	doc_1	doc_2	decision	id
cases			DUPLICATES	77

doc_1

authors	• Zhongwei Shen
title	Lectures on Periodic Homogenization of Elliptic Systems
publication_date	2017-10-30 21:58:59+00:00
source	SupportedSources.ARXIV
journal	None
volume	
doi	
urls	• http://arxiv.org/pdf/1710.11257v1 • http://arxiv.org/abs/1710.11257v1 • http://arxiv.org/pdf/1710.11257v1
id	id4408766698690418854
abstract	In recent years considerable advances have been made in quantitative homogenization of partial differential equations in the periodic and non-periodic settings. This monograph surveys the theory of quantitative homogenization for second-order linear elliptic systems in divergence form with rapidly oscillating periodic coefficients, $$ \mathcal{L}_\e =-\text{\rm div} \big (A(x/\e)\nabla \big), $$ in a bounded domain Ω in $\br^d$. It begins with a review of the classical qualitative homogenization theory, and addresses the problem of convergence rates of solutions. The main body of the monograph investigates various interior and boundary regularity estimates (H\"older, Lipschitz, $W^{1, p}$, nontangnetial-maximal-function) that are uniform in the small parameter $\e>0$. Additional topics include convergence rates for Dirichlet eigenvalues and asymptotic expansions of fundamental solutions, Green functions, and Neumann functions. Part of this monograph is based on lecture notes for courses the author taught at several summer schools and at the University of Kentucky. Much of material in Chapters 6 and 7 is taken from his joint papers \cite{KLS-2013, KLS-2014} with Carlos Kenig and Fang-Hua Lin, and from \cite{KS-2011-L} with Carlos Kenig.
versions	

doc_2

authors	• Zhongwei Shen
title	Lectures on Periodic Homogenization of Elliptic Systems
publication_date	2017-10-30 00:00:00
source	SupportedSources.SEMANTIC_SCHOLAR
journal	arXiv: Analysis of PDEs
volume	
doi	
urls	• https://www.semanticscholar.org/paper/5e7844a3c19b9349e71aecdbc11a58aca61794d5
id	id2092484511626640937
abstract	In recent years considerable advances have been made in quantitative homogenization of partial differential equations in the periodic and non-periodic settings. This monograph surveys the theory of quantitative homogenization for second-order linear elliptic systems in divergence form with rapidly oscillating periodic coefficients, $$ \mathcal{L}_\e =-\text{\rm div} \big (A(x/\e)\nabla \big), $$ in a bounded domain Ω in $\br^d$. It begins with a review of the classical qualitative homogenization theory, and addresses the problem of convergence rates of solutions. The main body of the monograph investigates various interior and boundary regularity estimates (H\"older, Lipschitz, $W^{1, p}$, nontangnetial-maximal-function) that are uniform in the small parameter $\e>0$. Additional topics include convergence rates for Dirichlet eigenvalues and asymptotic expansions of fundamental solutions, Green functions, and Neumann functions. Part of this monograph is based on lecture notes for courses the author taught at several summer schools and at the University of Kentucky. Much of material in Chapters 6 and 7 is taken from his joint papers \cite{KLS-2013, KLS-2014} with Carlos Kenig and Fang-Hua Lin, and from \cite{KS-2011-L} with Carlos Kenig.
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