

ANALYSIS OF PERIODIC OSCILLATIONS OF PARTIAL DIFFERENTIAL EQUATIONS USING SMALL δ METHOD

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Abstract. Two non-linear problems are considered: a non-linear wave equation with Dirichlet boundary conditions and a linear wave equation with non-linear boundary conditions. A so called small δ method is applied. It has been shown, among others that a "problem of small denominators" is omitted using the introduced approach. A relation of the used technique to other exiting methods is discussed.