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Effect of Rotation on Love Wave Propagation in Piezoelectric Medium with Corrugation

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Abstract : The present study analyses the propagation of Love wave in rotating piezoelectric layer lying over an elastic substrate with corrugated boundaries. The appropriate solutions in the considered medium satisfy the required boundary conditions to obtain the dispersion relation of Love wave for charge free as well as electrically shorted cases. The effects of rotation are shown by graphically on the non-dimensional speed of the Love wave. In addition to classical case, some existing results have been deduced as particular case of the present study. The present study may be useful in rotation sensor and SAW devices.

Keywords : corrugation, dispersion relation, love wave, piezoelectric
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