



Von der Systemfunktion zum Modul

Methoden der diskreten Optimierung zur Lösung des Zielkonflikts zwischen Aufwand, Verfügbarkeit und Funktion von Fluidsystemen

Abstract

Emotion eliciting situations are accompanied by reactions on multiple response variables on subjective, physiological, and behavioral levels. The quantification of the overall simultaneous synchrony of psychophysiological reactions plays a major role in emotion theories and has received increasing attention in recent research. The research project concentrated on the so-called physiological synchrony/coherence of the emotional reactions during an emotion-eliciting episode. From a psychometric perspective, the reactions represent multivariate non-stationary intra-individual time series. Past approaches did not consider the non-stationarity of the data or only considered average inter-individual levels. Furthermore, empirical results are inconsistent; some studies propose an increase of synchrony during an emotion while others assume a decrease (depending on the physiological signals). To eliminate the disadvantages of the existing approaches, a new timefrequency based latent variable approach for the quantification of the synchrony of the responses was developed. The approach was applied to empirical data collected during an emotion-eliciting situations and results showed that the new measure is capable of quantifying the coherence of reactions.

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