

# Review of: "On n-Dimensional Maxwell and Dirac Equations in Curved Space-Time and Its Applications in $SO(p,q)$ Group Theoretic Image Processing"

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Potential competing interests: No potential competing interests to declare.

## Review Report

**Title:** On n-dimensional Maxwell and Dirac Equations in curved space-time and its applications in  $SO(p,q)$  group theoretic image processing.

**Author:** Harish Parthasarathy.

**Manuscript ID:** Qeios ID: LZ87YF.

## Reviewer's Report

This paper studies how to use properties of the  $SO(p, q)$  group to formulate Maxwell's equations in n-dimensions with p time coordinates and q space coordinates by starting with an  $n = p + q$  vector potential. He derived the (p,q) dimensional wave equation for the electromagnetic potentials and explained how to calculate the associated Green's function in order to solve the (p,q)-dimensional Maxwell equation in the presence of an n-current density. He discussed properties of this Green's function and also explained how to use it to calculate the power radiated out into the  $n - 1$  space when there is one time variable. He also explained how to derive generalizations of the homogeneous Maxwell field equations in (p, q)-dimensional space-time from the potentials.

I am very willing to recommend the acceptance of it for publication in the Qeios journal. However, it is worth pointing out that there are some minor errors which need to be modified and corrected:

- 1) The author should check the punctuation marks at the end of equations and also the end of some sentences within the paper.
- 2) The author should add some recent references related to this topic.