

Some breathers and multi-breathers for FPU-type chains

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We consider several breather solutions for FPU-type chains that have been found numerically. Using computer-assisted techniques, we prove that there exist true solutions nearby, and in some cases, we determine whether or not the solution is spectrally stable. Symmetry properties are considered as well. In addition, we construct solutions that are close to (possibly infinite) sums of breather solutions.

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