

# mcpkineticQuartet

## synopsis

Compute the translational and rotational kinetic energy of each musician using the MoCap data structure based on the Dempster Model. A minimum set of 13 markers for each musician is mandatory to carry on the computation.

*[batch processing]*

## syntax

```
mcpkineticQuartet(loaddir,savedir,numbody,onset,offset,smptedir, fpsmpte);
```

## input parameters

loaddir= path to access .c3d file(s) of the mocap recording;

savedir= path to save the translational and rotational kinetic energy values of each segment – fullbody, head, shoulders, trunk (.m).

numbody=vector containing the first and the last musician to be considered

onset: a four column matrix containing the smpte time code of the onset(s)

offset: a four column matrix containing the smpte time code of the offset(s)

### *optional arguments*

loadsmpte= path to access .wav file(s) containing the smpte signal

fpsmpte= frame rate of the input signal

## output

none

## examples

```
loadfile='/Users/xxx/Documents/wav/';  
savefile='/Users/xxx/Documents/save/';  
numbody=[1,4];
```

### **-for one file**

```
onset=[3,18,56,07];  
offset=[3,20,46,12];
```

### **-for multiple files**

```
onset=[3,18,56,07;3,21,20,10];  
offset=[3,20,46,12;3,22,30,05];
```

```
smptedir='/Users/xxx/Documents/smpte/';  
fpsmpte=25;
```

```
mcpkineticQuartet(loaddir,savedir,numbody,onset,offset,smptedir,  
fpsmpte);
```

## comments

Built on MCT Toolbox

# SiempreRead

## **synopsis**

Compute kinetic energy for each body parts (head, shoulders, elbow)  
[*batch processing*]

## **syntax**

```
SiempreRead(loadfile,savefile);
```

## **input parameters**

loadfile= path to access .m file(s) of the kinetic energy

savefile= path to save the kinetic energy values of selected segment – head, shoulders, elbow (.m).

## **output**

none

## **examples**

```
loadfile='/Users/xxx/Documents/wav/';  
savefile='/Users/xxx/Documents/save/';
```

```
SiempreRead(loadfile,savefile);
```

## **comments**