cases	doc_1		doc_2		decision	id
	authors	• N. V. Krylov	**authors**	• N. V. Krylov	NOT DUPLICATES	495
	title	HÃ¶rmander's theorem for parabolic equations with coefficients measurable in the time variable	**title**	HÃ¶rmander's theorem for stochastic partial differential equations		
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	id	id7343846648372564978	**id**	id3506605761120004108		
	abstract	We are dealing with possibly degenerate second-order parabolic operators whose coefficients are infinitely differentiable with respect to space variables and only measurable with respect to the time variable. We impose the H\"ormander condition on the diffusion coefficients and prove that the solutions of the corresponding equations with right-hand sides which are infinitely differentiable in the space variables in a space-time domain have also this property.	**abstract**	We prove H\"ormander's type hypoellipticity theorem for stochastic partial differential equations when the coefficients are only measurable with respect to the time variable. The need for such kind of results comes from filtering theory of partially observable diffusion processes, when even if the initial system is autonomous, the observation process enters the coefficients of the filtering equation and makes them time-dependent with no good control on the smoothness of the coefficients with respect to the time variable.		
	versions		**versions**			