

# Kernel methods and sparse approximation

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Variational methods based on radial basis functions, or more generally on reproducing kernels, are a well-established tool in generalized function reconstruction, since they typically yield very good approximation properties. A well-known observation is that the coefficients of the approximants in standard basis representations are often large in absolute value and non-sparse. This leads to difficulties in post-processing steps. We therefore aim at regularizations that overcome these issues but maintain the good approximation properties. In this talk, I will discuss such regularization schemes and the analysis of the associated reconstruction errors.

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