

Generalized Interpolation and Image Reconstruction

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Modelling of Inverse Problems often leads to an operator equation $\mathcal{M}f = g$, where \mathcal{M} maps between suitable Hilbert spaces, g is a given function and f has to be determined.

But in application one does not have the whole function but *samples* of g , which leads to a semi-discrete Inverse Problem. In our presentation we will discuss how this problem can be handled with *Generalized Hermite-Birkhoff Interpolation* and how this can be applied in Image Reconstruction.

We will show both the analytic considerations connected to Approximation Theory and numerical questions related to the topic.