

# Abstract

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## **Facial Expression Analysis Based on Automatic Facial Feature Points Detection and Temporal Models of Facial Action Units**

a local model-based approach for extraction and analysis of facial feature points from 2D still images and feature point tracking in image sequences is presented. The proposed algorithm extracts the local oriented edges of intransient facial features (eyebrows, eyes, nose and mouth). Facial feature localization is obtained from local oriented edges projections. A hybrid approach for the detection of facial feature points is proposed. Finally, analysis of action units (AUs) in Facial Action Coding System (FACS) is applied, instead of handling prototypic expressions, such as happiness, anger and fear.