



SDI Review Form 1.6

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| Journal Name: | Physical Science International Journal |
| Manuscript Number: | Ms_PSIJ_63084 |
| Title of the Manuscript: | A Proposed SUSY Alternative (SUSYA) based on a new type of seesaw mechanism applicable to all elementary particles and predicting the existence of a superfluid aether composed of two new types of massless Majorana neutrinos |
| Type of the Article | Short Research Article |

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/journal/10/editorial-policy>)



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PART 1: Review Comments

| | Reviewer's comment | Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here) |
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| Compulsory REVISION comments | This paper proposes a potentially viable "out-of-the-box" alternative (called "SUSYA") to the currently known supersymmetry (SUSY) theory variants: SUSYA essentially proposes a new type of seesaw mechanism (SMEC) applicable to all elementary particles (EPs) and named "Z-SMEC"; Z-SMEC is a new type of charge-based mass symmetry/"conjugation" between EPs which predicts the zero/non-zero rest masses of all known/unknown EPs, EPs that are "conjugated" in boson-fermion pairs sharing the same electromagnetic charge (EMC). | |
| Minor REVISION comments | Z-SMEC is actually derived from an extended zero-energy hypothesis (eZEH) which is essentially a conservation principle applied on zero-energy (assigned to the ground state of vacuum) that mainly states a general quadratic equation governing a form of ex-nihilo creation and having a pair of conjugate boson-fermion mass solutions for each set of given coefficients. eZEH proposes a general formula for all the rest masses of all EPs from Standard model, also indicating the true existence of the graviton and a possible bijective connection between the three types of neutrinos (all predicted to be actually Majorana fermions) and the massless bosons (photon, gluon and the hypothetical graviton), between the electron/positron and the W boson, predicting at least three generations of leptoquarks (LQs) (defined here as the "mass-conjugates" of the three known generations of quarks) and predicting two distinct types of neutral massless fermions (NMFs) (modelled as mass-conjugates of the Higgs boson and Z boson respectively) which may be plausible constituents for a hypothetical lightest possible (hot fermionic) dark matter (LPDM) or, even more plausible, the main constituents of a superfluid fermionic vacuum/aether, as also proposed by the notorious Superfluid vacuum theory (SVT) (in which the physical vacuum is modeled as a bosonic/fermionic superfluid). | |
| Optional/General comments | SUSYA also predicts two hypothetical bosons defined as the ultra-heavy bosonic mass-conjugates of the muon and tauon called here the "W-muonic boson" (Wmb) and the "Wtauonic boson" (Wtb) respectively: Wmb and Wtb are predicted much heavier than the W boson and the Higgs boson so that Wmb and Wtb can be regarded as ultra-heavy charged Higgs bosons with their huge predicted rest energies defining the energy scale at which the electroweak field (EWF) may be unified with the Higgs field (HF). | |

PART 2:

| | Reviewer's comment | Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here) |
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| Are there ethical issues in this manuscript? | <i>(If yes, Kindly please write down the ethical issues here in details)</i> | |

Reviewer Details:

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| Name: | Zafar Wazir |
| Department, University & Country | International Islamic University, Pakistan |