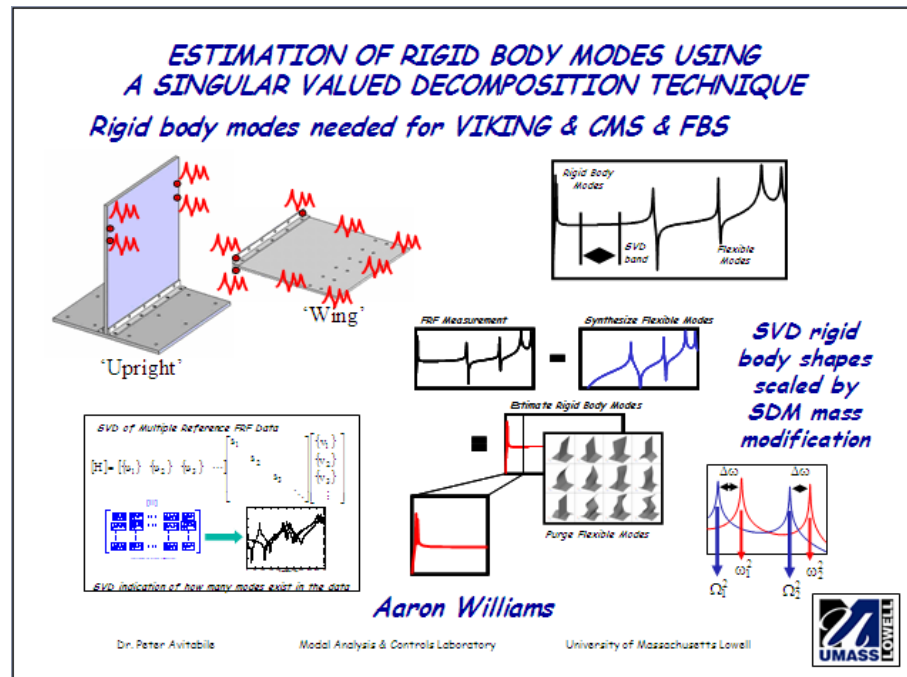




MASTER'S THESIS – AARON WILLIAMS

ESTIMATION OF RIGID BODY MODES FOR SYSTEM MODEL DEVELOPMENT



Rigid body modes are a necessary set of modes used in the development of component system models. Often these modes are difficult to obtain during modal testing due to instrumentation limitations or test difficulties. Using a combination of singular value decomposition, modal parameter estimation to purge higher order mode effects and structural dynamic modification, a set of appropriately scaled rigid body modes are derived. Several variations of this approach are presented for a simple structure to show the use of the technique.