Recent results on semilinear wave equations with space or time dependent damping

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In this talk I will present the progress on the small data Cauchy problem of semilinear wave equations with space or time dependent damping

$$\begin{cases} u_{tt} - \Delta u + \dfrac{\mu}{(1+t)^{\alpha}} u_t = |u|^p, \quad (t,x) \in [0,T) \times \mathbf{R}^n, \\ u(x,0) = \varepsilon f(x), \quad u_t(x,0) = \varepsilon g(x), \quad x \in \mathbf{R}^n, \end{cases} \tag{1}$$

or

$$\begin{cases} u_{tt} - \Delta u + \dfrac{\mu}{(1+|x|)^{\beta}} u_t = |u|^p, \quad (t,x) \in [0,T) \times \mathbf{R}^n, \\ u(x,0) = \varepsilon f(x), \quad u_t(x,0) = \varepsilon g(x), \quad x \in \mathbf{R}^n, \end{cases} \tag{2}$$

and will show some recent results.