

[Huang, D.](#); [Anh, V. V.](#)

**Estimation of spatial ARMA models.** (English) Zbl 0776.62074  
[Aust. J. Stat.](#) 34, No. 3, 513-530 (1992).

Let  $Z$  be the set of all integers. The nonsymmetric half-plane (NSHP) ordering on  $Z^2$  is given by the following rule: One says that  $x = (x_1, x_2) \leq y = (y_1, y_2)$  if  $y - x \in S$  where  $S = \{t = (t_1, t_s) : 1 \leq t_2, \text{ or } t_2 = 0 \text{ and } t_1 > 0\}$ . The authors deal with NSHP spatial ARMA models. A method for estimating the orders and parameters of the model is proposed and strong consistency of the estimators is established. The method is based on an inverse model and so the estimation of the innovations is avoided which considerably reduces the computational complexity.

Reviewer: [J.Anděl \(Praha\)](#)

**MSC:**

[62M30](#) Inference from spatial processes

[62M10](#) Time series, auto-correlation, regression, etc. in statistics (GARCH)

Cited in **9** Documents

**Keywords:**

[lattice data](#); [identifiability condition](#); [best linear predictor](#); [two- parameter martingale differences](#); [non-symmetric half-plane ordering](#); [NSHP spatial ARMA models](#); [strong consistency](#); [inverse model](#)

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