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Real-time Posture Detection using Body Area Sensor Networks

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Abstract: This paper presents a Hidden Markov Model (HMM) processing framework for stochastic identification of body postures and physical contexts. The key idea is to collect multi-modal sensor data from strategically placed wireless sensors over a human subject's body segments, and to process that using HMM in order to identify the subject's instantaneous physical context. Controlled experiments using human subjects are carried out for evaluating the accuracy of the HMM-identified postures.