

# Keynote Talk: An Approximate Secular Equation of Rayleigh-like Waves in Coated Elastic Half-Space Containing Voids

S. K. Tomar

Professor of Mathematics, Panjab University, Chandigarh (UT), India  
Vice Chancellor, J. C. Bose University of Science and Technology, YMCA, Faridabad,  
Haryana, India

\*Corresponding author's e-mail: sktomar@pu.ac.in

## ABSTRACT

Rayleigh-like wave propagation is studied in uniform elastic solid half-space coated with a thin isotropic elastic solid layer. Effective boundary condition method is employed to derive approximate secular equations of various orders. The corresponding secular equations are solved numerically to obtain the speed of propagating Rayleigh-like waves for a particular model. Fourth-order approximate secular equation is found to have high accuracy as it provides solutions that are in close vicinity of those obtained from the exact secular equation in the considered model. The presence of voids in the model is found to influence the speed of Rayleigh-like waves theoretically and verified numerically. In the absence of voids in the model, the secular equation completely coincides to that of obtained earlier in the corresponding model.

## How to Cite

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