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Jun Kigami* (kigami@i.kyoto-u.ac.jp), Graduate School of Informatics, Kyoto University,
Kyoto, Kyoto 606-8501, Japan. *Quaiconformal modification of metrics on self-similar sets.*

Using the notion of scales and their gauge functions, we give a necessary and sufficient condition for metrics on self-similar sets being quasiconformal to each other. As an application, the conformal dimension of the Sierpinski carpet is no greater than $\log \frac{9+\sqrt{41}}{2} / \log 3$, which is strictly less than the Hausdorff dimension of the Sierpinski carpet, $\log 8 / \log 3$. (Received July 19, 2010)