

Dr. Sherif Ismail Elsanadily

Email: Sherif_elsanadily@yahoo.com



Education

Bachelor of Science in Electrical Engineering– Communications and radar Systems Engineering (2000)

Military Technical College, Egypt

M.Sc. in Electrical Engineering– Communications (2012)

Faculty of Engineering, Helwan University, Egypt

Ph.D in Electrical Engineering– Communications (2018)

Faculty of Engineering, Helwan University, Egypt

Ph.D. Study

Ph.D. Department of Electronics, Communications and Computers, Faculty of Engineering, Helwan University.

Dissertation: Improving the Performance of Generalized Low Density Parity Check Codes.

Dissertation Context:

Developing fast, efficient and robust error control schemes for various channel models. Introducing novel decoding techniques for high-rate low-error applications

M.Sc. Study

M.Sc. Department of Electronics, Communications and Computers, Faculty of Engineering, Helwan University.

Thesis: Direction Of Arrival Estimation Using Modern Signal Processing Techniques .

Thesis Context:

* Introducing high-resolution signal parameter estimation in many signal processing applications.

* Proposing a novel method to solve the problem of stationary and moving DOA estimation (system identification and time series analysis) in communications and radar systems.

Work Experience

1/2019 – Now

A Staff Member in the Department of Communication Engineering, Egyptian Academy for Engineering And Advanced Technology (EAE&AT), Cairo, Egypt

Retired Military engineer (18 years in Air Defense Forces):

Dispatched engineer in ITT, Radar Systems, Gilfillan, USA.

¥ Radar System Engineer - Environment Analysis & communications channels Modeling

¥ Responsible for all radar technical missions + Performing regular system upgrades and routine maintenance.

¥ Providing support to the IT staff to correct communications issues.

¥ Development of communications and IT equipments (solely responsible for its implementation in conjunction with IFF, BAE systems).

¥ Integration of air defense surveillance systems with EMA, CANC, ATC, AIS and NANSO Headquarters.

Additional Skills

¥ Statistical modeling, Mathematical Tools, Software Capabilities (C/C++, Matlab).

Teaching Experience

¥ Communications Theory and Systems.

¥ Wireless and Mobile Communications.

¥ Satellite Communication Systems.

¥ Radar Theory, Design and Systems.

Points of Current Research Interest

Space–Time Coded Modulation, Turbo Codes, LDPC codes and Multicarrier modulation for high speed transmission in 4G.

Attended Conferences

1. The IEEE CS, The 2011 International Conference on Multimedia and Signal Processing, CMSP, Guilin, China, pp. 65-70, May 2011.
2. The 15-th International conference on aerospace & aviation technology, Military Technical, college, Cairo, Egypt, 28-30 May 2013.
3. The 2017 IEEE 12th International Conference on Computer Engineering and Systems (ICCES), pp. 320-324, 2017.
4. The 2018 IEEE 13th International Conference on Computer Engineering and Systems (ICCES), 2018

Publications

I- Journals:

- 1- S. Elsanadily, A. Mahran and O. Elghandour, **Two-Side State-Aided Bit-Flipping Decoding of Generalized Low Density Parity Check Codes**, *IEEE Commun. Lett.*, vol. 21, no. 10, pp. 2122-2125, Oct. 2017.
- 2- S. Elsanadily, A. Mahran and O. Elghandour, **Classification-Based Algorithm for Bit-flipping Decoding of GLDPC Codes over AWGN Channels**, *IEEE Commun. Lett.*, vol. 22, no. 8, pp. 1520-1523, Aug. 2018.
- 3- S. Elsanadily, A. Mahran and O. Elghandour, **On the Performance of Chase Decoding of High-Rate Generalized LDPC Codes with BCH Constituent Codes**, *International Journal of Satellite Communications and Networking*, Wiley, 2018.

II- Conferences:

1. Sherif I. Elsanadily, Zaki B. Nossair, Hossam Eldin A. Badr, Osama M. Elghandour, “**Direction of Arrival Tracking under Various Degrees of Correlation**”, *IEEE CS, The 2011 International Conference on Multimedia and Signal Processing, CMSP, Guilin, China, pp. 65-70, May 2011.*
2. S. Elsanadily, A. Mahran and O. Elghandour, **Lowered-complexity soft decoding of generalized LDPC codes over AWGN channels**, *The 2017 IEEE 12th International Conference on Computer Engineering and Systems (ICCES)*, pp. 320-324, 2017.
3. S. Elsanadily, A. Mahran and O. Elghandour, **Improving the Decoding Performance of High-Rate GLDPC Codes in Low Error-Rate Applications**, *The 2018 IEEE 13th International Conference on Computer Engineering and Systems (ICCES)* pp.375-378, 2018.

Honors and Awards

*Awarded to the **best paper** in The IEEE 13th International Conference on Computer Engineering and Systems (ICCES), 2018.*