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Asymptotics and bootstrap for inverse Gaussian regression.
(English. English summary)

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Summary: “This paper studies regression when the reciprocal of the mean of a dependent variable is considered to be a linear function of the regressor variables, and the observations on the dependent variable are assumed to have an inverse Gaussian distribution. The large-sample theory for the pseudo-maximum-likelihood estimators is available in the literature only when the number of replications increases at a fixed rate. This is inadequate for many practical applications. This paper establishes consistency and derives the asymptotic distribution for the pseudo-maximum-likelihood estimators under very general conditions on the design points. This includes the case where the number of replications do not grow large, as well as the one where there are no replications. The bootstrap procedure for inference on the regression parameters is also investigated.”

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