

Fault detection and isolation of faults in a multivariate process with Bayesian network

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Auteur	Verron, Sylvain [1], Li, Jing [2], Tiplica, T�odor [3]
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Mots-cl�s	Bayesian [4], Multivariate [5], T2 [6]
R�sum� en anglais	<p>The main objective of this paper is to present a new method of detection and isolation with a Bayesian network. For that, a combination of two original works is made. The first one is the work of Li et al. [1] who proposed a causal decomposition of the T2 statistic. The second one is a previous work on the detection of fault with Bayesian networks [2], notably on the modeling of multivariate control charts in a Bayesian network. Thus, in the context of multivariate processes, we propose an original network structure allowing to decide if a fault has appeared in the process. This structure permits the isolation of the variables implicated in the fault. A particular interest of the method is the fact that the detection and the isolation can be made with a unique tool: a Bayesian network.</p>
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- [1] <http://okina.univ-angers.fr/sylvain.verron/publications>
- [2] [http://okina.univ-angers.fr/publications?f\[author\]=2204](http://okina.univ-angers.fr/publications?f[author]=2204)
- [3] <http://okina.univ-angers.fr/teodor.tiplica/publications>
- [4] [http://okina.univ-angers.fr/publications?f\[keyword\]=4386](http://okina.univ-angers.fr/publications?f[keyword]=4386)
- [5] [http://okina.univ-angers.fr/publications?f\[keyword\]=4635](http://okina.univ-angers.fr/publications?f[keyword]=4635)
- [6] [http://okina.univ-angers.fr/publications?f\[keyword\]=4636](http://okina.univ-angers.fr/publications?f[keyword]=4636)

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