

## Lie Symmetry of a Nonlinear System Characterizing Endemic Malaria

**Authors :** Maba Boniface Matadi

**Abstract :** This paper analyses the model of Malaria endemic from the point of view of the group theoretic approach. The study identified new independent variables that lead to the transformation of the nonlinear model. Furthermore, corresponding determining equations were constructed, and new symmetries were found. As a result, the findings of the study demonstrate of the integrability of the model to present an invariant solution for the Malaria model.

**Keywords :** group theory, lie symmetry, invariant solutions, malaria

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