



Math for the people, by the people.

Kolmogorov's continuity theorem

Canonical name	KolmogorovsContinuityTheorem
Date of creation	2013-03-22 15:43:43
Last modified on	2013-03-22 15:43:43
Owner	georgiosl (7242)
Last modified by	georgiosl (7242)
Numerical id	9
Author	georgiosl (7242)
Entry type	Theorem
Classification	msc 60G07
Related topic	DistributionsOfAStochasticProcess

Let $X = \{X_t\}_{t \geq 0}$ be a process satisfying the following condition: For all $T > 0$ there exist positive constants α, β, D such that

$$E[|X_t - X_s|^\alpha] \leq D|t - s|^{1+\beta} \quad 0 \leq s, t \leq T.$$

Then there exists a continuous modification of X .