Efficient linear programming algorithm for functional component pursuit

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Abstract: Based on reproducing-kernel Hilbert space theory, a large class of feature spaces can be characterized through their kernel functions, which have been widely applied in statistics and engineering. By further parameterizing the kernel structure, many current nonparametric regularization methods can be extended to achieve both model-fitting and feature selection objectives. In this paper, we focus on the nonparametric regularization problems associated with a kernel collection, and introduce a fast adaptive kernel selection algorithm rooted in parametric linear programming.