

 POLITECNICO DI MILANO



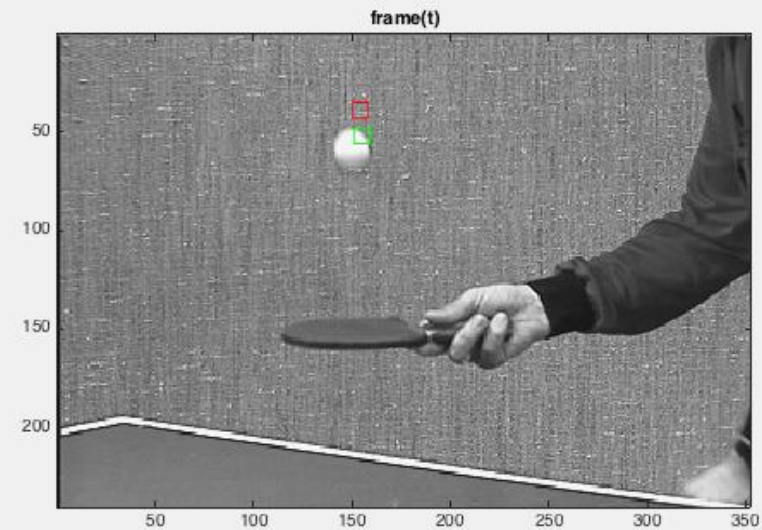
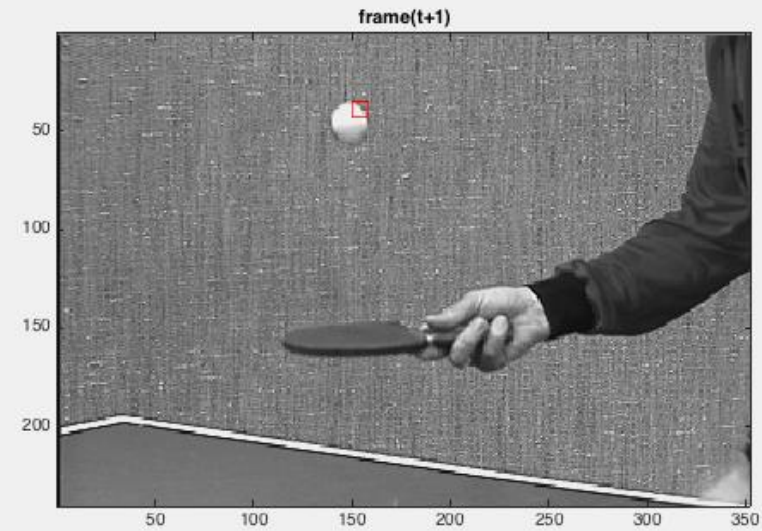
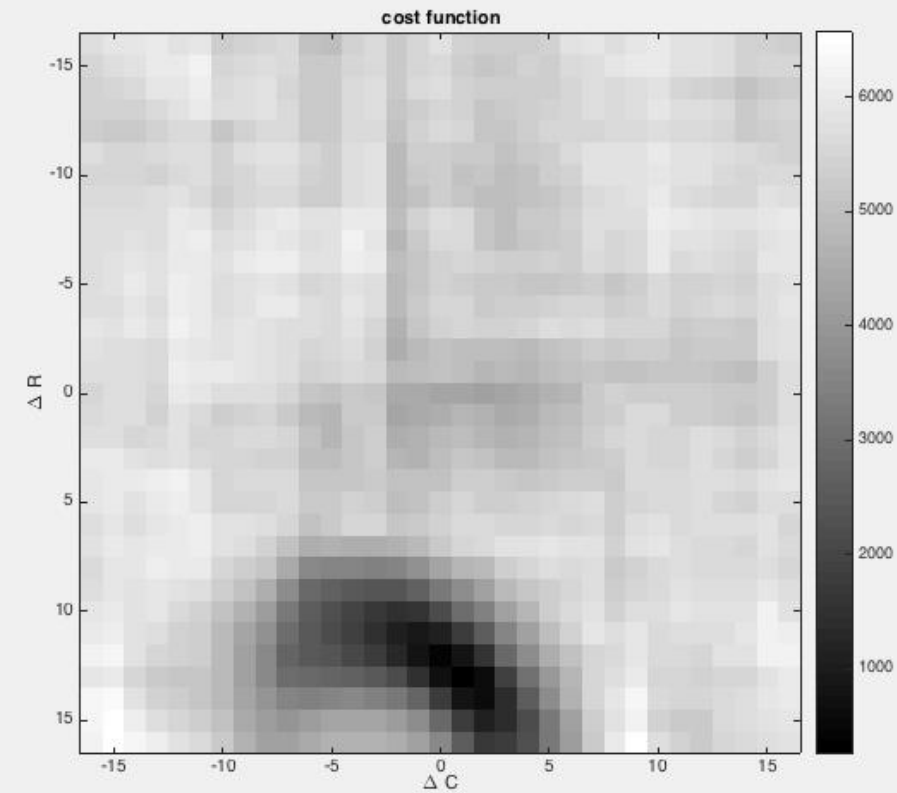
## MMSP 2<sup>nd</sup> Module – Lab6

Nicolò Bonettini  
*[nicolo.bonettini@polimi.it](mailto:nicolo.bonettini@polimi.it)*

Single block ME

# EXERCISE 1

1. Load the sequence 'table\_tennis.mat' consisting of two grayscale frames
2. Select the 8x8 block starting at  $(x,y)=(35,150)$  of the second frame. Perform ME using  $W=16$  pixels and the first frame as reference
3. Display the cost function, the starting block and its estimate



ME, MC and DFD

# EXERCISE 2

1. Load the sequence 'table\_tennis.mat' and spatially resize it at half the resolution
2. Compute the displaced frame difference - use 8x8 blocks, full-search,  $W=16$ , save all motion vectors and visualize them
3. Compute mean and variance of DFD and normal frame difference
4. Display DFD and frame difference

1. `imresize()` can be used to downsample the sequence
2. `quiver()` can be used to draw vectors

