10.2.0 Processing of Random Signals

In this section, we will study what happens when a WSS random signal passes through a *linear time-invariant (LTI)* system. Such scenarios are encountered in many real-life systems, specifically in communications and signal processing. A main result of this section is that if the input to an LTI system is a WSS process, then the output is also a WSS process. Moreover, the input and output are jointly WSS. To better understand these systems, we will discuss the study of random signals in the frequency domain.