

ERRATUM FOR THE PHD THESIS “SUBLINEAR ASYMPTOTIC GEOMETRY: HYPERBOLICITY, SELF-SIMILARITY, INVARIANTS”

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page 16: The assertion “On appelle α la dérivation structurelle, elle n’est bien définie qu’à un multiple strictement positif près” is incorrect as soon as N is nonabelian. The correct replacement is given by Sequeira as [3, Proposition 5.2.2]. Though α is undefined, only properties depending on its Jordan form are used when we refer to it, so this does not create a problem in the thesis.

page 18: Just before Eq. (7), replace “Groupe semi-simple G ” with “Groupe semi-simple de centre trivial, sans facteur compact G ”.

page 24: The Hölder dimension of the tree on Figure 5 is actually infinite. To build a pair of examples that are truly distinguished by Holdim one should instead start from the hyperbolic plane \mathbb{H}^2 , fix a base-point o and remove $3 \cdot 2^n$ half spaces at a distance roughly $n \log n$. This will have Hölder dimension 1 and be distinguished from the metric tree of constant edge length.

page 28: Footnote 35 contains a misleading statement as it puts on the same level results with different strength. The conclusion in [1] is strictly weaker than that in the other cited works of Xie.

page 28-29: One should not have used the (wrong) “parabolique minimaux” and (ambiguous) “ \mathbf{R} -sous-groupe de Borel” terminology. Actually in both cases we mean an AN subgroup whenever KAN is an Iwasawa decomposition of the group G .

page 35: In Théorème 51, the assumption should be: “Soit X un espace de Banach et $e \in [0, 1)$ ”.

page 114: $\mathcal{W}_{\ell, \text{loc}}^{p, k}$ may not be a Fréchet algebra. Hence one should replace “Fréchet algebra” by “normed algebra” in the conclusion of Lemma II.32.

page 116-117: Proposition II.35 and II.36 have an incomplete proof, because of the failure of Lemma II.32. Nevertheless, this does not affect the proof of Theorem II.1, which relies on Lemma II.56 rather than¹ Proposition II.36. (See [2, Section 3] for a proof of Theorem II.1 with only the necessary steps.)

page 122: Definition II.41 contains a mistake. The correct definition reads as

$$\text{Cdim}_{\mathcal{O}(u)}^{\Gamma}(\beta) = \sup \left\{ p \in \mathbf{R}_{>0} : \forall k \in \mathcal{O}^+(u), \exists \ell \in \mathcal{O}^+(u), \exists m \in \mathcal{O}^+(u), \text{mod}_{p, k}^{\ell, m}(\Gamma, \beta) = +\infty \right\}.$$

The author thanks Samuel Colvin, Yves Cornulier, Emiliano Sequeira, and especially Tullia Dymarz, Peter Haïssinsky, Pierre Pansu and the anonymous referees of the journal articles for helping him to locate and correct numerous errors on several versions of the manuscript.

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Date: September 28, 2021.

¹The reason for Proposition II.36 to appear in the thesis is that it was required in an earlier attempt to prove Theorem II.1 and seemed of independent interest.