Abstract: We consider the stability problem of reconstructing lattice sets from their noisy X-rays (i.e. line sums) taken along two directions. Stability is of major importance in discrete tomography because, in practice, these X-rays are affected by errors due to the nature of measurements. It has been shown that the reconstruction from noisy X-rays taken along more than two directions can lead to dramatically different reconstructions. In this paper we prove a stability result showing that the same instability result does not hold for the reconstruction from two directions. We also show that the derived stability result can be carried over by similar techniques to lattice sets with invariant points.
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Occurences:
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