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Authors: Amin Azarshab, Mehdi Shahbazian

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# Distributed fault detection in large-scale systems using hybrid extended information filter

Amin Azarshab<sup>a\*</sup>, Mehdi Shahbazian<sup>b</sup>

<sup>a</sup> MSc student at Department of Instrumentation and Automation, Petroleum University of Technology, Ahwaz, Iran

<sup>b</sup> Associate Professor at Department of Instrumentation and Automation, Petroleum University of Technology, Ahwaz, Iran

\*Corresponding Author. Tel: +98 916 690 1095

E-mail address: a.azar@put.ac.ir

## Highlights

- A new form of information filters is introduced.
- The algorithm is implemented in a distributed architecture to address large scale systems' practical limitations.
- A heuristic decomposition based on physical insight is applied.
- A typical bias fault in sensor measurements is simulated.
- The proposed diagnostic method is applied to Alkylation of Benzene process.

## Abstract

A fault monitoring system plays an important role to ensure and improve the reliability of an industrial plant to operate safely and efficiently. For large-scale systems, their high-

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