

Meeting: 1001, Evanston, Illinois, SS 12A, Special Session on Iterated Function Systems and Analysis on Fractals

1001-37-419 **Ning Jin*** (njin@math.uic.edu), Depart of Math., Stat., & Comp. Sci., 322 SEO m/c 249, 851
S. Morgan Street, Chicago, IL 60607. *Housdorff Dimension of General Sierpinski Carpets in*
 R^m . Preliminary report.

Let matrix $A = \text{diag}(n_1, \dots, n_m)$, where $n_1, \dots, n_m \geq 2$ be positive integers. Let $\Phi = \{A^{-1}x + v_1, \dots, A^{-1} + v_k\}$. Then Φ is a set of contractive affine mappings on \mathbb{R}^m . In this paper, the Hausdorff dimension of the attractor of Φ is obtained in case all the $v_i \in \mathbb{Q}^k$, $i = 1, \dots, k$, where \mathbb{Q} means the field of rational numbers. (Received August 31, 2004)