Lec 10/1

Monday, October 1, 2018 14:19

general Cantor sets: $\sum_0^\infty a_i \le 1$, $a_i > 0$, remove middle $\frac{a_i}{2^i}$ at each stage.

they all are homeomorphic.

Joel M. blog

$\mathcal{F}$ = all nonempty finite subsets of $\mathbb{N}$.

<u>Theorem</u>: If $\mathcal{F} = \bigcup_{i=1}^r C_i$ then one C_i contains some

$FU(\alpha_i)_{i=1}^\infty = \{\alpha_{i_1} \cup \alpha_{i_2} \cup \cdots \cup \alpha_{i_k} : k \in \mathbb{N},\ i_1 < i_2 < \cdots < i_k\}$

where $\alpha_i \in \mathcal{F}$ and are disjoint.

Now $\bigoplus_1^\infty \mathbb{F}_2 = V_{\mathbb{F}_2}$ business.

T/F if $V_{\mathbb{F}_2} = \bigcup_{i=1}^r C_i$ then one C_i contains an infinite

Ex: Show Theorem above is equiv. to normal Hindman thm (both forms, starting w/ $\mathbb{N}$ vs $FS(x_i)$. & show these are equivalent too)

Theorems to know from §8:

8.1.1, 8.2.1, 8.2.2, <u>8.3.1</u>, 8.5.1