The French project 'Corps Dansant' aims at recognizing a set of dance gestures from contemporary ballet. The input data are motion trajectories followed by the joints of a dancing body provided by a motion-capture system. It is obvious that direct use of the original signals is unreliable and expensive. Therefore, we propose a suitable tool for nonuniform sub-sampling of spatio-temporal signals. Our dance gesture recognition method involves a set of Hidden Markov Models (HMMs), each of them being related to a motion trajectory followed by the joints. The recognition of such movements is then achieved by matching the resulting gesture models with the input data via HMMs.