



Mathematical Physics

Convergent Quantum Normal Forms, \mathcal{PT} -symmetry and reality of the spectrum

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A class of non-selfadjoint, \mathcal{PT} -symmetric operators is identified similar to a self-adjoint one, thus entailing the reality of the spectrum. The similarity transformation is explicitly constructed through the method of the quantum normal form, whose convergence (uniform with respect to the Planck constant) is proved. Further consequences of the uniform convergence of the quantum normal form are the establishment of an exact quantization formula for the eigenvalues.

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