Programs

Final11.m: the first part of problem 1
Final12.m: the second part of problem 1
Final11_extra.m simulation with binary BCH code
Final12_extra.m simulation in barrage noise jamming and AWGN
Final21.m: the first part of problem 2
Final22.m: the second part of problem 2
Final21_extra.m simulates a pre-detection selective combining diversity receiver for Rayleigh fading channels
Final31.m: the first part of problem 3 using DS-CDMA
Final32.m: the second part of problem 3 using DS-CDMA
Final31_fh.m: the first part of problem 3 using slow FH-MA
Final32_fh.m: the second part of problem 3 using slow FH-MA

Functions

Awgn.m: adds additive white Guassian noise to signal
Awgn_complex.m: adds complex additive white Gaussian noise to input signal
Bingen.m: generates random +1/-1 sequence
Fade.m: generates Rayleigh fading
Fade_fs.m: generates frequency selective Rayleigh fading.
Fade_diversity.m: generates two channels of Rayleigh fading.
Fh.m: generates orthogonal complex exponential matrix for slow FH-MA
Ds_mod.m: DS_SS modulation
Ds_demod.m: DS_SS demodulation