

HAPPY FRACTALS AND SOME ASPECTS OF ANALYSIS ON METRIC SPACES

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Dedicated to Leon Ehrenpreis and Mitchell Taibleson

Abstract

There has been a lot of interest and activity along the general lines of “analysis on metric spaces” recently, as in [2], [3], [26], [40], [41], [46], [48], [49], [51], [82], [83], [89], for instance. Of course this is closely related to and involves ideas concerning “spaces of homogeneous type”, as in [18], [19], [66], [67], [92], as well as sub-Riemannian spaces, e.g., [8], [9], [34], [47], [52], [53], [54], [55], [68], [70], [72], [73], [84], [86], [88]. In the present survey we try to give an introduction to some themes in this general area, with selections related to several points of view. Let us also mention [39], [93], [97], [98], [99] for topics dealing with nonstandard analysis, where one might think of a continuous metric space as something like a nonstandard graph.

2000 *Mathematics Subject Classification.* 42-02.

Key words. Graphs, happy fractals, Lipschitz classes.

*This survey was prepared partially in connection with the trimester “Heat kernels, random walks, and analysis on manifolds and graphs” at the Centre Émile Borel, Institut Henri Poincaré, in the Spring of 2002. This trimester was organized by P. Auscher, G. Besson, T. Coulhon, and A. Grigor’yan, and the author was fortunate to be a participant. The proceedings will be published in the Contemporary Mathematics series of the American Mathematical Society, and a report on the trimester can be found in [82]. Another survey on related themes is [83]. The author is grateful to an unnamed reader for many helpful comments and suggestions.