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Erratum

Erratum to: “A general expression for the distribution of the maximum of a Gaussian field and the approximation of the tail” [Stochastic Process. Appl. 118 (7) (2008) 1190–1218]

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In our paper [1], one has to add a condition on the function ρ to ensure that the results in Section 4 and example (2) in Section 6 of the paper will hold true.

More precisely, we add the assumption that the function ρ such that the covariance of the real-valued random field $\{X(t) : t \in \mathbb{R}^d\}$ satisfies formula (11):

$$\mathbb{E}(X(s)X(t)) = \rho(\|s - t\|^2)$$

has the property that $\rho(\|s - t\|^2)$ is a covariance for every dimension $d \geq 1$. The functions $\rho : \mathbb{R}^+ \rightarrow \mathbb{R}$ for which this holds have been characterized by Schoenberg [2]: they are the Laplace transforms of finite Borel non-negative measures defined on \mathbb{R}^+ .

The added condition implies that $\rho'' - \rho'^2 \geq 0$ (this is Statement 5 in Lemma 2, which may otherwise not be satisfied).

Consequently, one has also to include in example (2) of Section 6 of the paper the requirement that the function ρ satisfies the above added condition, as well as in the statement of Theorem 7.

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