



Computer vision tools to optimize reconstruction parameters in X-ray in-line phase tomography

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| Résumé en anglais | <p>In this article, a set of three computer vision tools, including scale invariant feature transform (SIFT), a measure of focus, and a measure based on tractography are demonstrated to be useful in replacing the eye of the expert in the optimization of the reconstruction parameters in x-ray in-line phase tomography. We demonstrate how these computer vision tools can be used to inject priors on the shape and scale of the object to be reconstructed. This is illustrated with the Paganin single intensity image phase retrieval algorithm in heterogeneous soft tissues of biomedical interest, where the selection of the reconstruction parameters was previously made from visual inspection or physical assumptions on the composition of the sample.</p> |
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