
# CONSTRAINT TRANSLATIONAL AND ROTATIONAL MOTION FILTERING FOR VIDEO STABILIZATION (WedAmPO4)

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**Abstract :**

In this paper we propose a novel motion filtering approach that takes into consideration the existence of certain system constraints with respect to the amount of the corrective rotational and translational motions that can be applied on each video frame for stabilization. The interdependence between rotational and translational constraints is considered, and a modified Kalman filtering algorithm is used in order to obtain a smooth stabilized motion under the given constraints. The experimental results reveal that the proposed filtering approach improves the stabilization performance in the presence of the system constraints.

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