Parametric Approach to the Choice of the Smoothing Parameter in Nonparametric Problems

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Abstract

The choice of the smoothing parameter plays crucial role in many nonparametric problems — kernel density estimation and regression, convolution equations and so on. At the same time it is usually the most difficult part of the problem. In this work we study a parametric method of selection of the smoothing parameter based on equality of some functional of solution and that of its parametric approximation.