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Abstract

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1 Introduction

First paragraph is not indent by default. In ordinary text, we can write $\boldsymbol{a} \in \mathbb{R}$, compared with $\mathbf{a} \in \mathbb{R}$.

Definition 1. *[1] is an in-text citation.*
Text following theorem denotation are italic by default.
Ordinary text with default indent.
Ordinary text without indent. Hyperlink is available.

Theorem 1.1. *Let K be a compact set in a metric space (X, d). Suppose $\mathcal{F} = \{U_\alpha\}_{\alpha \in A}$ is an open cover of K, then there exists a positive number λ so that for every $p \in K$ the open ball $B(p, \lambda)$ is contained in one of the open sets of $\mathcal{F}$.*

Proof. Since $K \subset \underset{\alpha \in A}{\cup} U_\alpha$, for each point p in K there is a positive number $2\varepsilon(p)$ so that the ball $B(p, 2\varepsilon(p))$ is contained in one of the open sets of $\mathcal{F}$. Clearly $\{B(p, 2\varepsilon(p)\}_{p \in K}$ forms an open cover of K, and so by compactness this admits a finite refinement.

□

References

[1] Albert Einstein. Zur Elektrodynamik bewegter Körper. (German) [On the electrodynamics of moving bodies]. Annalen der Physik, *322(10):891–921, 1905.*