

Errata

Original Document: “Configurations in Fractal Sets in Euclidean and Non-Archimedean Local Fields”

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Begin errata.

Page 4: Theorem 1.2.1: Replace with the following:

Let $\{f_\ell\} : R^{n_{v_\ell}} \rightarrow R$ be a countable family of nonzero polynomials of degree at most d with integer coefficients, where $R = \mathbb{Z}_p$ or $\mathbb{F}_q[[t]]$. If $R = \mathbb{F}_{p^f}[[t]]$ for some prime p , then assume in addition that $d < p$. Then there exists a set $E \subset R^n$ of Hausdorff dimension $\frac{n}{d}$ and Minkowski dimension n such that, for all ℓ , the set E does not contain v_ℓ distinct points x_1, \dots, x_{v_ℓ} such that $f_\ell(x_1, \dots, x_{v_\ell}) = 0$.

Page 73: Case 1, Theorem 1.2.1 or 1.2.2: replace the second sentence with the following.

In the case of Theorem 1.2.2, we have by assumption that $|\partial^\alpha f|$ is nonzero on all of $T_1 \times \dots \times T_v$ for an appropriate multi-index α . In the case of Theorem 1.2.1, we use the fact that f is a polynomial. On \mathbb{Z}_p , any polynomial of any degree d has some partial derivative of order d that is equal to a nonzero constant. The same holds for $\mathbb{F}_{p^f}[[t]]$ if we make the additional assumption that $d < p$.