

## FMfI2023 Poster Session

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Affiliation	Faculty of Science, Department of Mathematics, Hokkaido University, Japan
Poster title	<b>Construction of solutions for sinh-Gordon equation in terms of Riemann theta functions</b>
Abstract	<p>In 1982, E.Date constructed quasiperiodic solutions of the equation Pohlmeyer-Lund-Regge which is a generalization of the sine-Gordon equation, and it was known that solutions could be explicitly expressed using Riemann theta functions. This construction is based on the Krichever's method for obtaining quasiperiodic solutions to the Zakharov-Shabat equation.</p> <p>In this study, by considering of another constraint and the Krichever's method, solutions of hyperbolic sinh-Gordon equation in terms of Riemann theta functions will be constructed.</p> <p>Note that, the sinh-Gordon equation is the Gauss-Codazzi equation of a timelike surface of constant mean curvature in Minkowski space, and we will investigate the structure and properties of such surfaces.</p>
Short Bio	I am a second-year master's student in the Faculty of Science, Department of Mathematics, Hokkaido University. My supervisor is Prof. Shimpei Kobayashi at Hokkaido University. I am currently interested in the integrable systems, particularly quasiperiodic solutions of it, and differential geometry.