

ASYMPTOTIC SYMMETRY FOR SINGULAR YAMABE EQUATION

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Let (M, g) be a compact Riemannian manifold of dimension n . A celebrated theorem of Khuri-Marques-Schoen says that if $3 \leq n \leq 24$, all the solutions to the Yamabe equation are uniformly bounded, as long as the manifold is not the standard sphere. On the other hand counter-examples have been constructed for $n \geq 25$ by Brendle and Marques. In this joint work with J. Xiong we prove that for singular Yamabe equation, the solution has asymptotic symmetry near its singularity for $3 \leq n \leq 24$.

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