**Programming Assignment 1**

EE548: Matrix computations for signal processing

Due date: ~ 2023/03/23, 23:59

1. Introduction

In this assignment, you will implement a standard normal random vector generator and a multivariate normal random vector generator. For detailed requirements, please follow the comments in the MATLAB file. The parts of the code you need to implement are marked in comment as ‘Write down your code in the following block’.

1. Specifications

Language: MATLAB

Files:

* *standard\_normal.m*: Your custom standard normal random vector generator function
* *multivariate\_normal.m*: Your custom multivariate normal random vector generator function
* *test.m*: Compare custom functions with MATLAB's built-in function by plotting two-dimensional normal random samples. You should submit the result of the plot of this code. Do not modify this file.

1. Submission
2. Explain your code implementation with a single pdf file. Simple explanation is ok. Include the resulting plot of *test.m*.
3. The final submission would be a single zip file containing a single pdf file and all the matlab files. The name of the zip file should be ‘ID\_name.zip’, e.g. 20223303\_SeoungbinBae.zip