DERIVATION OF THE THREE-DIMENSIONAL WAVE EQUATION SOLUTION BY SEPARATION OF VARIABLE METHOD

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DECLARATION BY CANDIDATE

We certify that this report and the project to which it refers is the product of our own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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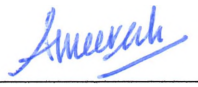

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ABSTRACT

Wave equation is the propagation of oscillations at a fixed speed in some quantity and are characterized by wavelength, frequency, and the speed at which they move and it can be found in many forms. This project deals with a three-dimensional homogenous wave equation in rectangular coordinates with different types of boundary conditions. Separation of variables method was used to solve the initial and boundary value problem on derivation of the solution for the three-dimensional homogenous wave equation. Then, Fourier series were applied to determine the coefficients in the particular solution.

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