

Discrete ROI reconstruction from deliberately motion blurred X-ray projections

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An X-ray scanning procedure in which the source and detector rotate continuously has many advantages with respect to scanning stability and scanning speed. However, in such an acquisition scheme, the acquired projections are motion blurred, which should be accounted for. Recently, a method was developed to reconstruct images from motion blurred projections where the resolution near the centre of rotation is very high, and decreasingly low the further away from it. Here, we extend this method towards discrete tomography in which prior knowledge about the attenuation values of the object to be scanned is exploited. By doing so, more details of the object can be obtained, especially further away from the centre of rotation..