

# 数論セミナー

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タイトル: Non-autonomous iterated function systems and fractals

アブストラクト:

Limit sets (for short, fractals) generated by iterated function systems (for short, IFS) with finite contraction maps have been well studied. On the other hand, fractals generated by non-autonomous IFSs have also been studied gradually, but there is still room for further development. Indeed, most of the studies of non-autonomous IFSs are considered the functions defined on some bounded set, which deduce that the fractals are always uniformly bounded with respect to the base point. In this talk, we consider non-autonomous IFSs generated by the functions defined on complete metric spaces. We show the existence of the fractals (which are not uniformly bounded with respect to the base point in general) generated by the non-autonomous IFSs. In addition, we also consider non-autonomous IFSs with weights defined on complete separable metric spaces. We also show the existence of the limit (probability) measures generated by non-autonomous IFSs with weights. Moreover, we discuss some properties of the limit sets and limit measures.

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