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**Periodic homogenisation of certain fully nonlinear partial differential equations.** (English)

Zbl 0796.35011

Proc. R. Soc. Edinb., Sect. A 120, No. 3-4, 245-265 (1992).

Summary: We demonstrate how a fairly simple “perturbed test function” method establishes periodic homogenisation for certain Hamilton-Jacobi and fully nonlinear elliptic partial differential equations. The idea, following Lions, Papanicolaou and Varadhan, is to introduce (possibly nonsmooth) correctors, and to modify appropriately the theory of viscosity solutions, so as to eliminate the effects of high-frequency oscillations in the coefficients.

**MSC:**

**35B27** Homogenization in context of PDEs; PDEs in media with periodic structure

**35J60** Nonlinear elliptic equations

Cited in **2** Reviews  
Cited in **102** Documents

**Keywords:**

Hamilton-Jacobi equations; fully nonlinear elliptic partial differential equations; viscosity solutions

**Full Text:** [DOI](#)

**References:**

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