

ON GLOBAL IN TIME ASYMPTOTIC BEHAVIOR OF SOLUTIONS OF STRONGLY DAMPED NONLINEAR WAVE EQUATIONS

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***ABSTRACT:** The talk will be devoted to the initial boundary value problem for nonlinear strongly damped wave equations and related systems under homogeneous Dirichlet's boundary condition in a bounded domain. It will be shown that the asymptotic behavior in time of solutions of considered nonlinear wave equations are completely determined by dynamics of the first N Fourier modes, when N is large enough. Recent results on existence of an exponential attractors of the semigroups generated by the strongly damped and structurally damped nonlinear wave equations will be also discussed.*

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