

Year: 2015

Vol.: 87

Fasc.: 1-2

Title: Generating iterated function systems for a class of self-similar sets with complete overlap

Author(s): Yuanyuan Yao and Wenxia Li

It is an interesting topic to find all generating iterated function systems (IFSs) for a given self-similar set. Previous results on this topic require some separation condition. In this paper, we discuss all generating IFSs for a class of self-similar sets with complete overlap. We prove that the IFS $\{\rho x, \rho x + \rho, \rho x + 1\}$ with $0 < \rho < (3 - \sqrt{5})/2$ is a minimal presentation, i.e. every other generating IFS with the same attractor is an iteration of this one.

Address:

Yuanyuan Yao
Department of Mathematics
East China University of
Science and Technology
Shanghai 200237
P.R. China

Address:

Wenxia Li
Department of Mathematics
Shanghai Key Laboratory of PMMP
East China Normal University
Shanghai 200241
P.R. China