

We present the modeling and control system's design of a laser pointing system. The aim of the paper is to provide means of detecting the relative errors of the system to correct them using actuating signals both directly and indirectly. The proposed control system will be used as part of a diagnostic and prognostic analysis for both systems. The paper includes the mathematical model of the two systems and Matlab simulations of the designed controller as well as its response to different stimulus. Diagnostic and prognostic approaches for actuator faults is presented.