

1131-53-221

Barbara A. Shipman* (bshipman@uta.edu), **Patrick D. Shipman** and **Stephen P. Shipman**. *Lorentz-conformal transformations and timelike surfaces of zero mean curvature*. Preliminary report.

Lorentz-conformal transformations in the plane satisfy, with sufficient smoothness, the Lorentz-Cauchy-Riemann equations and the wave equation. These maps are holomorphic with respect to a hyperbolic structure on the plane. Taking Lorentz-conformal generating functions in Weierstrass-Enneper expressions for timelike surfaces in Lorentz 3-space produces timelike surfaces with zero mean curvature. Solutions of the wave equation may be naturally extended to non-smooth functions, creating variants of timelike surfaces with non-smooth features. (Received July 15, 2017)