

Multibump solutions for a system of ordinary differential equations

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We consider the second order system of ode's $-\ddot{q} + q = W_q(q, t)$, $q \in \mathbb{R}^N$, where W is 1-periodic in t , and show that if q_0 is an isolated solution, homoclinic to 0 and carrying a certain topological information, then the system has uncountably many solutions of so-called multibump type. We also discuss the relation to the Bernoulli shift. If time permits, we briefly discuss multibumps for the Schrödinger equation $-\Delta u + V(x)u = |u|^{p-2}u$, with V 1-periodic in x_1, \dots, x_N , $\sigma(-\Delta + V) \subset (0, \infty)$ and $2 < p \leq 2^* := 2N/(N - 2)$.