

# Modeling structural dynamics from data

Serkan Gugercin  
Virginia Tech

October 30, 2020

In this talk, we will investigate how to use frequency domain and time-domain data to model structural dynamics from data. First we will employ the least-squares fitting of the frequency domain data to estimate the vibration characteristics of a beam, including the dispersion curves. Then, if time allows, we will move to time-domain data and introduce a wavelet-based DMD framework and illustrate its performance on another structural model.