This is a review text file submitted electronically to MR.

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Author: This line will be completed by the MR staff.

Short title: This line will be completed by the MR staff.

Control number: 1952072

Primary classification: 81Q10

Secondary classification(s): 81Q15 81Q05 47B50 46C20 35Q40

Review text:

Continuation of the recently increasingly popular numerical and perturbative experiments studying purely imaginary anharmonicities. The paper describes their extremely important extension to two and three dimensions. In two dimensions the author emphasizes the difference between even-even cases (where the spectra are general complex and nothing interesting happens) and the other possibilities where PT symmetric quantum mechanics applies (i.e., Hamiltonians may be interpreted as pseudo-Hermitian and their energies may be either real or arranged in complex conjugate doublets). It is emphasized that in contrast to the one-dimensional case, P is not the standard parity but rather a more general operator of reflection. The structure of the sample spectra is very instructive in exhibiting the unavoided crossings of levels, the confluence of pairs of opposite quasi-parity followed by their complexification called spontaneous symmetry breaking, etc. Detailed formulae are provided for the linear-linear "anharmonicity" (in fact, the mere rotated harmonic-harmonic exactly solvable special case) and then for the genuine linear-cubic and linear-linear-quadratic perturbatively and variationally tractable anharmonicities.