th European Signal Processing Conference (EUSIPCO), 2021, pp. 1590-1594, doi: 10.23919/Eusipco47968.2020.9287764.

24. R. Atat, M. Ismail, S. S. Refaat and E. Serpedin, "On the Impact of Control Center Allocation on Power-Communication Network Vulnerability," 2021 IEEE PES Innovative Smart Grid Technologies Europe (ISGT Europe), 2021, pp. 1-6, doi: 10.1109/ISGTEurope52324.2021.9640203.
25. A. Takiddin, M. Ismail and E. Serpedin, "Robust Detection of Electricity Theft Against Evasion Attacks in Smart Grids," ICC 2021 - IEEE International Conference on Communications, 2021, pp. 1-6, doi: 10.1109/ICC42927 .2021.9500822.
26. A. Takiddin, M. Ismail, U. Zafar and E. Serpedin, "Deep Autoencoder-based Detection of Electricity Stealth Cyberattacks in AMI Networks," 2021 International Symposium on Signals, Circuits and Systems (ISSCS), 2021, pp. 1-6, doi: 10.1109/ISSCS52333.2021.9497376.
27. M. Shaqfeh, C. Kececi, F. Al-Qahtani and E. Serpedin, "Clustered Scheduling and Communication Pipelining For Efficient Federated Learning," *IEEE ICC 2021*, Oct. 2020 (submitted).
28. A. Takiddin, M. Ismail and E. Serpedin, "Robust Detection of Electricity Theft Against Evasion Attacks in Smart Grids," *IEEE ICC 2021*, Oct. 2020 (submitted).
29. A. Takiddin, M. Ismail, U. Zafar and E. Serpedin, "Variational Auto-encoder-based Detection of Electricity Stealth Cyber-attacks in AMI Networks," *2020 28th European Signal Processing Conference (EUSIPCO)*, Amsterdam, 2021, pp. 1590-1594, doi: 10.23919/Eusipco47968.2020.9287764.
30. R. Atat, M. Ismail and E. Serpedin, "Stochastic Geometry Planning of Electric Vehicles Charging Stations," *ICASSP 2020 - IEEE International Conference on Acoustics, Speech and Signal Processing*, Barcelona, Spain, 2020, pp. 3062-3066, doi: 10.1109/ICASSP40776.2020.9054228.
31. Z. -Y. Wu, M. Ismail and E. Serpedin, "Data-Driven Smart Handover in Mobile RF/Optical HetNets," *2020 IEEE 10th International Conference on Intelligent Systems (IS)*, Varna, Bulgaria, 2020, pp. 322-327, doi: 10.1109/IS 48319.2020.9199936, **Best Paper Award**.
32. R. Atat, M. Ismail, S. S. Refaat and E. Serpedin, "Stochastic Geometry Model for Interdependent Cyber-Physical Communication-Power Networks," *ICC 2020 - 2020 IEEE International Conference on Communications (ICC)*, Dublin, Ireland, 2020, pp. 1-6, doi: 10.1109/ICC40277.2020.9148873.
33. E. Serpedin, "Detection of Electricity Theft Cyber-attacks in Smart Power Grids using Machine Learning Algorithms", *International Conference on Imaging, Signal Processing and Communications (ICISPC 2020) / International Conference on Artificial Intelligence and Virtual Reality (AIVR 2020)* **1 hour - Keynote Speech**, Kumamoto, Japan, Oct. 2020.
34. E. Serpedin, "Applications of Signal Processing and Machine Learning Techniques in Bioinformatics and Systems Biology," *SIU 2020: IEEE International Conference on Signal Processing and Communications Applications*, Gaziantep, Turkey, Oct. 2020, **1 hour Invited Talk-Keynote Speech**.
35. M. Ismail and E. Serpedin, "Efficient Integration of RF-LiFi in 5G+ Heterogenous Networks," *Efficient Integration of RF-LiFi in 5G+ Heterogenous Networks*, FutureWei University Days Workshop , July 2020, Chicago, IL. **1 hour Invited Talk-Keynote Speech**.

36. E. Serpedin, "Enabling Efficient Integration of Electric Vehicles in Qatars Smart Grid: Planning, Operation, and Cybersecurity", *Qatar Transportation Electrification QNRF Stakeholders Gathering & Workshop*, Dec. 2020, (invited talk).

37. A. Kundu, A. Sahu, K. Davis, E. Serpedin, "Attention-Based Auto-Encoder Anomaly Detector for Power System Attack Detection," PSCC 2020.

38. M Nabil, O Boyaci, M Ismail, M Mahmoud, and E Serpedin, "Deep Learning-Based Electricity Theft Detection Models in Smart Grid AMI Networks, SIPPR 2019 Conference, Bangkok, Thailand, Dec. 2019.

39. E. Serpedin, "Applications of Signal Processing in Bioinformatics and Systems Biology," ICDSP 2019 Conference, **Plenary Talk**, Jeju, South Korea, Febr. 2019.

40. A. Kundu, A. Sahu, K. Davis, E. Serpedin, "Learning-Based Defense of False Data Injection Attacks in Power System State Estimation," *NAPS 2019: 2019 North American Power Symposium*, Wichita, KS.

41. Q. Gao, K. Qaraqe and E. Serpedin, "Bias Allocation and Precoding for Tricolor Visible Light Communications with Signal-dependent Noise," 25th Asia-Pacific Conference on Communications (APCC 2019), Ho Chi Minh city, Vietnam, November 5-8, 2019 (**Best Paper Award**).

42. Q Gao, S Ekin, K Qaraqe, E Serpedin, "Capacity Maximizing Power Allocation for Multi-Channel Visible Light Communications", IEEE International Smart Cities Conference, 2019, Casablanca, Morocco during October 14 17, 2019.

43. M. Nabil, O. Boyaci, M. Ismail, M. Mahmoud, and E. Serpedin, "Deep Electricity Theft Detection Models in Smart Grid AMI Networks," 2019 International Symposium on Signal, Image Processing and Pattern Recognition (SIPPR 2019), Bangkok, Thailand, 2019.

44. H. Kong, M. Ismail, E. Serpedin and K. A. Qaraqe, "Energy Efficient Optimization of Base Station Density for VLC Networks," ICC 2019 - 2019 IEEE International Conference on Communications (ICC), Shanghai, China, 2019, pp. 1-6. doi: 10.1109/ICC.2019.8762064 (**Best Paper Award: IEEE TCGCC Best Conference Paper Award**)

45. M. Nabil, M. Mahmoud, M. Ismail and E. Serpedin, "Deep Recurrent Electricity Theft Detection in AMI Networks with Evolutionary Hyper-Parameter Tuning," 2019 International Conference on Internet of Things (iThings) and IEEE Green Computing and Communications (GreenCom) and IEEE Cyber, Physical and Social Computing (CPSCom) and IEEE Smart Data (SmartData), Atlanta, GA, USA, July 2019.

46. F. Mazhar, B. Wajid, F. Anwar, N. Mazhar, M. K. AlShawaqfeh and E. Serpedin, "Prevalence and Accuracy Measures of Diagnostic Tests for Metabolic Syndrome in Multi-ethnic Groups," 2019 16th International Multi-Conference on Systems, Signals & Devices (SSD), Istanbul, Turkey, 2019, pp. 170-175.

47. R. Atat, R. S. Bradley and E. Serpedin, "Toward Solar Energy Harvesting for Small Cell Networks: Technology, Feasibility, and Challenges," 2019 5th Experiment International Conference (exp.at'19), Funchal (Madeira Island), Portugal, 2019, pp. 90-95. doi: 10.1109/EXPAT.2019.8876496.

48. M. Baza, M. Nabil, M. Ismail, M. Mahmoud, E. Serpedin and M. Ashiqur Rahman, "Blockchain-Based Charging Coordination Mechanism for Smart

Grid Energy Storage Units," 2019 IEEE International Conference on Blockchain (Blockchain), Atlanta, GA, USA, 2019, pp. 504-509.

49. R. Atat, M. Ismail and E. Serpedin, "Stochastic Geometry-based Model for Spatio-temporal Expanding Smart Grids," 2019 IEEE Innovative Smart Grid Technologies - Asia (ISGT Asia), Chengdu, China, 2019, pp. 457-462.
50. M. Nabil, M. Ismail, M. A. E. Mahmoud, E. Serpedin, and K. Qaraqe, "Deep Recurrent Electricity Theft Detection in AMI Networks with Evolutionary Hyper-parameter Tuning," IEEE WCNC 2019, Morroco, Marakesh.
51. Y. Zhang and E. Serpedin, "Outage probability analysis in a cooperative non-orthogonal multiple access relaying network," *IEEE DSP Conference: SiPS 2018*, Cape Town, South Africa, Oct. 2018.
52. X. Wang, S. Ekin, E. Serpedin, "Joint Decision of Sensing Threshold and Power Allocation in OFDM Cognitive Radio Networks," 2018 IEEE International Conference on Communications (ICC) -IEEE ICC 2018, Kansas City, MO, USA, May 2018.
53. M. AlShawaqfeh, E. Serpedin, and K. Qaraqe, "Robust Principal Component Analysis Based Biomarker Detection," International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2018), Trabzon, Turkey, July 23-27, 2018.
54. M. Ismail, E. Serpedin, K. Qaraqe, "Testbed of Advanced Metering Infrastructure for Load Monitoring, Control, and Detection of Data Integrity Cyber-attacks in Smart Grids," International Academic Conference on Engineering, Transport, IT and Artificial Intelligence, Austria, Vienna 2018 (IAC-ETITAI 2018).
55. M. Nabil, M. Ismail, M. Mahmoud, M. Shahin, K. Qaraqe, and E. Serpedin, Deep recurrent electricity theft detection in AMI networks with random tuning of hyper-parameters, 24th International Conference on Pattern Recognition, Beijing, China, Aug. 2018.
56. M. Alshawaqfeh, A. Al Kawam, E. Serpedin, "Robust Fussed Lasso Model for Recurrent Copy Number Variation Detection," 24th International Conference on Pattern Recognition, Beijing, China, Aug. 2018.
57. M. Ismail, M. Shahin, M. Shaaban, E. Serpedin, and K. Qaraqe, Efficient detection of electricity theft cyber attacks in AMI networks, IEEE WCNC 2018, Barcelona, Spain, April 2018.
58. A. Al Karam, M. Alshawaqfeh, J. Cai, E. Serpedin and A. Datta, "Simulating variance heterogeneity in quantitative genome wide association studies," ACM-BCB 2017 - Proceedings of the 8th ACM International Conference on Bioinformatics, Computational Biology, and Health Informatics, ACM, ISBN 9781450347228. 8th ACM International Conference on Bioinformatics, Computational Biology, and Health Informatics, ACM-BCB 2017 - Boston, United States.
59. X. Wang, S. Ekin, E. Serpedin, "Optimal resource allocation for downlink OFDM-Based cognitive radio networks," 2017 International Symposium on Networks, Computers and Communications (ISNCC), Morroco, Tunis, Year: 2017.
60. Ahmad Al Kawam, James Cai, Mustafa Alshawaqfeh, Erchin Serpedin, Aniruddha Datta, "Simulating Variance Heterogeneity Genome Wide Association Studies Texas Genetics Society 44th Annual Meeting," April 27-29, 2017, George Bush Presidential Library and Museum College Station, TX.

61. M. Alshawaqfeh, A. Bashaire, M. Ismail, J. Suchodolski and E. Serpedin, "Reliable Detection of Biomarkers from Metagenomics Data, Sidras 3rd Annual Functional Genomics: Towards Precision Medicine, Dec. 11-13, 2017, (Poster Presentation), Doha, Qatar.
62. M. Alshawaqfeh and E. Serpedin, "Robust Fused-Lasso Approach for Copy Number Detection from Noisy aCGH Signals," Second International Computational Science and Engineering Conference (ICSEC17), Doha, Qatar, October 23-24, 2017.
63. X. Wang, S. Ekin, K. Qaraqe, E. Serpedin, "Fair resource allocation in downlink OFDM-based cognitive radio networks," 2017 International Symposium on Signals, Circuits and Systems (ISSCS), Iasi, Romania, Year: 2017.
64. M. Alshawaqfeh, A. Al Kawam, E. Serpedin, "Sparse-low rank matrix decomposition framework for identifying potential biomarkers for inflammatory bowel disease," 2017 25th European Signal Processing Conference (EUSIPCO), Kos, Greece, Year: 2017.
65. A. Bashaireh, M. Alshawaqfeh and E. Serpedin, "A Linear Algebra Approach for Reliable Biomarker Discovery from Metagenomic Data," Recent Trends in Pure and Applied Mathematics, Alba Iulia, Romania, 31 July - 4 August, 2017.
66. M. Alshawaqfeh, A. Bashaireh, E. Serpedin and J. Suchodolski, "Applications of Signal Processing and Machine Learning Techniques to Metagenomics," 8th International Conference on CIRCUITS, SYSTEMS, CONTROL, SIGNALS (CSCS17), Brasov, Romania June 27-29, 2017, **(Plenary Talk)**.
67. E. Serpedin, "Green Heterogeneous Wireless Networks," 16th International Conference on Automation & Information (ICAI '17), Brasov, Romania, June 2017, **(Plenary Talk)**.
68. M. Alshawaqfeh, A. Bashaireh, E. Serpedin and J. Suchodolski, "A Robust PCA-Based Algorithm for Metagenomic Biomarker Detection," AMiTaNS'17: Euro-American Consortium for Promotion of the Application of Mathematics in Technical and Natural Sciences, Albena, Bulgaria, June 21-26, 2017.
69. X. Wang, S. Ekin, E. Serpedin and K. Qaraqe, "Resource Allocation in Cognitive Communication Systems via Convex Optimization," AMiTaNS'17: Euro-American Consortium for Promotion of the Application of Mathematics in Technical and Natural Sciences, Albena, Bulgaria, June 21-26, 2017.
70. X. Wang, S. Ekin and E. Serpedin, "Joint Optimization of User Assignment and Resource Allocation in Heterogeneous Wireless Networks," ICDSP 2017, Kuala Lumpur, Malayesia, April 2017.
71. E. Serpedin, "Timing Synchronization and Node Localization in Wireless Sensor Networks," ICDSP 2017, Kuala Lumpur, Malayesia, April 2017 (**Keynote speech**).
72. A. Alsharif, S. Tonyali, M. Mahmoud, K. Akkaya, M. Ismail, E. Serpedin, "Performance Analysis of Certificate Renewal Scheme for AMI Networks," 2017 International Conference on Digital Signal Processing (ICDSP 2017) April 17-19, 2017, Kuala Lumpur, Malaysia.
73. M. Alshawaqfeh, A. Bashaire, E. Serpedin and J. Suchodolski, "A Robust PCA Algorithm for Metagenomic Biomarker Detection," International Conference on Systems and Synthetic Biology, Munich, Germany, July 2017.

74. E. Serpedin, "Green Heterogeneous Communications," ITELCON 2017: International Conference on Telecommunications, Istanbul, Turkey, Dec. 28-29, 2017 (**keynote speech**).

75. M. Qaraqe, M. Ismail, and E. Serpedin, "Combined Matching Pursuit and Wigner Ville Distribution Analysis for the Discrimination of Ictal HRV," *European Association for Signal Processing (EURASIP),* 2016, pp. 2045 - 2049, DOI: 10.1109/ EUSIPCO.2016.7760608.

76. M. Alshawaqfeh, B. Wajid, M. Guard, Y. Minamoto, JA Lidbury, JM Steiner, E. Serpedin, JS. Suchodolski, "Development of a dysbiosis index to assess microbial changes in fecal samples of dogs with chronic enteropathy", 2016 ACVIM Forum Research, Denver, Colorado, June 9 11, 2016.

77. M. Ismail, E. Serpedin, and K. Qaraqe, "Green Heterogeneous Wireless Networks," Tutorial - IEEE VTC 2016-Fall.

78. M. Alshawaqfeh, A. B. Younes, E. Serpedin, "Inferring Microbial Interaction Network Using a Stochastic Generalized LotkaVolterra Model," ECCB 2016-European Conference in Computational Biology, The Hague, Netherlands, Sept. 2016.

79. M. Ismail, M. Z. Shakir, E. Serpedin, and K. Qaraqe, Green heterogeneous wireless networks, IEEE WCNC 2016, April 2016 (**Tutorial Talk**).

80. M. Kashef, M. Ismail, E. Serpedin, and K. Qaraqe, Impact of dynamic planning on uplink service quality in heterogeneous cellular networks, *IEEE VTC Fall 2016*, Sept. 2016, Montreal, Canada.

81. M. Alshawaqfeh, E. Serpedin, "Inferring Microbial Interaction Networks from Metagenomic Data Using SgLV-EKF Algorithm," 3rd International Workshop on Computational Network Biology: Modeling, Analysis, and Control (CNB-MAC 2016).

82. Z Arshad, H Hameed, MF Ali Chaudhary, HA Awan, E Serpedin and B Wajid, "Investigating functional relationships of five critical genes present in the familial non-synonymous loci with risk of having Acute Lymphoblastic Leukemia," *Omics - International Conference on Integrative Biology,* Berlin, Germany, July 2016.

83. M. Ismail, M. Qaraqe, Q. Abbasi, E. Serpedin, "Multi-hop Cooperative Relaying for Energy Efficient In Vivo Communications " , *Wireless Telecommunications Symposium 2016.* London, UK, Year: 2016, Pages: 1 - 6, DOI: 10.1109/ WTS.2016.7482028.

84. M. Ismail, E. Serpedin, and K. Qaraqe, "Enabling Green Heterogeneous Wireless Networks," *Green 2016 Conference.* Nice, France, July 2016. ISBN: 978-1-61208-524-1 (**Best Paper Award**).

85. M. Ismail, M. Z. Shakir, E. Serpedin, and K. Qaraqe, "Efficient selection of source devices and radio interfaces for green Ds2D communications," *IEEE WCNC- 2016 IEEE Wireless Communications and Networking Conference*, 2016, Pages: 1 - 6, DOI: 10.1109/ WCNC.2016.7565152.

86. M. Mahmoud, M. Ismail, P. K. Akula, K. Akkaya, E. Serpedin, and K. Qaraqe, "Privacy-Aware Power Charging Coordination in Future Smart Grid," *IEEE WCNC- 2016 IEEE Wireless Communications and Networking Conference,* 2016, Pages: 1 - 6, DOI: 10.1109/ WCNC.2016.7564967.

87. E. Oriero, K. Rabieh, M. Mahmoud, M. Ismail, E. Serpedin, and K. Qaraqe, "Trust-based and privacy-preserving fine-grained data retrieval scheme for

MSNs," *IEEE WCNC,* 2016 IEEE Wireless Communications and Networking Conference, Pages: 1 - 6, DOI: 10.1109/WCNC.2016.7564969.

88. M Alshawaqfeh, X Wang, AR Ekti, MZ Shakir, K Qaraqe, and E Serpedin, "A Survey of Machine Learning Algorithms and Their Applications in Cognitive Radio", *10th International Conference on Cognitive Radio Oriented Wireless Networks, CROWNCOM 2015,* Doha, Qatar, in April 2015.
89. M. Alshawaqfeh, B. Wajid, and E. Serpedin, "Detecting Potential Biomarkers for Ulcerative Colitis Using Hybrid Feature Selection", *ICBE 2015: International Conference on Bioengineering, WASET 2015*, Dec. 2015, Dubai, UAE.
90. QH Abbasi, H El-Sallabi, E. Serpedin, K. Qaraqe, A. Alomainy, "Condition Number Variability of Ultra Wideband MIMO On Body Channels," *iWAT 2016* - 2016 International Workshop on Antenna Technology (iWAT), pp.: 167 - 169, DOI: 10.1109/IWAT.2016.7434833.
91. QH. Abbasi, H. Sallabi, E Serpedin, K. Qaraqe, A Alomainy and Yang Hao, "Ellipticity Statistics of Ultra Wideband MIMO Channels for Body Centric Wireless Communication", *IEEE European Conference on Antennas and Propagation (EuCAP 2016)*, 10-15 April 2016, Davon, Switzerland. (invited paper).
92. QH Abbasi, H. Sallabi, E Serpedin, K. Qaraqe and A Alomainy, "Condition Number Variability of Ultra Wideband MIMO On Body Channels", (accepted) *International Workshop on Antenna Technology (IWAT),* Feb. 29-2 March, 2016, Florida, USA.
93. M. Ismail, M. Qaraqe, Q. Abbasi, and E. Serpedin, "Optimal on-body relay placement for energy efficient in vivo communication," *IEEE International Workshop on Advances in Body-Centric Wireless Communications and Networks and their Applications,* 2015.
94. M. Ismail, M. Qaraqe, Q. Abbasi, and E. Serpedin, "Multi-hop cooperative relaying for energy efficient in-vivo communication," *IEEE International Workshop on Advances in Body-Centric Wireless Communications and Networks and their Applications,* 2015.
95. Z.E. Ankarali, A.F. Demir, M. Qaraqe, Q. Abbasi, E. Serpedin, H. Arslan, and R. Gitlin, "Physical layer security for wireless implantable medical devices," *Body centric wireless communication and networking from meter to the nano-scale,* 2015.
96. F. Demir, Q. Abbasi, Z. Ankarali, M. Qaraqe, E. Serpedin, and H. Arslan, "Experimental Characterization of In Vivo Wireless Communication Channels," *IEEE 82nd Vehicular Technology Conference*, 2015.
97. Z. Bouida, M. Qaraqe, Q. Abbasi, M. Abdallah, and E. Serpedin, "Performance of Ulra-Wideband Body-Centric Wireless Networks," *PIERS Proceedings*, no. 2096, pp. 2800-2804, 2015.
98. M. Qaraqe, M. Ismail, and E. Serpedin, "Epileptic seizure onset detection via energy and neural synchronization decision fusion," *17th International Conference on Bioinformatics, Computational Biology and Biomedical Engineering, 2015*, Athens, Greece, July 2015.
99. QH Abbasi, H. Sallabi, E. Serpedin, K. Qaraqe, A. Alomainy and Yang Hao, "Ellipticity Statistics of Ultra Wideband MIMO Channels for Body

Centric Wireless Communication", *IEEE European Conference on Antennas and Propagation (EuCAP 2016)*, 10-15 April 2016, Davon, Switzerland (invited paper), Pages: 1 - 4, DOI: 10.1109/ EuCAP.2016.7481896.

100. Q.H. Abbasi, H. Sallabi, E. Serpedin, K. Qaraqe and A. Alomainy, "Condition Number Variability of Ultra Wideband MIMO On Body Channels", (accepted) *International Workshop on Antenna Technology (IWAT)*, Feb. 29-2 March, 2016, Florida, USA.

101. M Ismail, M Qaraqe, QH Abbasi, and E Serpedin, "Optimal On-body Relay Placement for Energy Efficient In Vivo Communications", in Proceedings of The First International Workshop on Advances in Body-Centric Wireless Communications and Networks and Their Applications, IEEE WiMob 2015, pp. 107-111, Oct. 2015. DOI: 10.1109/WiMOB.2015.7347948.

102. AF Demir, QH Abbasi, ZE Ankarali, M Qaraqe, E Serpedin, and H Arslan, "Experimental Characterization of In Vivo Wireless Communication Channel", in *Proceedings of 2015 IEEE 82 Vehicular Technology Conference: VTC2015-Fall*, 6-9 September 2015, Boston, USA (invited).

103. ZE Ankarali, A Demir, M Qaraqe, Q H Abbasi, E Serpedin, H Arslan and RD Gitlin,"Physical Layer Security for Wireless Implantable Medical Devices", in *Proceedings of 20 IEEE International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD),* 7-9, Sep. 2015, Surrey, UK (invited).

104. Q Abbasi, E Serpedin, K Qaraqe, A alomainy, Y Hao, "Multiband-OFDM based Ultra Wideband System Modelling of On/Off-Body Antenna Diversity", in *Proceedings of 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting,* 19-24 July 2015, Vancouver, Canada.

105. Z Boudia, M Qaraqe, QH Abbasi, M Abdallah and E Serpedin, "Performance of Ultra-wideband Body-centric Wireless Networks", in *Proceedings of Progress in Electromagnetics Research Symposium (PIERS)*, 6-9 July, 2015, Prague, Czech Republic.

106. AF Abdelaziz, Q H Abbasi, AF Demir, K Qaraqe, E Serpedin, H Arslan, "Experimental Characterization of In Vivo Radio Channel at MICS and ISM Bands", in *Proceedings of Progress in Electromagnetics Research Symposium (PIERS)*, 6-9 July, 2015, Prague, Czech Republic.

107. M. Shawaqfeh, X. Wang, A. R. Ekti, M. Z. Shakir, E. Serpedin and K. Qaraqe "A Survey of Machine Learning Algorithms and Their Applications in Cognitive Radio," *10th International Conference on Cognitive Radio Oriented Wireless Networks - CrownCom: 2015.*

108. E. Serpedin, "Timing Synchronization and Node Localization in Wireless Sensor Networks," (Plenary Talk), *International Workshop on Recent Trends in Signal Processing (RTSP2015),* Cluj-Napoca, Romania, July 2015.

109. M. K. Alshawaqfeh, B. Wajid, E. Serpedin, "Detecting Potential Biomarkers for Ulcerative Colitis Using Hybrid Feature Selection" , *17th International Conference on Computational and Systems Biology, (ICCSB) 2015,* Dubai, UAE.

110. JB Honneffer, MU Sohail, B Wajid, BC Guard, E Serpedin, JM Steiner, and JS Suchodolski, "Fecal Metabolite Alterations in Canine Inflammatory Bowel Disease," *Gut Microbiota Keystone Symposium 2015.*

111. M. Sohail, B. Wajid, J. Kintzinger, J. Honneffer, E. Serpedin, and J. Suchodolski, "Understanding the Dynamics of Ulcerative Colitis," *3rd World Congress on Targeting Microbiota*, Institut Pasteur, Paris, Oct. 2015.

112. M. Qaraqe, M. Ismail and E. Serpedin, "Power Allocation for Maximizing Energy Efficiency of Mixed RF/VLC Wireless Networks," *Eusipco 2015.*

113. A. Noor, A. Aitzaz, E. Serpedin, "A Sparse Approach to Analyze Transcriptional Regulatory Networks with Incomplete Prior Information," *CiE 2015*, Bucharest, Romania, June 2015.

114. M. Qaraqe, M. Ismail, and E. Serpedin, "Epileptic Seizure Onset Detection via Energy and Neural Synchronization Decision Fusion," *ICBCBBE 2015 : XIII International Conference on Bioinformatics, Computational Biology and Biomedical Engineering*, Athens, Greece, July 2015 (World Academy of Science, Engineering and Technology, International Science Index, Bioengineering and Life Sciences, 1(7), 785).

115. M. Ismail, E. Serpedin, and K. Qaraqe, "PEV Charging in the Future Smart Grid," *12-th International Symposium on Signals, Circuits and Systems. ISSCS 2015.* Iasi, Romania, July 2015. DOI: 10.1109/ISSCS.2015.7203922.

116. M. Ismail, I. S. Bayram, M. Abdallah, E. Serpedin, and K. Qaraqe, "Optimal planning of PEV charging facilities," *First Workshop On Smart Grid And Renewable Energy (SGRE)*, Doha, Qatar, April 2015. **Best paper award**. DOI: 10.1109/SGRE.20 15.7208728.

117. H. Y. Lateef, M. Z. Shakir, M. Ismail, A. Mohamed, and K. Qaraqe, "Towards energy efficient and quality of service aware cell zooming in 5G wireless networks," IEEE VTC 2015, Sept. 2015. DOI: 10.1109/VTCFall.2015.7391181.

118. M. Qaraqe, M. Ismail, and E. Serpedin, "Patient-Specific Seizure Onset Detection via Neural Synchrony," *Qatar Foundation Annual Research Conference (QF-ARC 2014),* Nov. 2014.

119. M. Ismail, M. Z. Shakir, E. Serpedin, and K. Qaraqe, Green heterogeneous wireless networks, IEEE Globecom 2015, December 2015 (**Tutorial Talk**).

120. X. Wang, E. Serpedin and K. Qaraqe, "Variational methods in signal and image processing," *MMES 2014*, Brasov, Romania, July 2014.

121. M. Kashef, M. Ismail, M. Abdallah, K. Qaraqe, and E. Serpedin, "Power allocation for maximizing energy efficiency of mixed RF/VLC wireless networks," EUSIPCO 2015, pp. 1456-1460, Aug. 2015. DOI: 10.1109/EUSIPCO.2015.7362622.

122. M. Ismail, I. S. Bayram, M. Abdallah, E. Serpedin, and K. Qaraqe, "Optimal planning of PEV fast charging stations," *First Workshop On Smart Grid And Renewable Energy*, Doha, Qatar 2015 (**Best Paper Award**).

123. M. Kashef, M. Ismail, M. Abdallah, K. Qaraqe, and E. Serpedin, "VLC-Femto cell internetworking for green communications," *IEEE ICC 2015 (IEEE International Conference on Communications).*

124. E. Serpedin, "Applications of linear algebra in signal processing and wireless communications," (Plenary Talk), *19th International Conference on Circuits, Systems, Communications and Computers (CSCC 2015)*, Greece, July 2015.

125. M. Wang, M. Ismail, R. Zhang, S. Shern, K. Qaraqe and E. Serpedin"A Semi-distributed V2V Fast Charging Strategy Based on Price Control," *Globecom 2014: Global Communications Conference - Wireless Networking Symposium* (**Best Paper Award**), Austin, TX 2014. DOI: 10.1109/GLOCOM.2014.703 7525.

126. I. S. Bayram, M. Ismail, M. Abdallah, K. Qaraqe, E. Serpedin, "A Pricing-based Load Shifting Framework For EV Fast Charging Stations," *IEEE SmartGridComm 2014: IEEE International Conference on Smart Grid Communications*, 2014. DOI: 10.1109/SmartGridComm.20 14.7007726.

127. M. Ismail, M. Kashef, E. Serpedin, and K. Qaraqe, "Multiple timescale dynamic planning for energy efficient uplink and downlink communications," *IEEE Greencomm 14: IEEE Online Conference on Green Communications*, 2014.

128. M. Ismail, M. Kashef, E. Serpedin, and K. Qaraqe, Dynamic planning with balanced energy efficiency for network operators and mobile users, IEEE Online Greencomm14, pp. 1-6, Nov. 2014. DOI: 10.1109/OnlineGreen-Com.2014.711 4425.

129. M. Ismail, E. Serpedin, K. Qaraqe, "A win-win cooperative downlink resource allocation for green communications in a heterogeneous wireless medium," *IEEE Globecom 14: Global Communications Conference*, Green Broadband Access Workshop, 2014, pp. 1115-1119, Dec. 2014. DOI: 10.1109/GLO-COMW.2014.7063582.

130. M. Qaraqe, M. Ismail, Q. Abbasi, and E. Serpedin, "Channel selection and feature enhancement for improved epileptic seizure onset detection," *MobiHealth 2014: International Conference on Wireless Mobile Communication and Healthcare*, Athens, Greece, Nov. 2014. DOI: 10.1109/MOBI-HEALTH.2014.7015960.

131. M. Qaraqe, M. Ismail, E. Serpedin, "Patient-specific seizure onset detection via neural synchrony," Qatar Foundation Annual Research Conference (ARC), 2014, Doha, Qatar. DOI: 10.5339/qfarc.2014.HBPP0385.

132. Q. H. Abbasi, M. Qaraqe, E. Serpedin, and M. U. Rehman, "Ultra wideband in vivo radio channel characterization and system modeling," *IMWS Bio: IEEE MTT-S International Microwave Workshop Series on RF and Wireless Technologies for Biomedical and Healthcare Applications*, Dec. 2014, London, UK.

133. Z.E. Ankaraly, Q.H. Abbasi, A.F. Demir, E. Serpedin, K. Qaraqe and H. Arslan, "A Comparative Review on the Wireless Implantable Medical Devices Privacy and Security", *Proceedings of 4th International Conference on Wireless Mobile Communication and Healthcare (Mobi-Health 2014)*, 3-5 Nov., 2014, Athens, Greece.

134. Q. H. Abbasi, M. Qaraqe, E. Serpedin, H. Arsalan and R. Gitlin, "Ultra wideband parametric channel model for in body communication," *IMWS Bio: IEEE MTT-S International Microwave Workshop Series on RF and Wireless Technologies for Biomedical and Healthcare Applications*, Dec. 2014, London, UK.

135. M.Z. Shakir, Y. Sambo, K. Qaraqe, M. A. Imran, and E. Serpedin, "Spectral Efficiency Improvements in HetNets by Exploiting Smart Device-to-Device Communications," *Globecom 2014: Global Communications Conference - Wireless Communications Symposium,* Austin, TX 2014.

136. A. F. Demir, Q. H. Abbasi, Z. E. Ankarali, E. Serpedin, H. Arslan, "Numerical Characterization of In Vivo Wireless Communication Channels," *IMWS Bio: IEEE MTT-S International Microwave Workshop Series on RF and Wireless Technologies for Biomedical and Healthcare Applications*, Dec. 2014, London, UK.

137. Q H. Abbasi, M. Qaraqe, H. Arsalan and E. Serpedin, "Stochastic MIMO for In-VIVO communicational", *MobiHealth 2014: International Conference on Wireless Mobile Communication and Healthcare*, Athens, Greece, Nov. 2014.

138. T. Wuchen, Shakir, M.Z., Qaraqe, K.A., Serpedin, E., Imran, M.A., and Tafazolli, R. "On the bits per joule optimization in cellular cognitive radio networks," *2014 1st International Workshop on Cognitive Cellular Systems (CCS)*, DOI: 10.1109/CCS.2014.6933811 Publication Year: 2014 , Page(s): 1 - 5, Rhine, Germany.

139. Q.H. Abbasi, M. Qaraqe, and E. Serpedin, "Ultra Wideband Band Notched Antenna Design and Radio Propagation Modelling for Body-Centric Wireless Communications," *ICAT'2014 Conference: International Conference on Advanced Technology and Sciences*, Antalya, Turkey 2014.

140. A. Noor, A. Ahmad, B. Wajid, E. Serpedin, M. Nounou and H. Nounou, "A Closed-Form Solution for Transcription Factor Activity Estimation using Network Component Analysis," *AlCoB 2014: 1st International Conference on Algorithms for Computational Biology*, Tarragona, Spain, 2014.

141. Q.H. Abbasi, M. Qaraqe, and E. Serpedin, "Experimental Investigation of Channel Capacity and Correlation in Multi-Element Antennas for BCWN," *2014 IEEE International Symposium on Medical Measurements and Applications*, Lisbon, Portugal, June 2014 (invited paper).

142. F.H. Hsu and E. Serpedin, "Investigating Effects of Copy Number Alterations on Targeted Therapy Response Using a Conditioning-Based Model," *2nd Middle East Conference on Biomedical Engineering*, Doha, Qatar, Febr. 2014.

143. A.R. Ekti, M.Z. Shakir, K. Qaraqe and E. Serpedin, "End-to-End Downlink Power Consumption of Heterogeneous Small-Cell Networks Based on the Probabilistic Traffic Model," *IEEE WCNC 2014: Wireless Communications and Networking Conference,* Istanbul, Turkey, April 2014.

144. Y. Sambo, M.Z. Shakir, M. A. Imran, K. Qaraqe and E. Serpedin, "On the Capacity Bounds of K-Tier Heterogeneous Small-Cell Networks Employing Aggressive Frequency Reuse," *IEEE WCNC 2014: Wireless Communications and Networking Conference,* Istanbul, Turkey, April 2014.

145. H. Qammer, M. Qaraqe, A. Alomainy, E. Serpedin, "Second Order Statistics of Ultra Wideband On-Body Diversity Channels," *IEEE WCNC 2014: Wireless Communications and Networking Conference,* Istanbul, Turkey, April 2014.

146. Q. H. Abbasi, M. Qaraqe, and E. Serpedin, "Numerical Characterisation and Modeling of In-Vivo Radio Communication," *2nd Middle East Conference on Biomedical Engineering*, Doha, Qatar, Febr. 2014.

147. N. Mustafa, H. El-Sallabi, K. Qaraqe, and E. Serpedin, "Comparison of different 1-D interpolation algorithms for estimation of shadow fading," *2013 7th IEEE GCC Conference and Exhibition*, doi: 10.1109/IEEEGCC.2013.6705807, 2013, pp. 372-377.

148. B. Wajid, A. Reza Ekti, A. Noor, E. Serpedin, M. Nounou and H. Nounou, "Supersonic MiB", *2013 IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS 2013)*, Dec. 2013, Houston, TX, USA.

149. A. Noor and E. Serpedin, "Sparse Network Component Analysis for Recovering Transcription Factor Activities," *International Workshop on Applied Probability*, Antalya, Turkey, June 2014.

150. F.H. Hsu and E. Serpedin, "Stochastic Modeling of the Relationship between DNA Copy Number and Gene Expression," *International Workshop on Applied Probability*, Antalya, Turkey, June 2014.

151. K. Sastry, C. Ma, I. Aigha, I. Al-Bozom, S. Gehani, E. Serpedin, Y. Huang, Y. Chen, N. Mohamed, and L. Chouchane, "Gene Expression Profiling of Breast Cancer in Arab Populations," *105th Annual Meeting of the American Association for Cancer Research (AACR 2014),* April 5-9, 2014, San Diego, California.

152. M. Qaraqe, Q. Abbasi, and E. Serpedin, "MIMO Radio Channel Characterization for UWB Body-Centric Wireless Networks", *Qatar Foundation-Annual Research Conference*, **Student Best Poster Award** (First Prize Award), Doha, Qatar, Nov. 2013.

153. A. Noor, E. Serpedin, H. Nounou and M. Nounou, "ROBNCA: Robust Network Component Analysis for Recovering Transcription Factor Activities", *2013 IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS 2013)*, **Best Paper Award**, Houston, TX, Nov. 2013.

154. S. Park, E. Serpedin, and M. Qaraqe, "A Variational Perspective over an Extremal Entropy Inequality," *ISIT 2013: Information Theory Symposium,* Istanbul, Turkey, July 2013.

155. M.Z. Shahir, E. Serpedin etal., "K - Tier Heterogeneous Small-Cell Networks: Toward Balancing the Spectrum Usage and Power Consumption with Aggressive Frequency Reuse Scheme," *BlackSeaCom 2013 Conference*, July 2013.

156. A. Ekti, M. Shakir, E. Serpedin, and K. Qaraqe, "Downlink power consumption of HetNets based on the probabilistic traffic model of mobile users," *2013 IEEE 24th International Symposium on Personal Indoor and Mobile Radio Communications (PIMRC)*, DOI: 10.1109/PIMRC.2013.6666623, 2013, pp. 2797-2802.

157. A. Aitzaz, E. Serpedin, H. Nounou and M. Nounou, "A Distributed Algorithm for Network-Wide Clock Synchronization in Wireless Sensor Networks," *FUSION 2013 Conference: 16th International Conference on Information Fusion (FUSION),* Istanbul, Turkey, July 2013.

158. X. Wang, E. Serpedin, M. Nounou and H. Nounou, "Matrix Applications in Wireless Communications and Signal Processing," *4th International Conference on Matrix Analysis and Applications,* Konya, Turkey, July 2013.

159. A. Nasir, M.Z. Shakir, K. Qaraqe, and E. Serpedin, "On the reduction in specific absorption rate using uplink power adaptation in heterogeneous small-cell networks," *2013 7th IEEE GCC Conference and Exhibition*, doi: 10.1109/IEEEGCC.2013.6705825, 2013, pp: 474 - 478.

160. A. Ahmad*, E. Serpedin, H. Nounou, M. Nounou, "Joint node localization and time-varying clock synchronization in wireless sensor networks," *ICASSP 2013: IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 5170-5174, doi 10.1109/ICASSP.2013.6638648.

161. B. Wajid*, M. Nounouz, H. Nounouz, E. Serpedin, "GIBBS-BECA: Gibbs Sampling and Bayesian Estimation for Comparative Assembly," *3rd International Conference on Biomedical Engineering, Electronics and Nanotechnology,* Valencia, Spain, 2013.

162. S. Ekin*, M. M. Abdallah, K. A. Qaraqe and E. Serpedin, "Multiuser Diversity in OFDM-based Cognitive Radio Networks with Random Subcarrier Access Method," *IARIA 2013*, Rome, Italy.

163. M. Daloglu* and E. Serpedin, "Quantization Errors in Overlapped Block Digital Filtering Methods," *IARIA 2013*, Rome, Italy.

164. Y.A. Sambo, M.Z. Shakir, A.R. Ekti, K.A. Qaraqe, E. Serpedin, and M.A. Imran, "K-tier heterogeneous small-cell networks: Towards balancing the spectrum usage and power consumption with aggressive frequency reuse," *2013 First International Black Sea Conference on Communications and Networking (BlackSeaCom)*, doi: 10.1109/BlackSeaCom.2013.6623396, 2013, pp. 132-136.

165. S. Ekin*, M. Abdallah, K. A. Qaraqe, and E. Serpedin, "On the Capacity of a Cognitive User with Subcarrier Collisions over Rayleigh Fading Channels," *Signal Processing Advances in Wireless Communications Workshop - SPAWC 2013,* Darmstadt, Germany.

166. S. Ekin*, M. M. Abdallah, K. A. Qaraqe, and E. Serpedin, "An Investigation of Inter-cell Subcarrier Collisions in OFDM-Based Cognitive Radio Networks," *Signal Processing Advances in Wireless Communications Workshop - SPAWC 2013*, Darmstad, Germany, June 2013.

167. E. Serpedin, "Aspects of the Interface between Game Theory and Optimization Techniques: Designing Efficient Signal Processing Algorithms and Communication Systems," *Lecture at the 2nd International Summer School on Cognitive Wireless Communications*, Paris, France, July 2012.

168. L. Yang, K. Qaraqe, E. Serpedin, M.S. Alouini, "Sum-rate analysis of spectrum sharing spatial multiplexing MIMO systems with zero-forcing and multiuser diversity," *14th IEEE Workshop on Signal Processing Advances in Wireless Communications (SPAWC),* Darmstad, Germany, June 2013, doi 10.1109/SPAWC.2013.6612117.

169. L. Yang, K. Qaraqe, E. Serpedin, M.S. Alouini, "Performance Analysis of Amplify-and-Forward Two-Way Relaying with Co-Channel Interference and Channel Estimation Error," *IEEE WCNC 2013: Wireless Communications and Networking Conference*, April 2013, Shanghai, China, doi: 10.1109/WCNC.2013.6555164.

170. A. R. Ekti*, E. Serpedin, and K. A. Qaraqe, "Experimental Analysis of Energy Detection for PSK and QAM Signals: Indoor Measurements," *Proceedings of the IEEE International Radio Wireless Symposium (RWS)*, Austin, TX, January 20-23, 2013. DOI: 10.1109/RWS.2013.6486621.

171. A. Ahmad*, E. Serpedin, H. Nounou, and M. Nounou, "Joint Distributed Parameter and Channel Estimation in Wireless Sensor Networks via Variational Inference," *ASILOMAR 2012 Conference on Signals, Systems and Computers*, Nov. 2012, Pacific Grove, CA.

172. B. Wajid*, E. Serpedin, M. Nounou and H. Nounou, "MiB: A Genome Assembly Pipeline," *Gensips 2012: Genomic Signal Processing and Statistics Workshop*, Washington DC, Dec. 2012.

173. S. Park*, E. Serpedin, K. Qaraqe, "New perspectives, extensions and applications of De Bruijn identity," *Qatar Foundation Annual Research Forum Proceedings,* CSPS3, Doha, Qatar, Oct. 2012.

174. A. Noor*, E. Serpedin, H. Nounou, M. Nounou, M. Qaraqe, "Inferring nonlinear and sparse gene regulatory networks," *Qatar Foundation Annual Research Forum Proceedings,* BMP51, Doha, Qatar, Oct. 2012.

175. S. Ekin*, K. A. Qaraqe, E. Serpedin, "Performance analysis of cognitive radio multiple-access channels over dynamic fading environment," *Qatar Foundation Annual Research Forum Proceedings,* CSPS2, Doha, Qatar, Oct. 2012.

176. A. Noor*, E. Serpedin, H. Nounou, M. Nounou, M. Qaraqe, L. Chouchane, N. Mohamed, "Gene regulatory network inference using information theoretic methods," *Qatar Foundation Annual Research Forum Proceedings,* BMP59, Doha, Qatar, Oct. 2012.

177. A. Nasir, A. R. Ekti*, K. A. Qaraqe, E. Serpedin, "Human centric system for oil and gas quality and pipeline infrastructure monitoring in Qatar," *Qatar Foundation Annual Research Forum Proceedings,* CSOS2, Doha, Qatar, Oct. 2012.

178. A. R. Ekti*, E. Serpedin, K A Qaraqe, "Analysis of mobility impact on interference for short-range cognitive radio networks," *Qatar Foundation Annual Research Forum Proceedings,* CSPS10, Doha, Qatar, Oct. 2012.

179. B. Wajid*, E. Serpedin, M. Qaraqe, H. Nounou, M. Nounou, L. Chouchane, N. Mohamed, "Optimal reference selection for genome assembly using the minimum description length principle," *Qatar Foundation Annual Research Forum Proceedings,* BMP45, Doha, Qatar, Oct. 2012.

180. A. R. Ekti*, E. Serpedin, K A Qaraqe, "Experimental analysis of energy detection for digitally modulated signals: Indoor measurements," *Qatar Foundation Annual Research Forum Proceedings,* CSPS6, Doha, Qatar, Oct. 2012.

181. S. Ekin*, M. M. Abdallah, K A. Qaraqe, E Serpedin, "Random subcarrier allocation in OFDM-based cognitive radio networks," *Qatar Foundation Annual Research Forum Proceedings,* CSPS1, Doha, Qatar, Oct. 2012.

182. M. Qaraqe*, M Abdallah, E Serpedin, M-S Alouini, "Performance analysis of switch-based multiuser scheduling schemes with adaptive modulation in spectrum sharing systems," *Qatar Foundation Annual Research Forum Proceedings,* CSOS1, Doha, Qatar, Oct. 2012.

183. S. Park*, E. Serpedin and K. Qaraqe, "New Perspectives, Extensions and Applications of De Bruijn Identity," *2012 IEEE 13th International Workshop on Signal Processing Advances in Wireless Communications (SPAWC),* Cesme, Turkey, pp. 399 - 403, June 2012.

184. A. R. Ekti*, S. Yarkan, K. A. Qaraqe and E. Serpedin, "Effects of Mobility on Uplink Interference for Short-Range Cognitive Radio Networks," *Signal Processing Advances in Wireless Communications Workshop -IEEE SPAWC Workshop*, Turkey, June 2012.

185. M. Qaraqe*, M. Abdallah, E. Serpedin, M-S. Alouini and H. Alnuweiri, "Joint Multiuser Switched Diversity and Adaptive Modulation Schemes for Spectrum Sharing Systems," *Globecom 2012: Global Communications Conference - Cognitive Radio and Networks Symposium,* San Diego, CA, Dec. 2012.

186. Y. Zhou*, E. Serpedin, K. Qaraqe and O. Dobre, "On the Performance of Generalized Likelihood Ratio Test for Data-Aided Timing Synchronization of MIMO Systems," *COMM 2012 - International Conference on Communications,* Bucharest, June 2012.

187. S Ekin*, M. M. Abdallah, K. A. Qaraqe and E. Serpedin, "On OFDM-Based Spectrum Sharing Communication Systems with Random Access," *Wireless Advanced (WIAD) Conference,* London, UK, pp. 34 - 38, June 2012.

188. A. R. Ekti*, S. Yarkan, K. A. Qaraqe, and E. Serpedin, "Experimental results on the performance of energy detector for digitally modulated signals", *Proceedings of the International Conference on Networking and Future Internet (ICNFI)*, ISBN-13: 978-2-915618-24-2, EAN: 9782915618242, Istanbul, Turkey, April 2012.

189. A. Noor*, E. Serpedin, M. Nounou, H. Nounou, N. Mohamed, L. Chouchane, "Information theoretic methods for modeling of gene regulatory networks," *2012 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB)*, San Diego, CA, May 2012, pp. 418 - 423 (invited paper).

190. S. Park*, E. Serpedin, and K. Qaraqe, "An Information Theoretic Perspective Over an Extremal Entropy Inequality," *ISIT 2012: IEEE International Symposium on Information Theory,* MIT-Boston, MA, pp. 1266 - 1270, July 2012.

191. S. Park*, E. Serpedin, and K. Qaraqe, "On the equivalence between Stein identity and de Bruijn identity," *ISIT 2012: IEEE International Symposium on Information Theory,* Boston, MA, USA, pp. 145-149, July 1-6, 2012.

192. A. Ahmad*, A. Papathanassiou, E. Serpedin, P. Smith, M. Shafi, "LTE codebook capacity loss for single-cell multi-user MIMO channels," *2012 IEEE 23rd International Symposium on Personal Indoor and Mobile Radio Communications (PIMRC)*, Australia, 2012, pp. 1902- 1906.

193. E. Serpedin, "On mini-max optimal design of signal processing systems and communications systems," *Invited Talk at the 2nd International Summer School on Cognitive Wireless Communications,* July 10-13, 2012, Paris, France.

194. M. Qaraqe*, M. Abdallah, E. Serpedin and Mohamed-Slim Alouini, "On Multiuser Switched Diversity Transmission for Spectrum Sharing Systems," *2012 7th International ICST Conference on Cognitive Radio Oriented Wireless Networks and Communications (CROWNCOM 2012-IEEE Cognitive Radio Conference),* pp. 106 - 112, Stockholm, Sweden, June 2012.

195. 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: IEEE International Conference on Acoustics, Speech, and Signal Processing*, Kyoto, Japan, March 2012.

196. A. Noor*, E. Serpedin, H. Nounou and M. Nounou, "Inferring gene regulatory networks with nonlinear models via exploiting sparsity," *IEEE International Conference on Acoustics, Speech and Signal Processing - ICASSP 2012*, Kyoto, Japan, pp. 725 - 728, March 2012.

197. 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.

198. 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.

199. 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.

200. 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.

201. 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.

202. 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.

203. 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.

204. 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.

205. J. Kim, J. Lee*, E. Serpedin and K. Qaraqe, "A Robust Clock Synchronization Algorithm for Wireless Sensor Networks," *ICASSP 2011: IEEE International Conference on Acoustics, Speech, and Signal Processing*, 2011.

206. H. Jeon, K. Su and E. Serpedin, "An Efficient Blind Deterministic Frequency Offset Estimator for OFDM Systems," *ICASSP 2011: IEEE International Conference on Acoustics, Speech, and Signal Processing*, 2011.

207. 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, pp. 1 - 6, 2011.

208. 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.

209. S. Ekin*, S. Yarkan, K. Qaraqe, and E. Serpedin, "On the statistics of subcarrier 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.

210. 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.

211. 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**).

212. Y. Zhou* and E. Serpedin, "GLRT for data-aided time synchronization in MIMO-OFDM systems," *COMM 2012*, Bucharest, Romania.

213. 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: IEEE Genomic Signal Processing and Statistics Workshop*, Nov. 2010.

214. B. Wajid* and E. Serpedin, "Making a comparative assembler a pseudo denovo assembler using minimum description length," *Gensips 2010: IEEE Genomic Signal Processing and Statistics Workshop*, Nov. 2010.

215. 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.*

216. 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.

217. 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.

218. 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: Global Communications Conference*, Nov. 2009.

219. Y. Zhou*, K. Qaraqe, E. Serpedin, and O. Dobre, "AM-signal detection in cognitive radios using First-Order Cyclostationarity," *35th International Conference on Acoustics, Speech, and Signal Processing (ICASSP),* March 14 - 19, 2010, Dallas, USA

220. Y. Zhou*, K. A. Qaraqe and E. Serpedin, O. Dobre, "FSK-Signal Detection in Cognitive Radios Using First-Order Cyclostationarity," *IEEE ICT 2010: International Telecommunications Conference*, Doha , Qatar.

221. Y. Zhou*, K. Qaraqe, E. Serpedin, and O. Dobre, "Efficient detection of FSK-signals using cyclostationarity," *COMM 2010: Communications Conference*, June 2010, Bucharest.

222. X. Li, Y. C. Wu* and E. Serpedin, "Multiple timing offsets compensation in cooperative communication systems," *IEEE DSP (Digital Signal Processing) 2009 Conference*, June 2009, Greece.

223. X. Li, Y. C. Wu* and E. Serpedin, "On Performance Bounds for Timing Estimation under Fading Channels," *WCNC 2009 Conference: Wireless Communications and Networking Conference*, April 2009, Budapest, Hungary.

224. Q. Chaudhari* and E. Serpedin, "A new scheme for synchronization of inactive nodes in a sender-receiver protocol," *ICASSP 2009: IEEE International Conference on Acoustics, Speech, and Signal Processing*, Taipei, Taiwan, April 2009.

225. Q. Chaudhari*, Y. C. Wu* and E. Serpedin, "Improved Estimation of Clock Offset in Sensor Networks," *ICC 2009 Conference (IEEE International Conference on Communications),* Dresden, Germany, June 2009.

226. Q. Chaudhari*, E. Serpedin, and K. Qaraqe, "Minimal Cost Clock Synchronization Using a Sender-Receiver Protocol in Wireless Sensornets," *SPECTS 2008 - 2008 International Symposium on Performance Evaluation of Computer and Telecommunication Systems,* June 16-18, 2008, Edinburgh, UK.

227. J. Lee*, J. Kim*, K. Qaraqe, and E. Serpedin, "Clock offset estimation in wireless sensor networks using robust M-estimation," *ATOM-N 2008 Conference: SPIE 4th edition of the International Conference on Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies,* SPIE Proceedings, Sept. 2008.

228. 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.

229. 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.

230. 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: International Workshop on Signal Processing and its Applications,* Sharjah, UAE, March 2008.

231. Q. Chaudhari* and E. Serpedin, "Maximum Likelihood Estimation of clock parameters for synchronization of wireless sensor networks," *ICASSP 2008: IEEE International Conference on Acoustics, Speech, and Signal Processing.*

232. Q. Chaudhari* and E. Serpedin, "Clock Offset and Skew Estimation in Wireless Sensor Networks with Known Deterministic Delays and Exponential Nondeterministic Delays," *Third International Conference on Digital Telecommunications (ICDT 2008),* June 29 - July 5, 2008. (**Best Paper Award**).

233. Q. Chaudhari* and E. Serpedin, "Estimation of Clock Parameters and Performance Benchmarks for Synchronization in Wireless Sensor Networks," *IARIA-ICDT 2008 Conference,* July 2008.

234. Q. Chaudhari*, E. Serpedin, and K. Qaraqe, "Statistical Signal Processing for Clock Synchronization in Wireless Sensor Networks," *WoSPA 2008 Conference: International Workshop on Signal Processing and its Applications*, Sharjah, UAE, March 2008.

235. 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 2008*, SPIE Proceedings, Sept. 2008.

236. 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,* October 26-28, 2008, Dallas.

237. 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 Sensornets," *EUSIPCO 2008 Conference: European Signal Processing Conference*, Lausanne, Switzerland, August 2008.

238. 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.

239. 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.

240. 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 - CCNC 2008.* 10-12 Jan. 2008 Page(s):36 - 40.

241. 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.

242. Q. Chaudhari*, and E. Serpedin, "Clock Synchronization in Wireless Sensor Networks with Deterministic Part of Delays Unknown," *ICASSP 2008: IEEE International Conference on Acoustics, Speech, and Signal Processing*, March 2008.

243. W. Zhao, K. Ajepong, E. Serpedin, E. Dougherty, "Identifying Drosophila cell-cycle regulated genes from irregular microarray data," *ICASSP 2008: IEEE International Conference on Acoustics, Speech, and Signal Processing*, March 2008.

244. Q. Chaudhari*, Y. Zhou*, and E. Serpedin, "Efficient Clock Synchronization in Wireless Sensor Networks," *Asilomar Conf. on Signals, Systems, and Computers*, Oct. 2007.

245. E. Serpedin, "Advances in Synchronization of Wireless Sensor Networks," *2007 Workshop on Recent Advances in Signal Processing,* July 2007, Cluj-Napoca, Romania, (**Invited Paper**).

246. K. Noh* and E. Serpedin, "Adaptive Multi-hop Timing Synchronization for Wireless Sensor Networks," *ISSPA 2007 Conference*, Febr. 2007 (**Invited Paper.**).

247. W. Zhao*, K. Ajepong*, E. Serpedin, E. Dougherty, "Reconstruction of genetic regulatory networks based on the posterior probabilities of gene regulations," *ICASSP 2007: IEEE International Conference on Acoustics, Speech and Signal Processing*, April 2007.

248. W. Zhao*, E. Serpedin, and E. Dougherty, "Recovering genetic regulatory networks by integrating multiple data sources," *Gensips 2007: IEEE Genomic Signal Processing and Statistics Workshop*, June 2007.

249. 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.

250. 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.

251. 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**).

252. W. Zhao*, E. Serpedin, and E. Dougherty, "Information theoretic inference of direct gene regulation from time series data," *GENSIPS 2006: IEEE International Workshop on Genomic Signal Processing and Statistics*, College Station, TX, May 2006.

253. 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.

254. 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: Global Communications Conference*, Dec. 2006, San Francisco, CA.

255. 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 (Digital Signal Processing) 2006 Workshop*, Jackson, Wyoming, Sept. 2006.

256. 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 (Digital Signal Processing) 2006 Workshop*, Jackson, Wyoming, Sept. 2006

257. 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: Military Communications Conference,* Oct. 2006, Washington DC.

258. I. Sari* and E. Serpedin, "Application of Gibbs Sampler for Clock Synchronization in RBS-Protocol," *IEEE MILCOM 2006: Military Communications Conference,* Oct. 2006, DC.

259. 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.

260. 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.

261. 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.

262. K. Shi* and E. Serpedin, "Downlink Joint Detection for TD-SCDMA Systems: SNR Estimation and Active Codes Detection," *VTC Fall 2005 Conference,* Dallas, TX, Sept. 2005.

263. Y.C. Wu* and E. Serpedin, "Non-data-aided ML Symbol Timing Estimation in MIMO Correlated Fading Channels," *VTC Fall 2005 Conference,* Dallas, TX, Sept. 2005.

264. K. Shi* and E. Serpedin, "Fast Timing Recovery for Linearly and Nonlinearly Modulated Systems," *Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, Nov. 2004.

265. 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.

266. Y.C. Wu* and E. Serpedin, "Unified performance analysis of second-order statistics based feedforward timing delay estimators," *ICASSP 2005: IEEE International Conf. on Acoustics, Speech, and Signal Processing*, Philadelphia, PA, March 2005, Vol. 3, March 2005, pp. -804.

267. Y. C. Wu* and E. Serpedin, "Training Sequences Design for Symbol Timing Estimation in MIMO Correlated Fading Channels," *Globecom 2004: Global Communications Conference,* Dallas, TX, Dec. 2004.

268. 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**).

269. 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 on Signals, Systems, and Computers*, Pacific Grove, CA, Nov. 2004.

270. 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.

271. 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**).

272. 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.

273. Y.C. Wu* and E. Serpedin, "Data-aided Maximum Likelihood Symbol Timing Estimation in MIMO Correlated Fading Channels," *ICASSP 2004: IEEE International Conference on Acoustics, Speech, and Signal Processing*, Montreal, Canada, May 2004.

274. K. Shi* and E. Serpedin, "Decision-Directed Fine Synchronization for Coded OFDM systems," *ICASSP 2004: IEEE International Conference on Acoustics, Speech, and Signal Processing*, Montreal, Canada, May 2004.

275. K. Shi* and E. Serpedin, "On the design of a digital blind feedforward jitter free timing recovery scheme for linear modulations," *IEEE Communications Conference,* Bucharest, Romania, June 2004.

276. 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.

277. 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.

278. K. Shi* and E. Serpedin, "On the design of digital blind feedforward jitter free timing recovery schemes," *WNCG: Wireless Networking and Communications Group Symposium,* Univ. of Texas, Austin, Oct. 2003.

279. Y. Wang* and E. Serpedin, "Continuous-mode Frame Synchronization for Frequency-selective Channels," *WNCG: Wireless Networking and Communications Group Symposium,* Univ. of Texas, Austin, Oct. 2003.

280. K. Shi* and E. Serpedin, "Almost jitter free feedforward symbol timing recovery for GMSK modulations," *Asilomar Conference on Signals, Systems, and Computers*, Nov. 2003.

281. 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.

282. P. Ciblat, M.-L. Boucheret and E. Serpedin, "A blind frequency offset estimator for OFDM/OQAM systems," *Signal Processing Advances in Wireless Communications Workshop - SPAWC Conference*, Rome, Italy, July 2003.

283. K. Shi*, E. Serpedin, and P. Ciblat, "On the Optimal Metrics for Coarse Frame and Carrier Synchronization in OFDM systems," *Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, Nov. 2002.

284. Y. Wang*, E. Serpedin, and P. Ciblat, "Unified Performance Analysis of Blind Feedforward Timing Estimation," *Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, Nov. 2002.

285. Y. Wang*, E. Serpedin, and P. Ciblat, "Optimal Blind Feedforward Carrier Synchronization for General QAM Modulations," *Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, Nov. 2002.

286. P. Ciblat, E. Serpedin, and Y. Wang*, "On a fractionally-sampling based carrier frequency offset estimator for non-circular transmissions," *Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, Nov. 2002.

287. Y. Wang*, E. Serpedin, and P. Ciblat, "Non-Data Aided Feedforward Estimation of PSK-Modulated Carrier Frequency Offset," *ICC 2002: IEEE International Conference on Communications*, May 2002, New York, NY.

288. Y. Wang*, E. Serpedin, and P. Ciblat, "Optimal Blind Carrier Synchronization for M-PSK Burst Transmissions," *ICASSP 2002: IEEE International Conference on Acoustics, Speech, and Signal Processing*, June 2002, Orlando, FL.

289. Y. Wang* and E. Serpedin, "Optimal Matched Blind Carrier Phase Estimators for Star QAM Constellations," *CISS 2002: Conference on Information Sciences and Systems*, Princeton University, March 2002.

290. Y. Wang* and E. Serpedin, "Optimal Blind Synchronization in Flat-Fading Channels," *CISS 2002: Conference on Information Sciences and Systems*, Princeton University, March 2002.

291. 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.

292. Y. Wang*, E. Serpedin, and P. Ciblat, "Optimal blind nonlinear least-squares carrier phase and frequency offset estimation for burst QAM modulations," *Asilomar Conference on Signals, Systems, and Computers*, vol. 2, pp. 1499-1503, Pacific Grove, CA, Nov. 2001.

293. Y. Wang*, E. Serpedin, P. Ciblat, and P. Loubaton, "Non-data aided feedforward cyclostationary statistics based carrier frequency offset estimators for linear modulations" *GLOBECOM'01: Global Communications Conference,* vol. 2, pp. 1386-1390, Nov. 2001, San Antonio, TX.

294. 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: IEEE Military Communications Conference*, McLean, VA, Oct. 2001.

295. 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.

296. 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.

297. 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.

298. 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.

299. E. Serpedin, A. Chevreuil, 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.

300. E. Serpedin, "Semi-Blind Equalization of Nonlinear Communication Channels Using Transmitter Precoding," *Asilomar Conf. on Signals, Systems, and Computers*, Pacific Grove, CA, Nov. 1998.

301. E. Serpedin, G. B. Giannakis, A. Chevreuil, 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.

302. A. Chevreuil, 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.

303. 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.

304. 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.

305. 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.

306. 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.

307. 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.

308. 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.

309. 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.

310. 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.

311. E. Serpedin, "SVD-Based Identification of State-Space Models," 3rd Prize at the *1991 Annual Student Conference*, Polytechnic Inst. of Bucharest, Romania, 1991.

312. 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.
19. E. Serpedin, "Artificial Intelligence-Driven Technologies for Smart Grids and Biomedical Application," Seminar Talk at Doctoral School of Electronics, Telecommunications and Information Technology Politehnica University of Bucharest, Nov. 4, 2021.
20. E. Serpedin, "Detection of Cyber-attacks in Large-Scale Smart Power Grids," TASC Seminar, Nov. 2021.
21. E. Serpedin and M. Shaqfeh, "Artificial Intelligence-Driven Technologies for Biomedical and Smart Grid Applications", TASC Seminar, TAMUQ, Nov. 2021.
22. E. Serpedin, "AI-Guided Anomalies Detection in Large-Scale Smart Power Grids," QCRI Seminar, Nov. 2021.

Research Areas Investigated and Some Representative Papers:

- **AI and Machine Learning for Cybersecurity of Smart Grids**
  1. A. Takiddin, M. Ismail and E. Serpedin, "Robust Data-Driven Detection of Electricity Theft Adversarial Evasion Attacks in Smart Grids," IEEE Transactions on Smart Grid, vol. 14, no. 1, pp. 663-676, Jan. 2023, doi: 10.1109/TSG.2022.3193989.
  2. O. Boyaci, A. Umunnakwe, A. Sahu, M. R. Nariman, M. Ismail, K. Davis and E. Serpedin, "Graph Neural Networks Based Detection of Stealth False Data Injection Attacks in Smart Grids," IEEE Systems Journal, vol. 16, no. 2, pp. 2946-57, June 2022, doi: 10.1109/JSYST.2021.3109082.
  3. A. Takiddin, M. Ismail, U. Zafar and E. Serpedin, "Deep Autoencoder-Based Anomaly Detection of Electricity Theft Cyberattacks in Smart Grids," IEEE Systems Journal, vol. 16, no. 3, pp. 4106-4117, Sept. 2022, doi: 10.1109/JSYST.2021.3136683.
  4. O. Boyaci, M. R. Narimani, K. R. Davis, M. Ismail, T. J. Overbye and E. Serpedin, "Joint Detection and Localization of Stealth False Data Injection Attacks in Smart Grids Using Graph Neural Networks," IEEE Transactions on Smart Grid, vol. 13, no. 1, pp. 807-819, Jan. 2022, doi: 10.1109/TSG.2021.3117977.
- **Smart Power Grids**
  1. R. Atat, M. Ismail and E. Serpedin, "Limiting the Failure Impact of Interdependent Power-Communication Networks via Optimal Partitioning," in IEEE Transactions on Smart Grid, vol. 14, no. 1, pp. 732-745, Jan. 2023, doi: 10.1109/TSG.2022.3188648.
  2. R. Atat, M. Ismail, S. S. Refaat, E. Serpedin and T. Overbye, "Cascading Failure Vulnerability Analysis in Interdependent Power Communication Networks," in IEEE Systems Journal, vol. 16, no. 3, pp. 3500-3511, Sept. 2022, doi: 10.1109/JSYST.2021.3128698.
  3. R. Atat, M. Ismail, S. S. Refaat, E. Serpedin and T. Overbye, "Cascading Failure Vulnerability Analysis in Interdependent Power Communication Networks," IEEE Systems Journal, 2021, doi: 10.1109/JSYST.2021.3128698.
- **Electric Vehicle Charging/Discharging Policies**
  1. M. Wang, M. Ismail, R. Zhang, X. Shen, E. Serpedin, K. Qaraqe, "Spatio-Temporal Coordinated V2V Fast Charging Strategy for Mobile GEVs via Price Control," IEEE Transactions on Smart Grid Year: 2017, Volume: PP, Issue: 99. : DOI 10.1109/TSG.2016.2593667.
  2. M. Wang, M. Ismail, X. Shen, E. Serpedin, and K. Qaraqe, "Spatial and temporal online charging/discharging coordination of mobile PEVs" , *IEEE Wireless Communications,* vol. 22, no. 1, 2015, DOI: 10.1109/MWC.2015. 7054726.
  3. A.B.T Sherif, M. Ismail, M. Mahmoud, K. Akkaya, E. Serpedin, and K. Qaraqe, "Privacy preserving power charging coordination scheme in the smart grid," in "Transportation and Power Grid in Smart Cities: Communication Networks and Services", Wiley, in Press.
- **AI and Machine Learning for Computational Imaging**
  1. O. Boyaci, E. Serpedin, and M. A. Stotland, "Personalized quantification of facial normality: a machine learning approach," *Nature-Scientific*

Reports, 2020 Dec 7; 10 (1): 21375. doi: 10.1038/s41598-020-78180-x. PMID: 33288815; PMCID: PMC7721909.

2. A. Takiddin, M. Shaqfeh, O. Boyaci, E. Serpedin, and M.A. Stotland, "Toward a Universal Measure of Facial Difference Using Two Novel Machine Learning Models," Plastic and Reconstructive Surgery - Global Open; January 2022, Vol. 10, Issue 1, p e4034, doi: 10.1097/GOX.0000000000004034.
3. A. Hayajneh, M. Shaqfeh, E. Serpedin, M. Stotland, "Unsupervised Anomaly Appraisal of Cleft Faces Using a StyleGAN2-based Model Adaptation Technique," Plos One, Oct. 2022 (submitted).
4. A Hayajneh, M Shaqfeh, E Serpedin, MA Stotland, "Unsupervised Anomaly Appraisal of Cleft Faces Using a StyleGAN2-based Model Adaptation Technique," arXiv preprint arXiv:2211.06659, CVPR 2023 (submitted).

- **Systems Biology**
  1. A. Noor, A. Ahmad, E. Serpedin, M. Nounou and H. Nounou, "ROBNCA: Robust Network Component Analysis for Recovering Transcription Factor Activities," *Bioinformatics*, Oxford Univ. Press, 2013 Oct 1; 29(19):2410- 8. doi: 10.1093/bioinformatics/btt433.
  2. F. Hsu, E. Dougherty, Y. Chen, and E. Serpedin, "Estimating conditional probabilities for the detection of unfavorable copy number alterations in targeted therapy," *IEEE Trans. on Biomedical Engineering*, vol. 60, no. 10, October 2013.
  3. W. Zhao, E. Serpedin, and E. Dougherty, "Inferring Connectivity of Genetic Regulatory Networks Using Information Theoretic Criteria," *IEEE/ ACM Trans. on Computational Biology and Bioinformatics,* vol. 5, no. 2, pp. 262 - 274, April-June 2008.
  4. 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.
  5. A. Noor, E. Serpedin, M. Nounou, and H. Nounou, "An Overview of the Statistical Methods for Inferring Gene Regulatory Networks and Protein-Protein Interaction Networks," *Advances in Bioinformatics,* Vol. 2013, Article ID 953814, 12 pages. http://dx.doi.org/10.1155/2013/ 953814
  6. F.H. Hsu, E. Serpedin, Y. Chen and E. Dougherty, "Evaluating Dynamic Effects of Copy Number Alterations on Gene Expression Using a Single Transcription Model," *IEEE Trans. on Biomedical Engineering*, vol. 59, no. 10, pp. 2726-2736, Oct. 2012.
  7. 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 Trans. on Biomedical Engineering,* vol. 59, no. 1, Jan. 2012, pp. 272 - 280.
  8. 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,* vol. 9, no. 4, pp. 1203-1211, 2012.
  9. 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,* Springer, Vol. 2008, Article ID 248747, 12 pages.

10. A. Noor, E. Serpedin, H. Nounou and M. Nounou, "ROBNCA: Robust Network Component Analysis for Recovering Transcription Factor Activities", *2013 IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS 2013)*, **Best Paper Award**, Houston, TX, Nov. 2013.
11. A Noor, A. Ahmad, B. Wajid, E. Serpedin, M. Nounou and H. Nounou, "A Closed-Form Solution for Transcription Factor Activity Estimation using Network Component Analysis," *1st International Conference on Algorithms for Computational Biology - AlCoB 2014,* Tarragona, Spain, July 2014.

- **Computational Biology and Bioinformatics**

1. B. Wajid and E. Serpedin, "Optimal Reference Selection for Genome Assembly using Minimum Description Length Principle", *EURASIP Journal on Bioinformatics and Systems Biology,* Springer OA, Nov. 2012, (1):18.
2. B. Wajid, E. Serpedin, M. Nounou, and H. Nounou, "MARAGAP - A Modular Approach to Reference Assisted Genome Assembly Pipeline" *Int. J. Computational Biology and Drug Design,* Inderscience Publishers, 2015 (accepted).
3. B. Wajid and E. Serpedin, "Do it yourself guide to genome assembly," *Briefings in Functional Genomics,* Oxford University Press, doi:10.1093/ bfgp/ elu042, Nov. 2014.
4. B. Wajid and E. Serpedin, "Life sciences driven customized Linux distributions," *OA Bioinformatics,* 2014, Jan 18; 2(1):1.
5. B.Wajid* and E. Serpedin, "Review of General Algorithmic Features for Genome Assemblers for Next Generation Sequencers," *Genomics, Proteomics & Bioinformatics,* Elsevier, 2012 Apr;10(2):58-73. doi: 10.1016/ j.gpb.2012.05. 006. Epub 2012 Jun 9.
6. W. Zhao, E. Serpedin, and E. Dougherty, "Spectral Preprocessing for Clustering Time Series Gene Expressions," *Eurasip Journal on Bioinformatics and Systems Biology*, Springer, Vol. 2009, Article ID 713248, 10 pages.
7. 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.
8. W. Zhao, E. Serpedin, and E. Dougherty, "Identifying Cell Cycle Involved Genes By Combining Gene Expression Analysis and Prior Knowledge," *Eurasip Journal on Bioinformatics and Systems Biology,* Springer, Vol. 2009, Article ID 683463, 9 pages.
9. 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.
10. 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*, Springer, Vol. 2008, Article ID 248747, 12 pages.

11. A. Noor, E. Serpedin, M. Nounou, H. Nounou, L. Chouchane, "Information theoretic methods for modeling of gene regulatory networks," *2012 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB),* San Diego, CA, May 2012, pp. 418 - 423.
12. 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 2011),* Dec. 2011, San Antonio, TX.
13. W. Zhao, K. Ajepong, E. Serpedin, E. Dougherty, "Reconstruction of genetic regulatory networks based on the posterior probabilities of gene regulations," *2007 IEEE International Conference on Acoustics, Speech and Signal Processing - ICASSP 2007.*
14. W. Zhao, E. Serpedin, and E. Dougherty, "Recovering genetic regulatory networks by integrating multiple data sources," *2007 IEEE International Workshop on Genomic Signal Processing and Statistics - Gensips 2007*, June 2007.
15. W. Zhao, E. Serpedin, and E. Dougherty, "Information theoretic inference of direct gene regulation from time series data," *IEEE International Workshop on Genomic Signal Processing and Statistics - GENSIPS 2006*, Conference, College Station, TX, May 2006.

- **Cancer Genomics**

1. C. Ma, Sastry K.S., Flore M., Gehani S., Al-Bozom I., Feng Y., Serpedin E., Chouchane L., Chen Y., Hwang Y., "CrossLink: A novel method for cross-condition classification of cancer subtypes," *BMC Genomics*, 2016 17(Suppl 7):549, GICS-D-12-00099, DOI: 10.1186/ s12864-016-2903-z
2. FH Hsu, E. Serpedin, TH Hsiao, AJ Bishop, E. Dougherty, Y. Chen, "Reducing confounding and suppression effects in TCGA data: an integrated analysis of chemotherapy response in ovarian cancer," *BMC Genomics,* 2012; 13 Suppl 6:S13. doi: 10.1186/1471-2164-13-S6-S13. Epub 2012 Oct 26.
3. F.H. Hsu, E. Serpedin, Y. Chen and E. Dougherty, "Evaluating Dynamic Effects of Copy Number Alterations on Gene Expression Using a Single Transcription Model," *IEEE Trans. on Biomedical Engineering*, vol. 59, no. 10, pp. 2726-2736, Oct. 2012.
4. F. Hsu, E. Dougherty, Y. Chen, and E. Serpedin, "Estimating conditional probabilities for the detection of unfavorable copy number alterations in targeted therapy," *IEEE Trans. on Biomedical Engineering*, vol. 60, no. 10, October 2013.
5. 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 Trans. on Biomedical Engineering,* vol. 59, no. 1, Jan. 2012, pp. 272 - 280.
6. K. Sastry, C. Ma, I. Aigha, I. Al-Bozom, S. Gehani, E. Serpedin, Y. Huang, Y. Chen, N. Mohamed, and L. Chouchane, "Gene Expression Profiling of Breast Cancer in Arab Populations," *105th Annual Meeting of the American Association for Cancer Research (AACR 2014)*, April 5-9, 2014, San Diego, California.
7. 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 2011),* Dec. 2011, San Antonio, TX.

8. 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 2011),* Dec. 2011, San Antonio, TX.
9. 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**).
10. 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," *2010 IEEE International Workshop on Genomic Signal Processing and Statistics - Gensips 2010*, Nov. 2010.

- **Metagenomics**
  1. M. AlShawaqfeh, Wajid B, Minamoto Y, Markel M, Lidbury JA, Steiner JM, Serpedin E, Suchodolski JS., "A dysbiosis index to assess microbial changes in fecal samples of dogs with chronic inflammatory enteropathy," FEMS Microbiol Ecol., 2017 Oct 11. doi: 10.1093/femsec/fix136. [Epub ahead of print] PMID: 29040443
  2. M. Alshawaqfeh, Bashaireh A, Serpedin E, Suchodolski J., "Reliable Biomarker discovery from Metagenomic data via RegLRSD algorithm," BMC Bioinformatics, 2017 Jul 10;18 (1):328. doi: 10.1186/s12859-017-1738-1. PMID: 28693478
  3. M. Alshawaqfeh, Serpedin E, Younes AB, "Inferring microbial interaction networks from metagenomic data using SgLV-EKF algorithm," BMC Genomics, 2017 Mar 27;18(Suppl 3):228. doi: 10.1186/s12864-017-3605-x. PMID: 28361680
  4. M. Alshawaqfeh, Bashaireh A, Serpedin E, Suchodolski J., "Consistent metagenomic biomarker detection via robust PCA," Biology Direct, 2017 Jan 31; 12 (1):4. doi: 10.1186/s13062-017-0175-4. PMID: 28143486
  5. M Alshawaqfeh, S Rababah, A Hayajneh, A Gharaibeh and E Serpedin, "MetaAnalyst: a user-friendly tool for metagenomic biomarker detection and phenotype classifcation," BMC Medical Research Methodology, (2022) 22:336, https://doi.org/10.1186/s12874-022-01812-5.

- **Modeling and Radio Access for In-Vivo Communications**
  1. AF Demir, Abbasi QH, Ankarali ZE, Alomainy A, Qaraqe K, Serpedin E, Arslan H, "Anatomical Region-Specific In Vivo Wireless Communication Channel Characterization," IEEE J Biomed Health Inform., 2017 Sep; 21(5):1254-1262. doi: 10.1109/JBHI.2016.2618890. Epub 2016 Oct 18. PMID: 27810839.
  2. AF Demir, Z. Ankarali, QH Abbasi, Y Liu, E Serpedin, H Arslan, and RD Gitlin, "State of the Art of In Vivo Wireless Communication Channels", *IEEE Vehicular Technology Magazine,* Year: 2016, Volume: 11, Issue: 2, Pages: 32 - 42, DOI: 10.1109/ MVT.2016.2520492.

3. M. Qaraqe, Q.H. Abbasi, A. Alomainy, and E. Serpedin, "Experimental Evaluation of MIMO Capacity for Ultrawideband Body-Centric Wireless Propagation Channels," *IEEE Antennas and Wireless Propagation Letters*, vol. 13, 2014, pp. 495 - 498.
4. Q. Abbasi, MU Rehman, X. Yang, A. Alomainy, K. Qaraqe and E. Serpedin, "Ultra Wideband Band-notched Flexible Antenna for Wearable Applications," *IEEE Antennas and Wireless Propagation Letters,* vol. 12, pp. 1606 - 1609, doi: 10.1109/LAWP.2013.2294214, Dec. 2013.
5. Q.H. Abbasi, M. Qaraqe and E. Serpedin, "Experimental Evaluation of MIMO Capacity for Ultra Wideband Body-Centric Wireless Propagation Channels," *IEEE Antennas and Wireless Propagation Letters,* Jan. 2014.
6. Q. H. Abbasi, Marwa Qaraqe, Erchin Serpedin, and M. U. Rehman, "Ultra wideband in vivo radio channel characterization and system modeling," *IMWS Bio2014: IEEE MTT-S International Microwave Workshop Series on RF and Wireless Technologies for Biomedical and Healthcare Applications*, Dec. 2014, London, UK.
7. Q. H. Abbasi, M. Qaraqe, E. Serpedin, H. Arsalan and R. Gitlin, "Ultra wideband parametric channel model for in body communication," *IMWS Bio2014: IEEE MTT-S International Microwave Workshop Series on RF and Wireless Technologies for Biomedical and Healthcare Applications*, Dec. 2014, London, UK.
8. Q H. Abbasi, Marwa Qaraqe, H. Arsalan and Erchin Serpedin, "Stochastic MIMO for In-VIVO communicational", *MobiHealth 2014: International Conference on Wireless Mobile Communication and Healthcare*, Athens, Greece, Nov. 2014.
9. A. F. Demir, Q. H. Abbasi, Z. E. Ankarali, E. Serpedin, H. Arslan, "Numerical Characterization of In Vivo Wireless Communication Channels," *IMWS Bio2014: IEEE MTT-S International Microwave Workshop Series on RF and Wireless Technologies for Biomedical and Healthcare Applications*, Dec. 2014, London, UK.
10. Q.H. Abbasi, M. Qaraqe, and E. Serpedin, "Experimental Investigation of Channel Capacity and Correlation in Multi-Element Antennas for BCWN," *2014 IEEE International Symposium on Medical Measurements and Applications,* Lisbon, Portugal, June 2014.
11. H. A. Qammer, M. Qaraqe, A. Alomainy, and E. Serpedin, "Second Order Statistics of Ultra Wideband On-Body Diversity Channels," *IEEE Wireless Communications and Networking Conference - WCNC 2014*, Istanbul, Turkey, April 2014.
12. Q. H. Abbasi, M. Qaraqe, and E. Serpedin, "Numerical Characterisation and Modeling of In-Vivo Radio Communication," *2nd Middle East Conference on Biomedical Engineering,* Doha, Qatar, Febr. 2014.

- **Computational Neuroscience**
  1. M. Qaraqe, M. Ismail, and E. Serpedin, "Band-sensitive seizure onset detection via CSP-enhanced EEG features," Epilepsy and Behavior, no. 50, pp. 77-87, 2015.
  2. M. Qaraqe, M. Ismail, E. Serpedin, and Haneef Zulfi, Epileptic seizure onset detection based on EEG and ECG data fusion, Epilepsy and Behavior, Elsevier, vol. 58, pp. 48-60, Feb. 2016. DOI: 10.1016/j.yebeh.2016.02.039.

3. M. Qaraqe, M. Ismail, Q. Abbasi, and E. Serpedin, "Channel selection and feature enhancement for improved epileptic seizure onset detection," *MobiHealth - 4th International Conference on Wireless Mobile Communication and Healthcare*, Nov. 2014, Athens, Greece.
4. M. Qaraqe, M. Ismail, E. Serpedin, "Patient-specific seizure onset detection via neural synchrony," *Qatar Foundation Annual Research Conference (ARC),* Nov. 2014, Doha, Qatar.

- **Microbiota and Metabolites in Inflammatory Bowel Disease**
  1. M. Alshawaqfeh, B. Wajid, M. Guard, Y. Minamoto, JA Lidbury, JM Steiner, E. Serpedin, JS. Suchodolski, "Development of a dysbiosis index to assess microbial changes in fecal samples of dogs with chronic enteropathy", *Journal of Veterinary Internal Medicine*, 2016 Jul-Aug; 30(4): 15201551. doi: 10.1111/jvim.13963
  2. M. AlShawaqfeh, Wajid B, Minamoto Y, Markel M, Lidbury JA, Steiner JM, Serpedin E, Suchodolski JS., "A dysbiosis index to assess microbial changes in fecal samples of dogs with chronic inflammatory enteropathy," FEMS Microbiol Ecol., 2017 Oct 11. doi: 10.1093/femsec/fix136. [Epub ahead of print] PMID: 29040443
  3. JB Honneffer, MU Sohail, B Wajid, BC Guard, E Serpedin, JM Steiner, and JS Suchodolski, "Fecal Metabolite Alterations in Canine Inflammatory Bowel Disease," *Gut Microbiota Keystone Symposium 2015* (submitted Oct. 2014).
  4. M. Sohail, B. Wajid, J. Kintzinger, J. Honneffer, E. Serpedin, and J. Suchodolski, "Understanding the Dynamics of Ulcerative Colitis," *3rd World Congress on Targeting Microbiota*, Institut Pasteur, Paris, Oct. 2015 (submitted Sept. 2014).
- **Information Theory**
  1. S. Park, E. Serpedin, and K. Qaraqe, "On the equivalence between Stein identity and de Bruijn identity, *IEEE Trans. On Information Theory*, vol. 58, no. 12, pp. 7045 - 7067, Dec. 2012.
  2. S. Park, E. Serpedin, and K. Qaraqe, "Gaussian Assumption: the Least Favorable but the Most Useful," *IEEE Signal Processing Magazine,* vol. 30, no. 3, May 2013.
  3. S. Park, E. Serpedin, and K. Qaraqe, An alternative proof of an extremal inequality, Available online: arxiv.org/pdf/1201. 6681v5.pdf
  4. S. Park, E. Serpedin, and K. Qaraqe, "A Unifying Variational Perspective on Some Fundamental Information Theoretic Inequalities," *IEEE Trans. on Information Theory*, vol. 59, no. 11, 2013, pp. 7132-7148. Correction Note in *IEEE Transactions on Information Theory*, Year: 2016, Volume: 62, Issue: 7 Pages: 4356 - 4357, DOI: 10.1109/TIT.2016.2568208
  5. X. Wang, E. Serpedin, and K. Qaraqe, "A Variational Approach for Assessing the Capacity of a Memoryless Nonlinear MIMO Channel," *IEEE Communications Letters*, Vol. 18 , Issue: 8, 2014, pp. 1315 - 1318.
- **Green Communications**
  1. M. Ismail, M. Shakir, E. Serpedin, and K. Qaraqe, *Green Heterogeneous Wireless Networks*, Wiley-IEEE Press, ISBN 978-1-119-08805-9, 2016 (research monograph, 272 pages).

2. MZ Shakir, M. Ismail, X. Wang, K.A. Qaraqe, E. Serpedin, "From D2D to Ds2D: Prolonging the Battery Life of Mobile Devices via Ds2D Communications," IEEE Wireless Communications, Year: 2017, Volume: 24, Issue: 4 Pages: 55 - 63. DOI: 10.1109/MWC.2017.1600348. Impact Factor: 8.972.
3. M. Kashef, M. Ismail, E. Serpedin, and K. Qaraqe, Balanced dynamic planning in green heterogeneous cellular networks, *IEEE Journal on Selected Areas of Communications*, Series on Green Communications and Networking. Year: 2016, Volume: 34, Issue: 12 Pages: 3299 - 3312, DOI: 10.1109/ JSAC.2016.2624098. Impact Factor: 8.085.
4. M. Kashef, M. Ismail, M. Abdallah, K. Qaraqe, and E. Serpedin, Energy Efficient Resource Allocation for Mixed RF/VLC Heterogeneous Wireless Networks, IEEE Journal on Selected Areas of Communications, vol. 34, no. 4, pp. 883-893, April 2016. DOI: 10.1109/JSAC.2016.2544618.
5. M. Ismail, E. Serpedin, and K. Qaraqe, "Cooperation incentives and downlink radio resource allocation for green communications in a heterogeneous wireless environment," *IEEE Trans. Vehicular Communications,* 2016, vol. 65, no. 3, DOI: 10.1109/ TVT.2015.2409191.
6. M. Ismail, W. Zhuang, E. Serpedin, and K. Qaraqe, "A Survey on Green Mobile Networking: From the Perspectives of Network Operators and Mobile Users," *IEEE Communications Surveys & Tutorials,* vol. 17, no. 3, pp. 1535-1556, 2015.
7. M. Ismail, M. Kashef, E. Serpedin, and K. Qaraqe, "On balancing energy efficiency for network operators and mobile users in dynamic planning," *IEEE Communications Magazine, Green Communications and Computing Networks Series,* 2015, Volume: 53, Issue: 11, Pages: 158 - 165, DOI: 10.1109/ MCOM.2015.7321986.

- **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,* Springer, vol. 2008, Article ID 136939, doi:10.1155 /2008/136939, Dec. 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, Jan. 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, Pages 504-520, 2009 ISSN:1051-2004 .
6. Q. Chaudhari, E. Serpedin, and K. Qaraqe, "On minimum variance un-

biased 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,* Vol. 4, Issue 6, Nov. 2005, pp. 2751 - 2763.

- **Synchronization of 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, 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,* Springer, Vol. 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 Receivers," *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,* Vol. 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,* Vol. 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,* Vol. 55, Issue 2, Jan. 2007, pp: 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, Sept. 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, Sept. 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.
- **Relaying Systems**
  1. Y. Zhang, J. Ge, and E. Serpedin, "Performance Analysis of a 5G Energy-Constrained Downlink Relaying Network With Non-Orthogonal Multiple Access", IEEE Trans. on Wireless Communications, (accepted for publication Oct. 2017). Year: 2017, Volume: PP, Issue: 99.
  2. L. Yang, K. Qaraqe, E. Serpedin, and X. Gao, "Performance Analysis of Two-Way Relaying Networks with the Nth Worst Relay Selection Over Various Fading Channels," *IEEE Trans. on Vehicular Technology,* vol. 64, no. 7, pp. 3321-3327, 2015.
  3. L. Yang, K. Qaraqe, E. Serpedin, M. Alouini, "Performance Analysis of Distributed Beamforming in a Spectrum Sharing System," *IEEE Trans. on Vehicular Technology*, vol. 62, no. 4, April 2013, pp. 1655 - 1666.
  4. L. Yang, K. Qaraqe, E. Serpedin, and X. Gao, "Performance Analysis of Two-Way Relaying Networks with the N^{th} Worst Relay Selection Over Various Fading Channels," *IEEE Trans. on Veh. Technology*, Year: 2015, Volume: 64, Issue: 7 Pages: 3321 - 3327, DOI: 10.1109/TVT.2014.2352252.
  5. L. Yang*, K. Qaraqe, E. Serpedin, M.S. Alouini, "Performance Analysis

of Amplify-and-Forward Two-Way Relaying with Co-Channel Interference and Channel Estimation Error," *IEEE Trans. on Communications*, vol. 61, no. 6, June 2013, pp. 2221-2231.

- **Wireless Heterogeneous Networks**

  1. M. Kashef, M. Ismail, E. Serpedin, and K. Qaraqe, Balanced dynamic planning in green heterogeneous cellular networks, *IEEE Journal on Selected Areas of Communications*, Series on Green Communications and Networking. Year: 2016, Volume: 34, Issue: 12 Pages: 3299 - 3312, DOI: 10.1109/ JSAC.2016.2624098. Impact Factor: 8.085.
  2. A. Ekti, X. Wang, M. Ismail, E. Serpedin, and K. Qaraqe, "Joint User Association and Data Rate Allocation in Heterogeneous Wireless Networks" , *IEEE Trans. On Vehicular Technology,* Volume: 65, Issue: 9, Sept. 2016, pp. 7403 - 7414.
  3. M. Kashef, M. Ismail, M. Abdallah, K. Qaraqe, E. Serpedin, "Energy Efficient Resource Allocation for Mixed RF/VLC Heterogeneous Wireless Networks", *IEEE Journal on Selected Areas for Communications (015 JSAC Energy-Efficient Techniques for 5G Wireless Communication Systems special issue)*-accepted for publication Dec. 2015: under print 2016.
  4. M. Ismail, Amila T. Gamage, W. Zhuang, X. Shen, E. Serpedin, and K. Qaraqe, "Uplink decentralized joint bandwidth and power allocation for energy-efficient operation in a heterogeneous wireless medium", *IEEE Trans. Communications,* vol. 63, no. 4, pp. 1483-1495, 2015.
  5. M. Marzban, M. Ismail, M. Abdallah, M. Khairy, K. Qaraqe, and E. Serpedin, "IDC interference-aware resource allocation for LTE/WLAN heterogeneous networks," *IEEE Wireless Communications Letters,* vol. 4, no. 6, pp. 581-584, 2015.
  6. AR Ekti, M Shakir, E Serpedin, K Qaraqe and M Imran, "On the Traffic Offloading in Wi-Fi Supported Heterogeneous Wireless Networks," *Springer Journal of Signal Processing Systems-Special Issue for Ultra High Performance and High Efficiency in 5G Mobile Networks,* October 2015. , pp. 1-16, Online ISSN 1939-8115. DOI 10.1007/s11265-015-1064-7, Print ISSN 1939-8018.

- **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 Nonlinearly 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, Sept. 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.
- **Cognitive Radio Networks**
  1. 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,* vol. 60, no. 9, pp. 4758- 4774, Sept. 2012.
  2. S. Ekin, M. M. Abdallah, K. A. Qaraqe, and E. Serpedin, "A Study on Inter-cell Subcarrier Collisions in OFDM-Based Cognitive Radio Networks," *IEEE Trans. on Communications*, vol. 61, no. 5, May 2013, pp. 1695 - 1707.
  3. 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*, 2011, Wiley Online. DOI: 10.1002/wcm.1082.

- **Electronic Interception and Recognition**

  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. Reza-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, Sept. 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. 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.
3. 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.
4. 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.

- **Inverse Problems and Blind Deconvolution**

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.