

Algebraic CMC Surfaces and Weierstrass \wp -Functions

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We show that for every spacelike CMC surface of revolution (except spacelike cylinders and standard hyperboloids) about a timelike axis or spacelike axis, which is either an unduloid or a nodoid, in the Lorentz-Minkowski space \mathbb{L}^3 there is an associated Weierstrass- \wp function. Next, using this association, we will show that unduloid and nodoid cannot be algebraic. A similar result is obtained for CMC surfaces of revolution in the Euclidean space \mathbb{E}^3 .

This talk is based on joint work with Rukmini Dey and Anantadulal Paul.