

Homework

Result of the vibration testing for a Free-Free beam is provided and shared with you (open the zip file). The dimensions of the beam, which is made from steel and all of the required information, can be concluded regarding to Figure (1). Furthermore, the experimentally obtained FRF's are shown in Figure (2). **You should obtain the modal properties of the system using all of the methods presented in the class and check it by the results obtained using FEM and theory.** (Remember that the cut of frequency of the low pass filter is equal to 500Hz. Furthermore, for help, you can find the result obtained using peak-picking method in the ICATS software in the zip file).



Figure1. Detail of the vibration testing

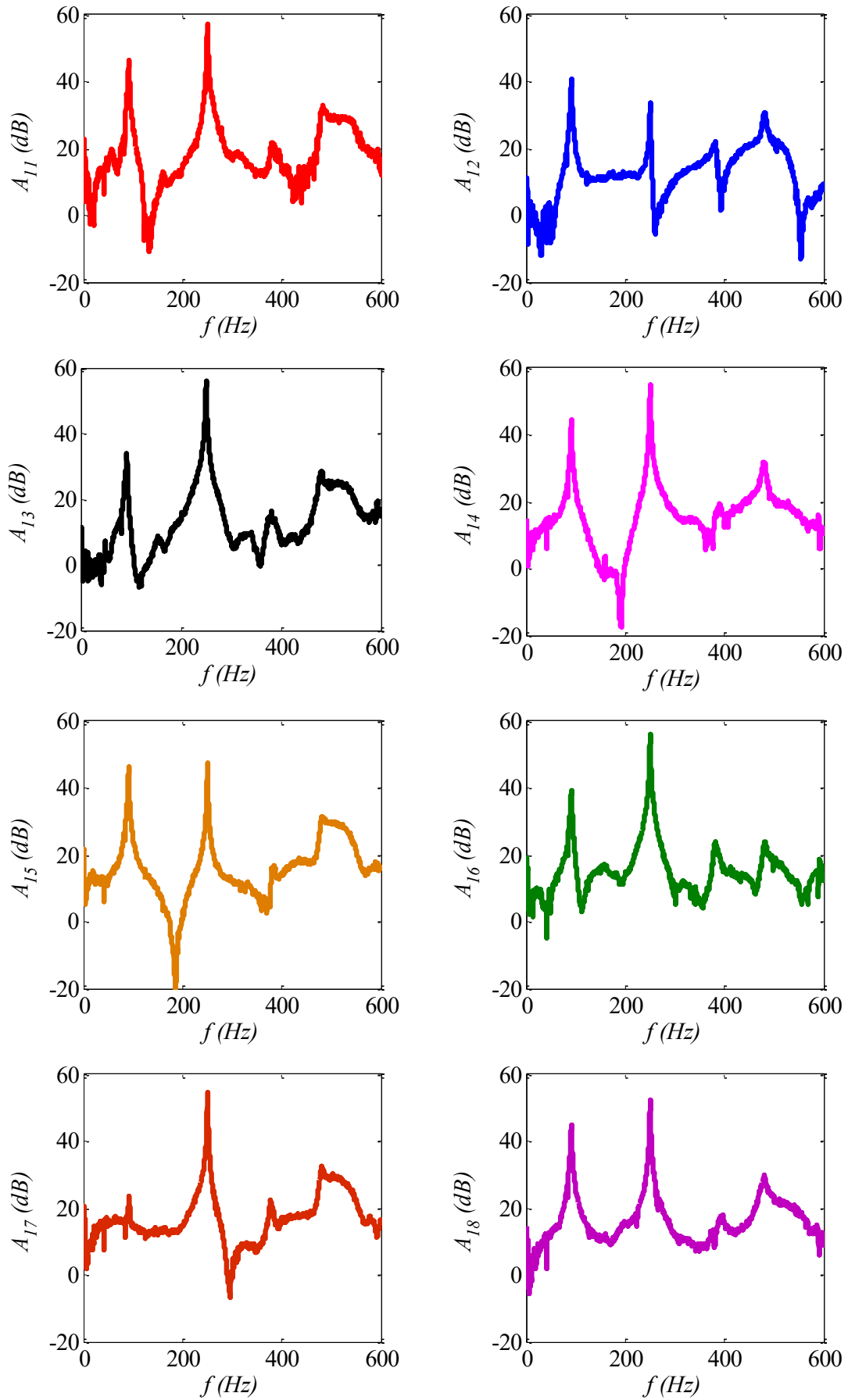


Figure2. Experimental frequency response functions