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Gradient estimates for porous medium and fast diffusion equations via FBSDE approach

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(Submitted on 7 Jun 2012)

In this paper, we establish several gradient estimates for the positive solution of Porous Medium Equations (PMEs) and Fast Diffusion Equations (FDEs). Our proof is probabilistic and uses martingale techniques and Forward and Backward Stochastic Differential Equations (FBSDEs).

Subjects: **Probability (math.PR)**; Analysis of PDEs (math.AP)
Cite as: **arXiv:1206.1394 [math.PR]**
(or **arXiv:1206.1394v1 [math.PR]** for this version)

Submission history

From: Ying Hu [view email]
[v1] Thu, 7 Jun 2012 04:32:51 GMT (12kb)

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