

# Rough Statistically Cauchy Sequences

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## **Abstract**

A sequence  $(x_i)$  in  $\mathbb{R}^n$  is said to be a rough statistically Cauchy sequence with roughness degree  $r$ , provided that for each  $\varepsilon > 0$  there exists a natural number  $N = N(\varepsilon)$  such that the set

$$\{i \in \mathbb{N} : \|x_i - x_N\| \geq r + \varepsilon\}$$

has natural density zero. In this talk, we formulate some properties of rough statistically Cauchy sequences and calculate the minimal statistically Cauchy degree of a sequence. Finally, when a statistically Cauchy degree is given for a sequence, we try to determine the set of natural numbers for which the sequence is rough statistically convergent.

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