

# The Trace Theorem for Sobolev Homeomorphisms

Aleksis Koski,  
Aalto University

Classical Sobolev trace theory tells us when a boundary map can be extended as a Sobolev function inside a given domain in  $\mathbb{R}^n$ .

For the purposes of minimization problems in Nonlinear Elasticity, it is natural to rephrase this question in the context of extending a given embedding of the boundary as a homeomorphic Sobolev map. In this talk, I will explain what is known about this problem, ending with a full trace theory for Sobolev homeomorphisms in 2D.