In general we're interested minimising the following functional:

$$\hat{u} = \arg\min_{u} \left\{ \lambda \mathcal{G}(u) + \frac{1}{2} \|u - v\|_{2}^{2} \right\},\,$$

where λ is the regularisation parameter establishing the trade-off between quadratic data fidelity and the regularisation term \mathcal{G} . The noisy data u can be 2D, 3D or multidimensional (see multi-channel). The toolbox provides various solutions to the problem above depending on the choice of \mathcal{G} .