عنوان مقاله:

Decentralized Particle Filtering Based Fault Diagnosis for Nonlinear Distributed and Interconnected Systems

محل انتشار:

بیست و یکمین کنفرانس مهندسی برق ایران (سال: 1392)

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نویسندگان:

Nargess Sadeghzadeh Nokhodberiz - *Department of Electrical Engineering, Iran University of Science and Technology, Tehran, Iran*

Javad Poshtan

خلاصه مقاله:

The problem of decentralized fault diagnosis for nonlinear, non-Gaussian systems composed of spatially distributed and physically interconnectedsubsystems, is considered. Normal and faulty behavioursare modelled as two hypotheses with two different models. Accordingly, the general system is modeled as ahybrid system with two faulty and healhty modes. Then, it is decomposed into hybrid interconnected subsystems.Particle filtering approach is employed for nonlinear state estimation as well as non-Gaussian probability distribution estimation. Faulty or health modes areestimated using Maximum A Poserior Estimators (MAP). The effectiveness of the proposed distributed .algorithm is demonstrated through applying to a quadruple tank process

کلمات کلیدی:

Decentralized Fault Diagnosis, Particle Filtering, Hybrid Systems, Maximum A Posterior Estimator