Brad Osgood* (osgopd@stanford.edu), 271 Packard Bldg., Stanford University, Stanford, CA 94305, and Martin Chuaqui and Peter Duren. Quasiconformal Extensions to Space of Weierstrass-Enneper Lifts.

The Ahlfors-Weill extension of a conformal mapping of the disk is generalized to the Weierstrass-Enneper lift of a harmonic mapping of the disk to a minimal surface, producing homeomorphic and quasiconformal extensions to space. The extension is defined through the family of best Möbius approximations to the lift applied to a bundle of Euclidean circles orthogonal to the disk. Extension of the planar harmonic map is also obtained subject to additional assumptions on the dilatation. The hypotheses involve bounds on a generalized Schwarzian derivative for harmonic mappings in terms of the hyperbolic metric of the disk and the Gaussian curvature of the minimal surface. Hyperbolic convexity plays a crucial role. (Received August 28, 2015)