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Review text:

In the context of building solvable models in quantum mechanics the authors come with an interesting combination of two ideas which enables them to offer a few new models of the so called Fermi-Ulam oscillators (in single spatial dimension) characterized by the time-dependent (right) boundary condition. Separately, both these ideas are well known. The first one (carrying the nickname of supersymmetric quantum mechanics, cf. ref. [12]) enables the authors to start from the most elementary and readily solvable time-independent square well potential (cf. eq. (20)) and to construct the whole hierarchy of the less trivial but still exactly solvable “partner” potentials (cf. the triplet of their samples given by eqs. (27) and (37) and (42)). The second idea (restricting the reader’s attention to the separable time-dependent Schroedinger equations) is then shown to produce the final time-dependent exactly solvable versions of the above-mentioned “partner” potentials (cf. their respective samples given by eqs. (30) and (39) and (44)) as well as the corresponding energies and wave functions.