cases	doc_1	doc_2	decision	id
			NOT DUPLICATES	1905

doc_1

authors	• Lingling Hou • Pengcheng Niu
title	A Nash Type result for Divergence Parabolic Equation related to Hormander's vector fields
publication_date	2017-05-17 00:00:00
source	SupportedSources.OPENALEX
journal	arXiv (Cornell University)
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doi	10.48550/arxiv.1705.06278
urls	• https://openalex.org/W2615044592 • https://doi.org/10.48550/arxiv.1705.06278 • http://arxiv.org/pdf/1705.06278
id	id-5866969602453843286
abstract	
versions	

doc_2

authors	• Lingling Hou • Pengcheng Niu
title	A Nash Type result for Divergence Parabolic Equation related to Hormander's vector fields
publication_date	2017-05-17 01:46:40+00:00
source	SupportedSources.ARXIV
journal	None
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doi	
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id	id7047419319414157508
abstract	In this paper we consider the divergence parabolic equation with bounded and measurable coefficients related to Hormander's vector fields and establish a Nash type result, i.e., the local Holder regularity for weak solutions. After deriving the parabolic Sobolev inequality, (1,1) type Poincar\'e inequality of Hormander's vector fields and a De Giorgi type Lemma, the Holder regularity of weak solutions to the equation is proved based on the estimates of oscillations of solutions and the isomorphism between parabolic Campanato space and parabolic Holder space. As a consequence, we give the Harnack inequality of weak solutions by showing an extension property of positivity for functions in the De Giorgi class.
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