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Yang Wang* (ywang@math.msu.edu), Department of Mathematics, Michigan State University, East Lansing, MI 48824, and **Xinrong Dai** (ywang@math.msu.edu). *Peano Curves for Fractals*.

In 1890 G. Peano introduced a continuous function that maps the unit interval onto the unit square. It is the first construction of a space-filling curve. In 1891 Hilbert discovered another space-filling curve by employing the technique of self-similarity. Later space-filling curves have been constructed by many authors, all of which have the properties that they are Hölder continuous and are measure preserving. A natural question is whether a Peano curve exists for any connected self-similar set. We discuss this question in this talk. (Received January 10, 2011)