# Digital Video Stabilization using SIFT Feature Matching and Adaptive Fuzzy Filter

* 选择SIFT算法来识别特征点的原因

Feature based motion estimation can be used to effectively identify features in previous frame and find the same features in the current frame. It is found to be better by using SIFT for its key-point matching as the features are highly distinctive which allow collecting reliable matching.

* 选择二维模型作全局运动估计的依据

we only calculate the horizontal and vertical translation vectors for calculating Global Motion Vectors because translational jitter is the most common effect resulting in visual quality degradation.

* 背景点选择判断依据——三角形

The basic idea is to randomly select three key-points from three different blocks to form a triangle. The motivation behind choosing a triangle over other shapes is that it helps in finding stable key points by avoiding most of the local motion features. These selected key-points are the best matches obtained from our similarity measurement using SIFT.

* 帧与帧间的差距不过帧大小的十分之一

The offset of the adjacent frame is usually less than one tenth of the frame size [6].

RANSAC误匹配VS 特征点像素位置差距?