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A human motion analysis using the rhythm – a reproducing method of human motion.

(English) [Zbl 0990.68555](#)

J. Geom. Graph. 5, No. 1, 45-51 (2001).

Summary: In this study we estimate the postures of a human body in dance images (or repeated motions) recorded in an image database (especially recorded movies). We propose a new method by defining the “Rhythm Points”, i.e., equally spaced points on the time axis located at the moment of the start or end of the motion. With these rhythm points we are able to separate each repetition of the motions and to measure coordinates only at the moment of rhythm points and of a few points between (key frames), while coordinates of other frames are interpolated automatically. We introduced new terms for these variables in the formula of the splines and we designed a new natural spline curve for interpolating the knee-angle. Thus we could improve our previous results. With our method the necessary human work could be remarkably reduced.

MSC:

[68U99](#) Computing methodologies and applications

[68U10](#) Computing methodologies for image processing

[68T45](#) Machine vision and scene understanding

Keywords:

[dance image](#); [rhythm points](#); [human motion analysis](#)

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