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RKHS-based linear functional strategy for machine learning

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In this talk a framework for discussing the generalization ability of a trained algorithms in the original function space using tools of functional analysis based on reproducing kernel Hilbert spaces (RKHS) is discussed. Using this framework, linear functional strategy approach is studied, and a new method for detecting relevant variables from a given high-dimensional data is developed. The effectiveness of the method is demonstrated in the example with synthetic data and in the reconstruction of real data.

This is a joint work with Sergei V. Pereverzyev (RICAM).