

Generating Generalized Bessel Equations by Virtue of Bose Operator Algebra and Entangled State Representations

FAN Hong-Yi^{1,2} and WANG Yong³

¹ Department of Material Science and Engineering, University of Science and Technology of China, Hefei 230026, China

² Department of Physics, Shanghai Jiao Tong University, Shanghai 200030, China

³ Department of Special Class for Gifted Young, University of Science and Technology of China, Hefei 230026, China

(Received: 2004-8-2; Revised:)

Abstract: With the help of Bose operator identities and entangled state representation and based on our previous work [Phys. Lett. A 325 (2004) 188] we derive some new generalized Bessel equations which also have Bessel function as their solution. It means that for these intricate higher-order differential equations, we can get Bessel function solutions without using the expatiatory power-series expansion method.

PACS: 03.65.Ud, 03.65.-w

Key words: Bose operator algebra, entangled state representation

[\[Full text: PDF\]](#)

Close