cases	doc_1	doc_2	decision	id
			DUPLICATES	379

doc_1

authors	• Dorodnyi, M. • Suslina, T.
title	Spectral approach to homogenization of hyperbolic equations with periodic coefficients
publication_date	2018-01-01 00:00:00
source	SupportedSources.CROSSREF
journal	
volume	
doi	10.1016/j.jde.2018.02.023
urls	• https://api.elsevier.com/content/article/PII:S0022039618301128?httpAccept=text/xml • https://api.elsevier.com/content/article/PII:S0022039618301128?httpAccept=text/plain • http://dx.doi.org/10.1016/j.jde.2018.02.023
id	id4110978329387452802
abstract	
versions	

doc_2

authors	• Mark Dorodnyi • Tatiana Suslina
title	Spectral approach to homogenization of hyperbolic equations with periodic coefficients
publication_date	2017-08-02 07:22:23+00:00
source	SupportedSources.ARXIV
journal	None
volume	
doi	
urls	• http://arxiv.org/pdf/1708.00859v1 • http://arxiv.org/abs/1708.00859v1 • http://arxiv.org/pdf/1708.00859v1
id	id-3847912587829905321
abstract	In $L_2(\mathbb{R}^d;\mathbb{C}^n)$, we consider selfadjoint strongly elliptic second order differential operators ${\mathcal A}_\varepsilon$ with periodic coefficients depending on ${\mathbf x}/ \varepsilon$, $\varepsilon>0$. We study the behavior of the operators $\cos({\mathcal A}^{1/2}_\varepsilon \tau)$ and ${\mathcal A}^{-1/2}_\varepsilon \sin({\mathcal A}^{1/2}_\varepsilon \tau)$, $\tau \in \mathbb{R}$, for small ε. Approximations for these operators in the $(H^s\to L_2)$-operator norm with a suitable s are obtained. The results are used to study the behavior of the solution ${\mathbf v}_\varepsilon$ of the Cauchy problem for the hyperbolic equation $\partial^2_\tau {\mathbf v}_\varepsilon = - \mathcal{A}_\varepsilon {\mathbf v}_\varepsilon +\mathbf{F}$. General results are applied to the acoustics equation and the system of elasticity theory.
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