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FROM PHYSIOLOGICAL SIGNALS TO EMOTIONS: IMPLEMENTING AND COMPARING SELECTED METHODS FOR FEATURE EXTRACTION AND CLASSIFICATION (WedAmPO1)

★ **Author(s) :** Johannes Wagner (Institute of Computer Science, University of Augsburg, Germany)
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★ **Abstract :** Little attention has been paid so far to physiological signals for emotion recognition compared to audio-visual emotion channels, such as facial expressions or speech. In this paper, we discuss the most important stages of a fully implemented emotion recognition system including data analysis and classification. For collecting physiological signals in different affective states, we used a music induction method which elicits natural emotional reactions from the subject. Four-channel biosensors are used to obtain electromyogram, electrocardiogram, skin conductivity and respiration changes. After calculating a sufficient amount of features from the raw signals, several feature selection/reduction methods are tested to extract a new feature set consisting of the most significant features for improving classification performance.
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★ Abstract : (cont.)

Three well-known classifiers, linear discriminant function, k-nearest neighbour and multilayer perceptron, are then used to perform supervised classification.

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