This programming assignment is concerned with using OpenCV to analyze the motion in a video sequence. OpenCV has implemented Optical Flow analysis base on Shi-Tomasi features [1] and Lucas Kanade [2] tracking algorithm. For this homework, you need to write a program which takes a video as input and returns the estimated optical flow of each frame interactively, see example below.

Each red arrow is a motion vector of the feature being tracked.

For testing, you may use the training data of task 3 and task 4 to see how optical flow captures the motion of individual avatars and the background.
Submission: Please submit the C++ code, executable, and an image of one frame with optical flow information to Blackboard (https://blackboard.princeton.edu/).

References:
