Estimation of Parametric Fault in Closed-loop Systems - DTU Orbit (08/11/2017)

Estimation of Parametric Fault in Closed-loop Systems

The aim of this paper is to present a method for estimation of parametric faults in closed-loop systems. The key technology applied in this paper is coprime factorization of both the dynamic system as well as the feedback controller. Using the Youla-Jabr-Bongiorno-Kucera (YJBK) parameterization, it is shown that a certain matrix transfer function, the fault signature matrix, is an LFT (linear fractional transformation) of the parametric faults. Further, for limit parametric faults, the fault signature matrix transfer function can be approximated with a linear matrix function of the parametric faults.

General information

Host publication information