Quantum Mechanics Version of Wavelet Transform Studied by Virtue of IWOP Technique

FAN Hong-Yi[1,2] and LÜ Jian-Feng[1]

[1] Department of Physics, Shanghai Jiao Tong University, Shanghai 200030, China
[2] Department of Material Science and Engineering, University of Science and Technology of China, Hefei 230026, China

Abstract: Using the technique of integral within an ordered product (IWOP) of operators we show that the wavelet transform can be recasted to a matrix element of squeezing-displacing operator between the mother wavelet state vector and the state vector to be transformed in the context of quantum mechanics. In this way many quantum optical states' wavelet transform can be easily derived.

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