1073-35-163   **Jan Chabrowski** and **David G. Costa*** (`costa@unlv.nevada.edu`), Department of Mathematical Sciences, University of Nevada Las Vegas, Las Vegas, NV 89154-4020. *Positive solutions for a class of Caffarelli-Kohn-Nirenberg type equations in $\mathbb{R}^N$.*

We study existence of positive solutions for a singular equation of Caffarelli-Kohn-Nirenberg type in $\mathbb{R}^N$ having a critical-like nonlinearity with a sign-changing weight function. This is done by investigating how the properties of the Nehari manifold and the fibering mappings affect the existence of positive solutions. (Received July 31, 2011)