Abstract

The convergence of the block cyclic projection for compressed sensing based tomography (BCPCS) algorithm had been proven recently in the case of underrelaxation parameter in the interval (0,1]. In this paper, we prove its convergence with overrelaxation parameter in the interval (1,2). As a result, the convergence of the other two algorithms (BCAVCS and BDROPCS) with overrelaxation parameter in the interval (1,2) in a special case is derived. Experiments are given to demonstrate the convergence behavior of the BCPCS algorithm with different values of the relaxation parameter.