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Michael Dorff* (mdorff@math.byu.edu), Department of Mathematics, Brigham Young University, Provo, UT 84602, and **Magdalena Woloszkiewicz**. *Convex combinations of harmonic mappings*.

Complex-valued harmonic mappings can be regarded as generalizations of analytic functions. We are interested in investigating univalent harmonic mappings. These are connected with minimal surfaces in \mathbb{R}^3 . In this paper, we prove results concerning the univalence of the linear combinations of harmonic mappings. One application of these results offers an easy way to construct harmonic mappings onto nonconvex polygonal domains and to construct the corresponding minimal graphs over these nonconvex domains. This results in a new family of minimal surfaces that are generalizations of the Jenkins-Serre surfaces. (Received July 24, 2008)