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Reviewer: Znojil, Miloslav

Reviewer number:

Address:

NPI ASCR, 250 68 Rez,
Czech Republic
znojil@ujf.cas.cz

Author: Bagarello, F.

Short title: (Regular) pseudo-bosons versus bosons.

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Review text:

The most common representations of the creation and annihilation operators for bosons exhibit a peculiar property of being truly infinite-dimensional. This opens the necessity of studying the related mathematical subtleties with due care. The paper under review contributes to this study by the analysis of what happens when one transforms the physical Hilbert space non-unitarily, in the spirit of the so called pseudo-Hermitian (a.k.a. PT-symmetric) quantum mechanics (cf. review paper [10] for details). In particular, the author describes the role of the specification of the domains and of the properties of boundedness of the transformation operators, say, for the validity of the spectral decomposition of identity.