
Homework III

1. (20%) Implement an m-sequence generator with a degree of 10. (Specify the employed generator polynomial.) Verify that the output sequence is indeed an m-sequence (based on the properties of m-sequences).
 2. (20%) According to (1), devise a generator that has two output sequences with an arbitrary phase difference in chips. (The phase difference can be input by users.) Verify that the phase difference is correct.
 3. (20%) Based on the generator obtained in (2), evaluate the discrete partial autocorrelation with a window size of $W = 50, 100, 200, \text{ and } 500$ for different initial points. Evaluate the mean and variance via simulation, and compare the results for different values of W .
- Due date: **4/29**, (Submit your report during the class and mail your program to the TA.) TWNTHUCOM5160@gmail.com