

A Cantor set type result in the field of formal Laurent series.

Let \mathcal{L} denote the formal Laurent series over \mathbb{F}_3 . \mathcal{L} is then an ultra-metric space when equipped with the absolute value $|0| = 0$ and

$$\left| \sum_{n=N}^{\infty} a_{-n} X^{-n} \right| = 3^{-N}, \text{ for elements } \sum_{n=N}^{\infty} a_{-n} X^{-n} \text{ with } a_{-N} \neq 0.$$

Inside \mathcal{L} we can find an analogue of the Cantor set by considering elements of the form

$$\sum_{n=1}^{\infty} a_{-n} X^{-n}, \text{ where } a_{-n} \in \{0, 2\}.$$

In this talk we will look at a Khintchine type result for intrinsic Diophantine approximation in this Cantor set in \mathcal{L} .