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Titolo	A Spectral Theory for Simply Periodic Solutions of the Sinh-Gordon Equation [[electronic resource] /] / by Sebastian Klein
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Sommario/riassunto	This book develops a spectral theory for the integrable system of 2-dimensional, simply periodic, complex-valued solutions u of the sinh-Gordon equation. Such solutions (if real-valued) correspond to certain constant mean curvature surfaces in Euclidean 3-space. Spectral data for such solutions are defined (following ideas of Hitchin and Bobenko) and the space of spectral data is described by an asymptotic characterization. Using methods of asymptotic estimates, the inverse problem for the spectral data is solved along a line, i.e. the solution u is reconstructed on a line from the spectral data. Finally, a Jacobi variety and Abel map for the spectral curve are constructed and used to describe the change of the spectral data under translation of the

solution u. The book's primary audience will be research mathematicians interested in the theory of infinite-dimensional integrable systems, or in the geometry of constant mean curvature surfaces. .