

# DESIGNING CONTROLLER BY STATE SPACE TECHNIQUES USING REDUCED ORDER MODEL ALGORITHM

Cong Huu Nguyen, Du Huy Dao, Hai Trung Do

## TÓM TẮT:

In general telecommunication, control and signal processing, mathematical models of objects are often built from the physical process. In fact, some objects have complex physical models, therefore, accurate description of the object will results to large and high-order mathematical models. This causes difficulties for the computation and design. Hence, finding a lower-order model that still has the important characteristics of the high-order models with acceptable errors is essential. This paper presents the reduced order model problem and studies on balancing approach proposed by Moore. The comprehensive research includes: transient response  $h(t)$ , frequency response and applications in control. Simulation results prove the proper algorism as well as capability of being applied into practice.