Lorentz transformations, The mass,The mass-energy equivalence

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There is a trend in the world to develop the applications of mathematics and links to other areas especially with the physics and mechanics. Roughly speaking, this work is my first step in this direction.
In this rough note we treat Euclidean and non-Euclidean rotations in a transparent and simple way. In 3D we interpret rotations by means of rigid body motion and we try to outline precise derivation of Lorenz transformations from mathematical point of view. We give simple proof of some known results (based on new pedagogical approach and methodological tools). In particular, we reduce the Minkowski isometry to the Euclidean isometry and apply complex trigonometry. We also use a thought experiment to give an argument (heuristic from mathematical point of view) for the mass-energy equivalence.