

Name : Mr.Prapas Satapongsat
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Concentration : Mechanical Engineering
Thesis Advisors : Assoc.Prof.Dr.Thanu Chouychai, Dr.Virat Chomkwah
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Abstract

In analyzing the real systems, all systems are non-linear and some of the systems can not be expressed in the mathematical form. In practice, input and output signals may be measured, then transfer function is determined and used to describe the system characteristics. Theoretical identification of non-linear system by using Gaussian Noise as an input is more suitable than other input signals but this assertion needs to be proved. The purpose of this thesis is to confirm and prove the above assertion by comparison between output signals from Gaussian Noise input and that from Impulse input signal. The results show that the linear systems can be correctly identified but the identification of non-linear systems are not suitably identified by Gaussian Noise.