is the Richardson's iterative method

$$x_{n+1} = x_n - \alpha_n \left(Ax_n - b \right), \ \ n \in \mathbb{Z}^+,$$

where x_0 is an initial guess and α_n is a numerical parameter. This leads to the well-known Krylov subspace method.

Almost all known algorithms are based on two principal projection methods - the minimal residual and the orthogonal residual. We propose a new method, based on the quantity

$$m\left(A\right) = \inf_{t \in \mathbb{C}} \left\| I - tA \right\|.$$

Concentration and stable reconstruction of continuous Gabor Transform

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In this article we generalize some uncertainty principles related with the continuous Gabor transform for strong commutative hypergroups. More precisely, in the following we prove that for a locally compact strong commutative hypergroup X with the Haar measure μ and the Plancherel measure λ on its dual $\widehat{X}$, window function ψ and each $f \in L^2(X)$, the portion of $\mathcal{G}_\psi f$ lying outside some small U of finite $\mu \times \lambda$-measure in $X \times \widehat{X}$ cannot be arbitrary small, either. For sufficiently small U, this can be seen immediately by estimating the Hilbert-Schmidt norm of a suitable defined operator. Also we generalize the stable reconstruction of Gabor transform from incomplete noisy data, for strong commutative hypergroups. As an example we show how these techniques apply to the Locally compact groups and Bessel$-$Kingman hypergroups.