

Multi-Modal Medical Image Registration Using Normalized Compression Distance

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Image registration is an important task in medicine, especially when images have been acquired by different scanner/sensor types, since they provide information on different body structures (bones, muscles, vessels...). Several techniques have been proposed in the past, and among those, Normalized Mutual Information has been proven as successful in many cases. Normalized Compression Distance has been proposed as a simple yet effective technique for image registration. It is especially suitable for the case of CT-MRI registration. However, other image modalities such as PET pose some problems and do not

achieve accurate registration. In this paper we analyse and propose a valid approach for image registration using compression that works properly for different combinations of CT, MRI and PET images.