

SPARSE DYNAMIC TOMOGRAPHY REGULARIZATION USING OPTIMAL SPACE-TIME PRIORS

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We consider a sequence of sparse and dynamic tomography problems and regularize them in both spatial- and temporal domains using the multiresolution representation system. Our choice of sparsity promoting regularization is motivated by the fact that these systems provide the optimal finite-term approximation rate for specific class of cartoon-like signals. We discuss convergence of the regularized problem and validate the approach with numerical tests using real dynamic tomography data.