Dynamic characterization of flexible vibrating structures using Adaptive Neuro-Fuzzy Inference System (ANFIS)

Abstract

Flexible plate structures have broad applications, ranging from industrial area to space technology. The demand for thin, flexible plate structure has rapidly increased due to industrial evolutions. However, this type of structure leads to high vibration. There are numerous research and study that have been conducted to analyze this problem. The aim of this study is to develop a model characterizing the vibration of a 2-dimensional flexible plate using Adaptive Neuro-fuzzy Inference System (ANFIS).