

SEMINÁRIOS
SÉRIES TEMPORAIS, ONDALETAS E DADOS
FUNCIONAIS

LOCAL: IMECC, Unicamp, Sala 221

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BIRNBAUM-SAUNDERS GENERALIZED AUTOREGRESSIVE SCORE MODEL
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Time series models based on the Birnbaum-Saunders (\mathcal{BS}) distribution have not received much attention in the literature, there being only a few articles that address such models. In the present paper, we propose a generalized autoregressive score (GAS) model based on a bimodal Birnbaum-Saunders law. We discuss conditional maximum likelihood parameter estimation, hypothesis testing inference, residual analysis and develop prediction intervals for the GBS2-GAS model. Additionally, we provide analytical expressions for the score vector and for the Hessian matrix. Two empirical applications, involving financial and hydrological data, are presented and discussed.

Keywords: Bimodal Birnbaum-Saunders distribution, generalized autoregressive score, streamflow data, trade duration data.

(this is a joint work with Francisco Cribari Neto)