

# General Regularization for Image Motion Problem

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An adaptive control of general regularization is presented in this paper which is based on a posteriori error estimation for a variational optic flow model, which is designed using complementary approach. In this paper the adaptive control and general regularization technique is improved and extended as appeared in previous work. It is shown that with the improvement in the data term, the successful and fast “a posteriori” error control is obtained with a significant improvement in regularization process and determination of dense optic flow field. This method is based on the adaptive finite element method using unstructured grid as the discrete computational domain which allows the locally adaptive choice of optimal general regularization parameters. The given Meshes on unstructured grid and the dramatic improvement in flow field at various adaptive iterations is the core of this presentation and could be an attraction for the image community.

**Keywords:** Optic Flow, regularization, Adaptive Control of regularization, Adaptive finite elements, Optimization.