Mohammad Abdul Mobin

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EDUCATION

University of Arkansas, Fayetteville, Arkansas
PhD, Electrical Engineering, Jan 2023 - Current   GPA: 3.67
Bangladesh University of Engineering and Technology, Dhaka, Bangladesh
Bachelor of Science, Electrical and Electronic Engineering, 2016 -2021   GPA: 3.56

PROJECTS

Low Complexity OTFS Detection with a Delay-Doppler Domain MRC-MMSE Receiver We shuffled the delay-doppler domain symbols in a way that the channel matrix is block circulant. Each data block was combined via MRC and detected through MMSE detection.

On the Performance of Practical Pulse-Shaped OTFS with Analog Receivers Cross-ambiguity function for different practical pulse shapes was derived. Performance of the OTFS system with practical waveforms was similar to the system with ideal bi-orthogal waveform.

Oversampled Orthogonal Frequency Division Multiplexing in Doubly Selective Fading Channels Oversampling was employed in the time domain. System was modeled so that a symbol was being simultaneously transmitted via multiple subcarriers and different doppler spreads. With oversampling factor of two, this system outperforms OFDM by 7dB.

Performance Analysis of Wireless Systems with Doubly Selective Rayleigh Fading The system was modeled as cobination of several correlated flat fading channels. Correlation was dependent on factors like the sampler timing offset,max doppler spread, power delay profile. Closed form error equation took account of the fractionally spaced equalizer.

Optimal Diversity Combining Based on Noisy Channel Estimation Optimal receiver was designed for MPSK modulation for both Rayleigh and Rician Fading channels. Closed-form equations for bit-error probability was derived and compared with the simulation results

PUBLICATIONS

Performance Analysis of GMSK and Chirp-Binary Orthogonal Keying in AWGN and Multipath Fading Channels, 2020 11th International Conference on Electrical and Computer Engineering (ICECE), Mobin, Mohammad Abdul and Islam, Mahmudul and Rahman, Md. Saifur

SKILLS

MATLAB, Communication system design, Analysis and Simulation

EXPERIENCE

Graduate Assistant   University of Arkansas
Jan 2023 - Current   Fayetteville, Arkansas
TA for labs: Senior Design; Electronics 1; Signals and Systems

Executive   DBL Group
Feb 2022 - Dec 2022   Dhaka Bangladesh
Project Planning, Electrical Design of Factories

Lecturer   Canadian University of Bangladesh
Nov 2021 - Jan 2022   Dhaka Bangladesh

INTERESTS   Music, Guitar, Movies, Books