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98e:83007 [83A05](#)

[Oyibo, Gabriel](#) (1-PINY2)

Generalized mathematical proof of Einstein's theory using a new group theory. (English summary)

Nova J. Math. Game Theory Algebra **4** (1996), no. 1, 1–24.

Summary: "A generic mathematical proof for Einstein's relativity principle relating mass to energy is proposed. Some parallelism is drawn that relates the features of Lorentz's group of transformations to the new methodology using a new form of group theory. Specifically the concept of conformal invariance, which was fully used with the Lorentz group of transformations to explain special relativity theory, is used to show that the mass conservation equations of physics is a conformal invariant of the energy conservation equation as well as the momentum conservation equations. This permitted the conclusion that mass is proportional to energy as well as momentum. The units of the constants of proportionality are shown to have the units of velocity squared and velocity, respectively. It is further postulated that a good experimental procedure should verify that the constant magnitude speed involved in the constants of proportionality is the speed of light. Such experiments have undoubtedly been conducted to verify the mass-energy relationship. However, the verification of the relationship proposed between mass and momentum as well as of the one between energy and momentum may not have been already carried out since such relationships do not seem to have been proposed. This methodology further provides the opportunity for generating generic solutions to the 3D unsteady conservation equations of mathematical physics. For relativistic systems the implications of the concepts of space-like and time-like directions as well as that of simultaneity of events in these solutions are investigated at a preliminary level."

Reviewed by [Jaume J. Carot](#)

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