

ARTÍCULO ACEPTADO

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Paper: Quality control of industrial processes by combining a hyperspectral sensor and fisher's linear discriminant analysis

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Abstract:

A non-intrusive and non-contact system for the real time detection of spurious elements in raw material processing chains for industrial environments is presented. Observation line spectrographs, obtained from the visible-near infrared (Vis-NIR) reflectance of the material under study, are obtained using a dual spatial-spectral technique. Therefore, a huge amount of information is involved in the process and an efficient classification algorithm would be a great asset. In this paper, the validity of Fisher's linear discriminant for this application is investigated.

The technique has been successfully tested on the tobacco industry. However, the technique is not limited to tobacco leaves, but other materials can additionally be discriminated or classified.