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Sommario/riassunto	Wave maps are the simplest wave equations taking their values in a Riemannian manifold (M,g) . Their Lagrangian is the same as for the scalar equation, the only difference being that lengths are measured with respect to the metric g . By Noether's theorem, symmetries of the Lagrangian imply conservation laws for wave maps, such as conservation of energy. In coordinates, wave maps are given by a system of semilinear wave equations. Over the past 20 years important methods have emerged which address the problem of local and global wellposedness of this system. Due to weak dispersive effects, wave maps defined on Minkowski spaces of low dimensions, such as $\mathbb{R}^{2+1}_{t,x}$, present particular technical difficulties. This class of wave maps has the additional important feature of being energy critical, which refers to the fact that the energy scales exactly like the equation. Around 2000 Daniel Tataru and Terence Tao, building on earlier work of Klainerman-Machedon, proved that smooth data of small energy lead to global smooth solutions for wave maps from 2+1 dimensions into target manifolds satisfying some natural conditions. In contrast, for large data, singularities may occur in finite

time for $M = \mathbb{S}^2$ as target. This monograph establishes that for \mathbb{H} as target the wave map evolution of any smooth data exists globally as a smooth function. While we restrict ourselves to the hyperbolic plane as target the implementation of the concentration-compactness method, the most challenging piece of this exposition, yields more detailed information on the solution. This monograph will be of interest to experts in nonlinear dispersive equations, in particular to those working on geometric evolution equations.
