CONFERENCIA:

"Direct Simultaneous Inference in Additive Models and its Application to Model Undernutrition."

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Abstract

This article proposes a simple and fast approach to build simultaneous condence bands and perform specication tests for smooth curves in additive models. The method allows for handling of spatially heterogeneous functions and its derivatives as well as heteroscedasticity in the data. It is applied to study the determinants of chronic undernutrition of Kenyan children, with particular focus on the highly non-linear age pattern in undernutrition. Model estimation using the mixed model representation of penalized splines in combination with simultaneous probability calculations based on the volume-of-tube formula enable the simultaneous inference directly, i.e. without resampling methods. Finite sample properties of simultaneous condence bands and specication tests are investigated in simulations. To facilitate and enhance its application, the method has been implemented in the R package AdaptFitOS.

Lugar: A.2.Graos. Facultade de Informática da UDC.
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