

# A New Method for the Registration of Mammograms

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## Abstract

Mammogram registration is a critical step in automatic detection of breast cancer. Much research has been devoted to registering mammograms using either feature-matching or similarity measure. However, few studies have been done on combining these two methods. In this research, a hybrid mammogram registration method is developed by combining feature-based and intensity-based image registration techniques. Besides, internal and external features were used simultaneously during registration to obtain a global spatial transformation. The experimental results indicate that the similarity between the two mammograms increases significantly after a proper registration using the proposed registration procedures.

Keyword : Mutual Information, Mammogram Registration, Thin-Plate Splines, Feature Matching