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L. Al-Shrouf, M.-S. Saadawia, N. Szczepanski, D. Soffker

Event Detection Using Multisensor Fusion and Filtering Techniques Based on CWT and SVM

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This paper investigates the use of multisensor data fusion principle to design an object detection system based on Support Vector Machine (SVM) for monitoring and supervision of a complex production process. The goal is to state the existence of undesired objects in the process or to detect events in streamed data. The monitoring system includes acceleration sensors used as sensor-cluster. In order to extract the relevant features of the acceleration signals, Continuous Wavelet Transform (CWT) is used along with other supporting algorithms. The extracted features of the individual sensors are undergone multistage filtration and fusion processes. These processes aim to reduce the false alarm rate as well as to realize a reliable decision about the presence of undesired objects.

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Ключевые слова:

Содержание.