cases	doc_1		doc_2		decision	id
	authors	• M. Dorodnyi • T. Suslina	**authors**	• Mark Dorodnyi • Tatiana Suslina	DUPLICATES	86
	title	Homogenization of hyperbolic equations with periodic coefficients	**title**	Homogenization of hyperbolic equations with periodic coefficients		
	publication_date	2016-06-19 00:00:00	**publication_date**	2016-06-19 13:27:50+00:00		
	source	SupportedSources.SEMANTIC_SCHOLAR	**source**	SupportedSources.ARXIV		
	journal	arXiv: Analysis of PDEs	**journal**	None		
	volume		**volume**			
	doi		**doi**			
	urls	• https://www.semanticscholar.org/paper/7aa66b7786bee542c3afed84f2c55fbc00956241	**urls**	• http://arxiv.org/pdf/1606.05868v1 • http://arxiv.org/abs/1606.05868v1 • http://arxiv.org/pdf/1606.05868v1		
	id	id2794005982141959912	**id**	id66189463590999955088		
	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 operator cosine $\cos({\mathcal A}^{1/2}_\varepsilon \tau)$, $\tau \in \mathbb{R}$, for small ε. Approximations for this operator 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.	**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 operator cosine $\cos({\mathcal A}^{1/2}_\varepsilon \tau)$, $\tau \in \mathbb{R}$, for small ε. Approximations for this operator 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.		
	versions		**versions**			