On a drift homogenization problem

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Revisiting a problem studied by Tartar, I shall discuss the homogenization of an elliptic equation with a $L^2$ bounded oscillatory drift, describing the extra zero order term obtained at the limit with minimal a priori bounds on the sequence of oscillatory drift. I will compare the methods of oscillatory test functions introduced by Tartar with a new method based on the use of a parametrix of the Laplace operator. This is a joint work with Marc Briane.