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Graphs and asymptotic expansions in homogenisation of nonlinear equations

Contributed talk

In order to pinpoint technical difficulties for the open problem of homogenisation of semilinear transport equation, following Tartar's suggestion we study a nonlinear ordinary differential equation. We shall describe a method for computing the corenspoding asymptotic expansion. Due to their complexity, we represent the multiple integrals as graphs, which allows us to work with a number of leading terms, in a manner which might bear some similarity with Feymann diagrams.

This is a joint work with Nenad Antonić.