eMOTION: Analysis of Emotion and Movement Variability in the Context of Human-Robot Interaction

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Movement variability (MV) is an inherent feature within and between persons. Such MV can be seen in many activities where human body movement is involved. So, we hypothesise that not only the subtle variations of face expressions but also simple body movements in the context of human-robot interaction activities can be described and quantified using nonlinear dynamics (ND) theorems.

We therefore explain how the uniform time-delay embedding theorem, a technique of ND, works and present both results of our hypothesis and its potential impact in areas such as rehabilitation, neuroscience or artificial intelligence to name a few.