# Extraction of Motion Information

## Task

Extract motion information from videos.

## Requirements

- Extract motion information from the test video sequence, using an arbitrary method of the three categories introduced in the course;
- Show the video and the motion field in two subfigure within the same figure at the frame rate of 25 frame/second;
- You are only allowed to upload one file. So, please includes all necessary files such programs in a directory, and make a RAR or ZIP package. DO NOT include the dataset. After decompression, your programs should run correctly without any modification as long as the path of the input file is correctly set.

## Materials

- **Data:** A video sequence Suzie (176x144, 90frames, YUV420 planar) is accessible from the e-Classroom. The color space of the video file is YUV420, and we provide two Matlab scripts to convert between YUV420 color space and the RGB color space.

## Tools

- **Environment:** Matlab is preferable, other platforms are also acceptable;
- **Showing a motion field in Matlab**: quiver(…);
- **File I/O:** fopen(…), fread(…), fwrite(…), fclose(…);