

# Motion Scoring

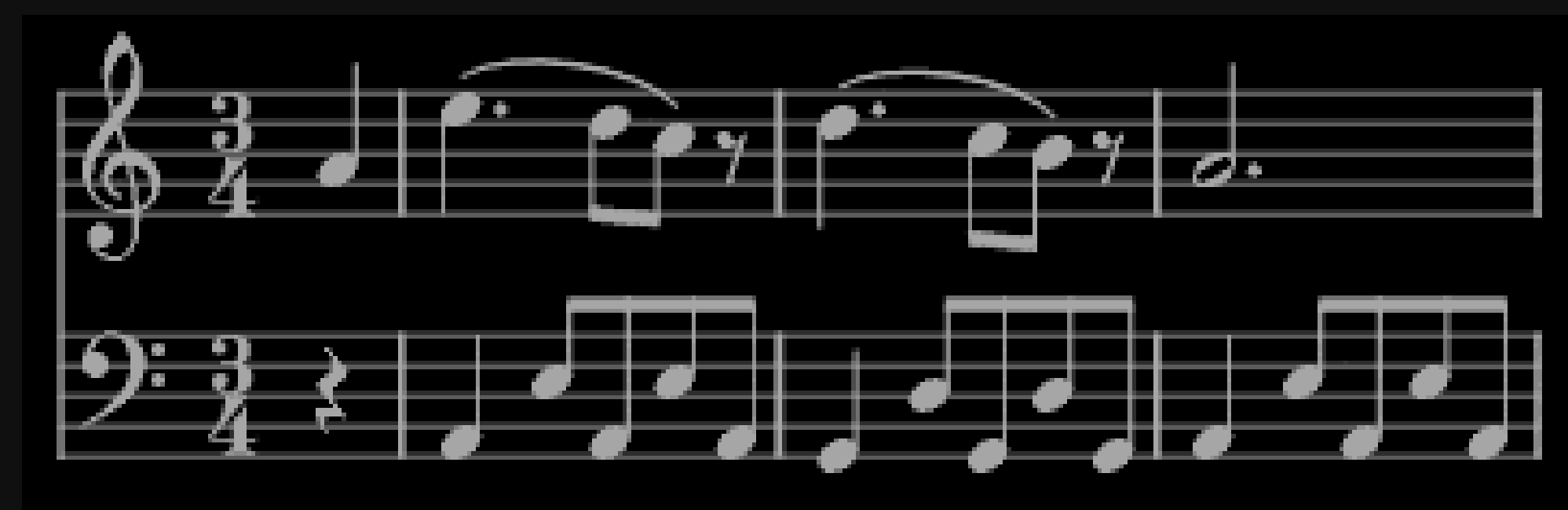
## Dance-Guided Music Composition

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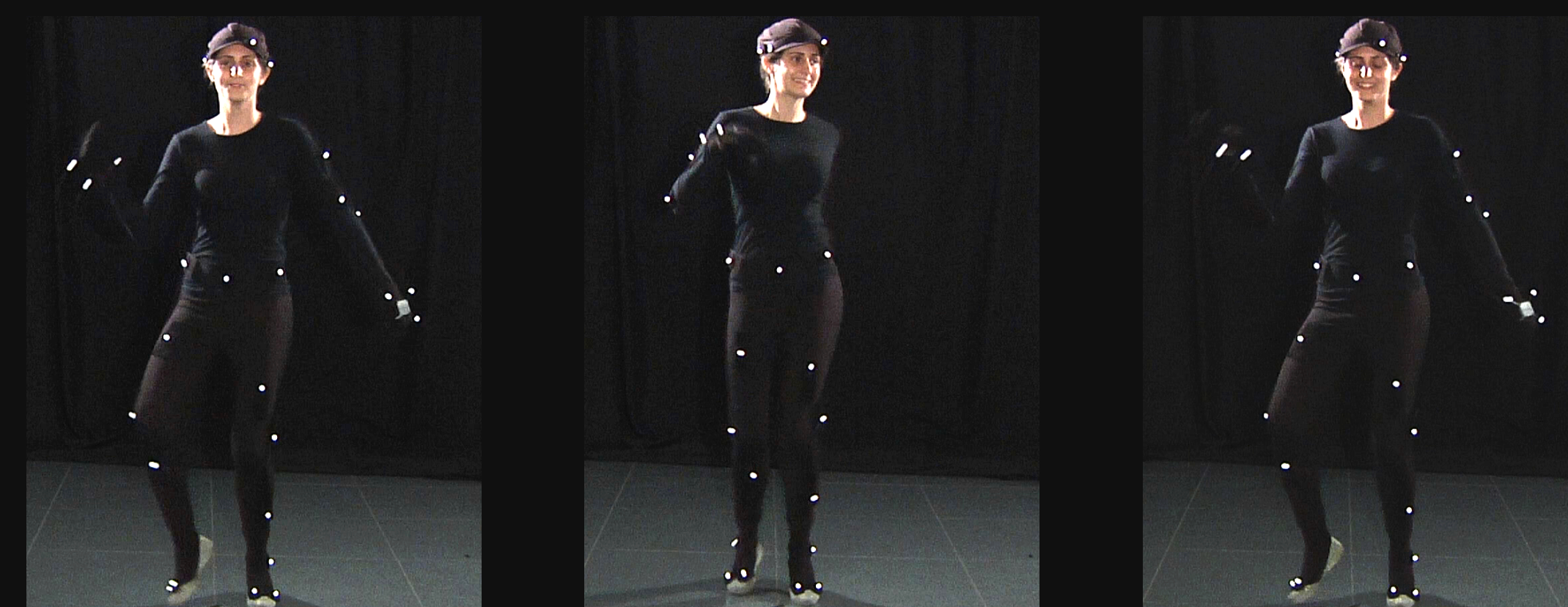
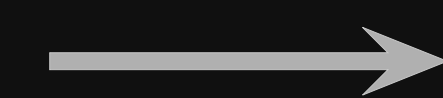
Visgraf Lab  
IMPA  
Rio de Janeiro

Samba style songs are composed using high level parameters; each one with a different melodic instrument.

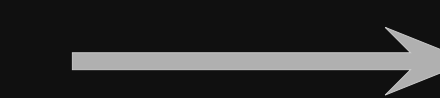
MoCap is done while a dancer performs to the composed songs, automatically connecting these signals.



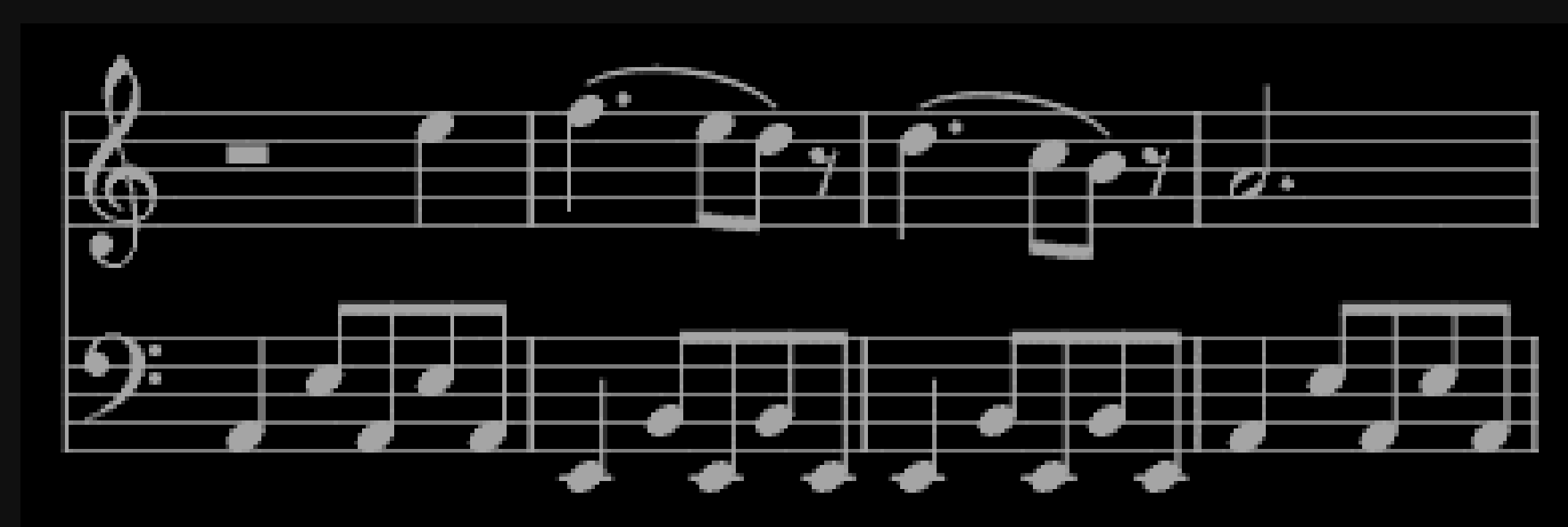
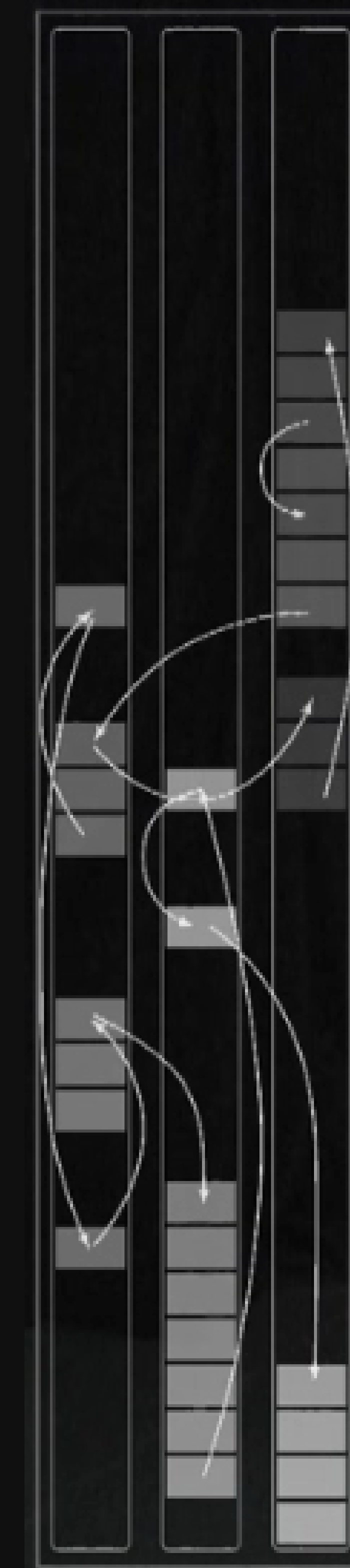
Original Song



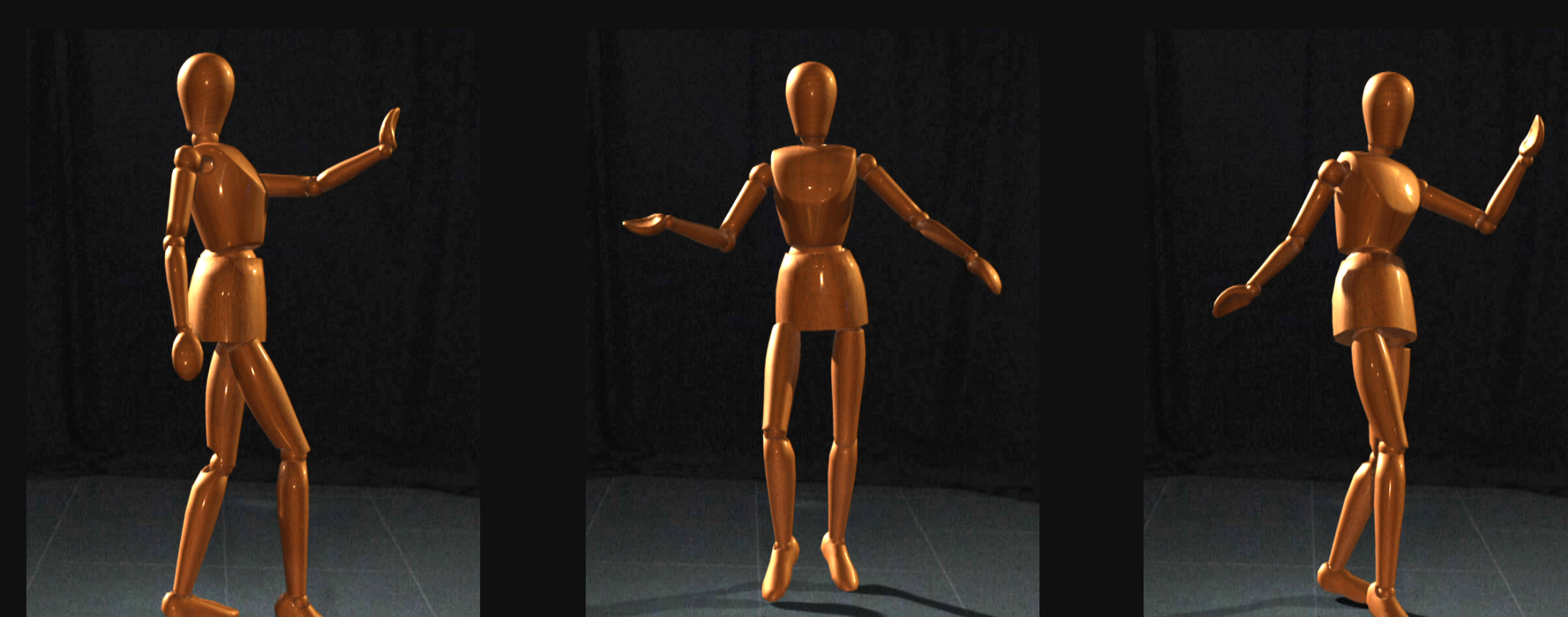
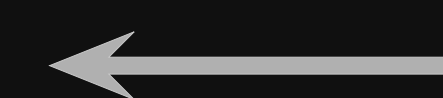
Captured Motion



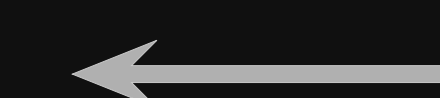
Measure-Synchronous Motion Graph



Resynthesized Song



Resynthesized Motion



The corresponding melody score is composed by following the high level parameters (instrument, number of notes per phrase and drums) of the new sequence of segments.

A restricted random-walk on this graph creates a new motion. By varying the weights of the graph we control variations between instruments and between large music blocks (intro, middle, ending).

A measure-synchronous motion graph is built by segmenting the motion data according to the melodic phrases.