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Normal covariances. (English) Zbl 0641.60043
Kybernetika 24, No. 1, 17-27 (1988).

Covariances $R(s,t)$ are called normal if they can be written in the form

$$R(s,t) = \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} e^{\lambda(s+t)} e^{i\mu(s-t)} dF(\lambda, \mu), \quad (s,t) \in \mathbb{R}^2.$$

Some properties and characteristics of normal covariances are proved (in addition to previous results of the author): 1) they are continuous on \mathbb{R}^2 ; 2) they can be characterized as a function which is nonnegative definite in some sense; 3) they can be characterized using the corresponding reproducing kernel Hilbert space.

Reviewer: [T.Cipra](#)

MSC:

60G10 Stationary stochastic processes

Cited in **2** Documents

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[locally stationary covariances](#); [properties and characteristics of normal covariances](#); [reproducing kernel Hilbert space](#)

Full Text: [EuDML Link](#)

References:

- [1] J. Michálek: Locally stationary covariances. Trans. Tenth Prague Conf. on Inform. Theory, Statist. Dec. Funct. Random Processes, Academia, Prague 1987.
- [2] J. Michálek: Random sequences with normal covariances. Kybernetika 23 (1986), 6, 443-457. · [Zbl 0632.60031](#)
- [3] R. A. Silverman: Locally stationary random processes. IRE Trans. Inform. Theory IT-3 (1957), 3, 182-187.

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