Harmonic diffeomorpphisms between surfaces

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Heinz proved in 1952 that there is no harmonic diffeomorphism from a disk onto the complex plane (with the euclidean metric). Collin and Rosenberg constructed in 2010 harmonic diffeomorphisms from the complex plane onto the hyperbolic plane, disproving a conjecture by Schoen and Yau. In a joint work with Laurent Mazet and Harold Rosenberg we prove: Given any hyperbolic complete surface S of finite topology and infinite area, there exists a parabolic complete surface M (it is nothing but S with a parabolic conformal structure) and a harmonic diffeomorphism from M to S.