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Piotr Hajlasz (hajlasz@pitt.edu), 301 Thackeray Hall, Pittsburgh, PA 15213, and **Xiaodan Zhou*** (xiz78@pitt.edu), 301 Thackeray Hall, Pittsburgh, PA 15213. *Sobolev Homeomorphism on a Sphere Containing An Arbitrary Cantor Set in the image.*

We construct a large class of pathological n -dimensional spheres in \mathbb{R}^{n+1} by showing that for any Cantor set $C \subset \mathbb{R}^{n+1}$ there is a topological embedding $f : \mathbb{S}^n \rightarrow \mathbb{R}^{n+1}$ of the Sobolev class $W^{1,n}$ whose image contains the Cantor set C . (Received September 16, 2015)