

Dirac's equation in the light of geometric algebra

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The main goals will be to review how Dirac's relativistic theory of the electron can be cast into the language of geometric algebra, to point out the advantages of this translation, to present some recent developments along these lines, and to show how effective computations can be carried out. As background, the talk will include a full presentation of Pauli's and Dirac's (geometric) algebras and the Riesz form of Maxwell's equations.

References

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- [4] Xambó-Descamps, S.: Escondidas sendas de la geometría proyectiva a los formalismos cuánticos. In *El legado matemático de Juan Bautista Sancho Guimerá* (edited by A. Campillo and D. Hernández-Ruipérez), 233-274. Ediciones Universidad de Salamanca and Real Sociedad Matemática Española, 2015.