

Abstract

A MATLAB package (HIFOO) is developed for fixed order H-infinity controller design. We used HIFOO to solve two important problems in control: Low order controller design achieving good robustness/performance and low order strongly stable H-infinity controller design.

We apply HIFOO to various benchmark problems. The background information and importance of the problems in control theoretical framework are explained. The performance of HIFOO is compared with available methods on benchmark examples and the results are given.