

Review of: "Constructing a Set of Kronecker-Pauli Matrices"

Dimitri Gurevich¹

¹ Institut des Hautes Études Scientifiques, Bures-sur-Yvette, France

Potential competing interests: No potential competing interests to declare.

The paper is devoted to constructing families of matrices by using the Kronecker products of the Pauli matrices and studying properties of these families.

The author motivates his interest in this construction by the needs stemming from quantum physics. I consider this motivation to be plausible and suggest that the paper should be published in your journal. The paper is correct and is written in a comprehensible way.

However, I would like to give the author two suggestions. First, it would be advisable to include in the paper the following references (at least partially) in order to enhance its physical motivation:

1. R. Kerner and J. Lukierski "Internal quark symmetries and colour SU(3) entangled with Z3-graded Lorentz algebra", Nuclear Physics B, 972, 115529. arXiv:2012.05335 (2021),
2. R. Kerner, "Ternary generalizations of graded algebras with some physical applications", Revue Roumaine de Mathématiques Pures et Appliquées, Tome LXII, N° 2, pp. 107-142 (2018)
3. R. Kerner "The Z 3-graded extension of the Poincaré algebra",
In : Algebra without Borders—Classical and Constructive Nonassociative Algebraic Structures: Foundations and Applications. Cham : Springer International Publishing, 2023. p. 165-187.
see also arXiv:1908.02594.

Second, it is necessary to check the spelling (English grammar). For instance, in example 1, the expression "with only one one..." has to be replaced by "with the only unit..."

Maybe it would be reasonable to ask some help from a native English speaker.

After accepting the amendments, the paper can be published without a new review.