

The thesis deals with the alignment of manually captured photographs which are to be used for HDR merging. It focuses on available methods, describes their drawbacks and presents an algorithm capable of detection of global translation, rotation and scaling within pairs of input photographs. This algorithm is based on searching for suitable key points among single photographs, their weighted pairing and final calculation of the transformation. The enclosed application can perform direct HDR merging of the aligned photographs which is used to compare the results of registration with other methods and available applications.