Towards automatic detection of myoclonic shocks in pediatric patients by means of video recordings

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Epilepsy is typically monitored by means of video-EEG monitoring. This method however hampers a long time monitoring of patients as it is patient demanding. The use of a non-contacting sensor, a video camera, would make this monitoring feasible.
Currently a detector of nocturnal movement in epileptic pediatric patients is developed. In a next step we want to distinguish epileptic activity from normal nocturnal activity. A first type of epileptic movement we want to detect are myoclonic shocks, which are characterized by a short and small contraction of the muscles, like in the arms or legs. Motion blobs are found by using an updated background. The blobs are tracked in time, and the movement vector from each blob in each frame is calculated by means of the optical flow algorithm. From each moving pattern from the tracked blob features are derived. From these features we want to develop an automatic detection algorithm for myoclonic shocks.