Model approximation for the control of large-scale LTI models with guaranteed stability

Various efficient methods exist for the control of LTI models. Yet these methods can quickly become intractable as the dimension of the considered model increases. Here, a process is described to design a stabilising controller for a large-scale model using model approximation and the robust control framework. The approach is illustrated through the design of an input disturbance rejection control law for the large-scale LTI model representing a flexible space structure.