

Detecting Dance Motion Structure

Using Motion Capture and Musical Information

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We propose a new method for extracting primitive motions from dance motion sequence. In these days, many important intangible cultural properties of the world are being lost because of the lack of successive performers. Digital archiving technology is one of the effective solutions for this issue, and we have started our digital archiving project of cultural properties including these intangible ones. For these human motion archives, the method of automatic motion structure analysis is vital for a variety of purposes. We believe that the dance motion consists of “primitive motions” and that motion analysis is necessary to detect these components. Particularly for dance motions, we think these primitives must be synchronized to the musical rhythm. In this paper, we introduce musical information for motion structure analysis. This method automatically detects the musical rhythm and segments the original motion, and classifies them as to the primitive motions. The experimental results confirm that our motion analysis yielded the primitive motions in accordance to the musical rhythm.

Publication

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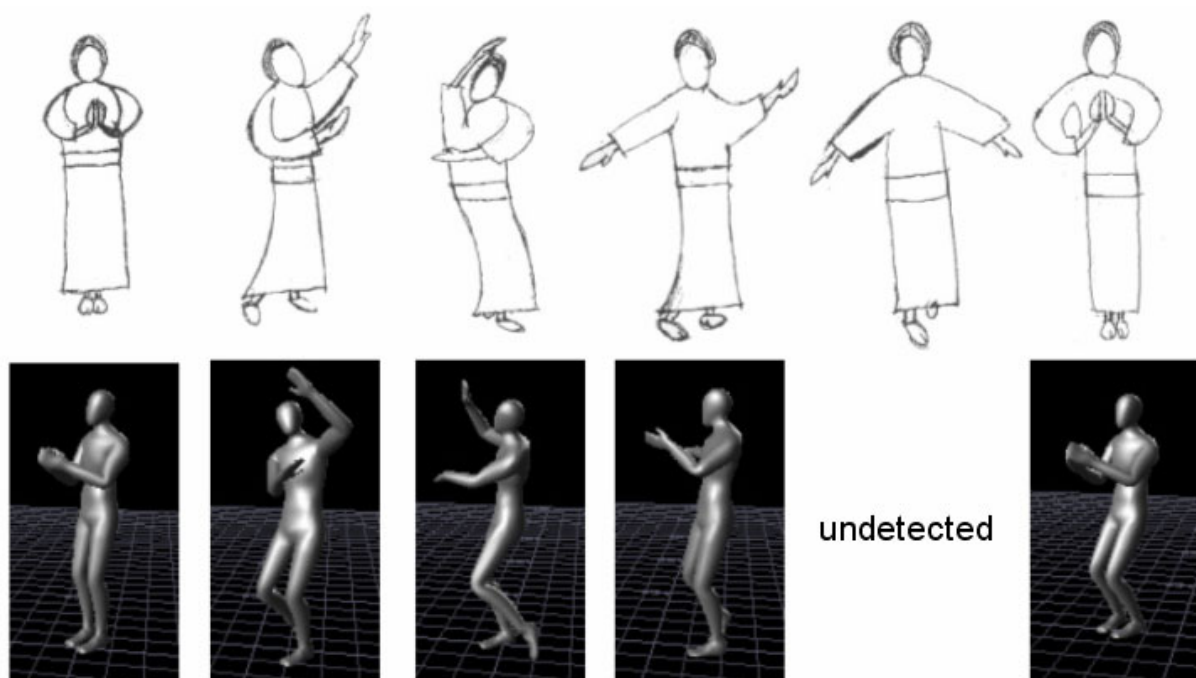


Figure : Result – Extracted Keyposes in Aizu-bandaisan

Upper : Keyposes extracted by dancers

Lower : Poses extracted by our proposed method