**CS 5197/6097 Wireless and Mobile Networking**

**Homework No. 3 dated Wednesday September 06, 2017**

**P4.3** If the code generator polynomial is *g*(*x*) = 1 + *x*2 for a (5, 3) code. Find the linear block code generator matrix *G*.

**P4.6** Find the linear block code generator matrix *G*, if the code generator polynomial is *g*(*x*) = 1 + *x*2 + *x*3 for a (7, 4) code.

**P4.7** Repeat Problem **P4.6** if *g*(*x*) = 1 + *x*3 for a (7, 4) code.

**P 5.4** If each user keeps a traffic channel busy for an average of 5% time and an average of 60 requests per hour is generated, what is the Erlang value?

**P 5.7** The size and shape of each cluster in a cellular need to be designed carefully to cover adjacent spoke in a non-overlapped manner. Define such patterns for the following cluster sizes:

1. 4-cell
2. 9-cell
3. 13-cell
4. 37-cell