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论文

误差非线性回归模型基于几何方法的若干二阶渐近性质

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摘要：

该文用微分几何方法对AR(q)误差非线性回归模型若干二 阶渐近性质进行了研究. 作者基于Fisher信息阵在欧氏空间定义了内积，并在期望参数空间建立了几何结构. 基于上述几何结构，给出了AR(q)误差非线性回归模型若干二阶渐近性质的曲率表示. 将前人的一些结果推广到AR(q)误差非线性回归模型.

关键词： AR(q)误差,非线性回归,几何结构,统计曲率,二阶渐近性质

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Some Second Order Asymptotics in AR(q) Nonlinear Regressio n Models Based on Geometric Method

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Abstract:

This paper is devoted to a study on some second order asymptotics for AR(q) nonlinear regression models based on geometric method. For these models, the authors intr oduce an inner product in Euclid space based on Fisher information matrix and give a geometric framework i n expectation parameter space. Based on the above geometric framework, some second order asymp totics for AR (q) nonlinear regression models are given in terms of statistical curvatures. Severa l previous results are extended to AR(q) nonlinear regression models.

Keywords: AR(q) errors,Nonlinear regression,Geometric framework, Statistical curvature,Second order asymptotics

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