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Periodic solutions for 1d nonlinear wave equation

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We consider the cubic nonlinear wave equation on an interval with Dirichlet boundary conditions. First, we review the perturbative construction of small-amplitude time-periodic solutions. Furthermore, using an appropriate numerical construction algorithm, we explore large solutions. By analysing the underlying equations, we propose a systematic approach for describing the complex structure of time-periodic solutions. This is joint work with Filip Ficek.

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