

# DIFFEOMORPHIC APPROXIMATION OF $W^{1,1}$ PLANAR SOBOLEV HOMEOMORPHISMS

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ABSTRACT. Let  $f$  be a homeomorphism from planar domain into the plane which lies in the Sobolev space  $W^{1,1}$ . We show that there exists a sequence of smooth diffeomorphisms converging to  $f$  in Sobolev norm and uniformly. This is a joint result with Aldo Pratelli.