

Approximate identities and reconstruction from spherical mean data

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Circular and spherical mean data arises in various models of thermoacoustic and photoacoustic tomography which are rapidly developing modalities for in vivo imaging. We describe how summability respectively kernel based methods can be applied in order to come up with new reconstruction techniques. We will show how suitable kernels can be constructed. A detailed description for the most important case of 2D images will be provided. Finally, some numerical examples will be presented.