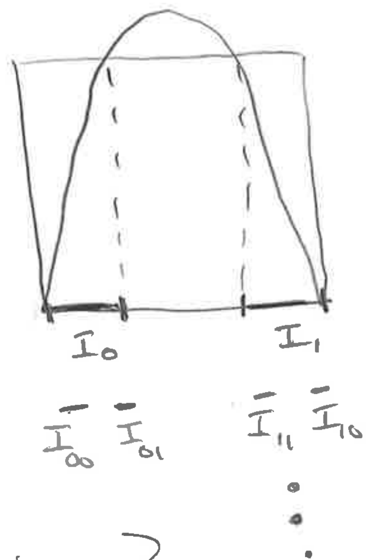

Recall for $\mu > 2+\sqrt{5}$

$$|F_\mu'(x)| > \lambda > 1 \qquad x \in I_0 \cup I_2$$

$$I_{s_0 \cdots s_n} \overset{\text{def.}}{=} \{x \in [0,1] \mid F^j(x) \in I_{s_j} \quad 0 \le j \le n\}$$

Closed interval.

$I_{s_0 \cdots s_{n+1}} \subset I_{s_0 \cdots s_n}$ nested closed intervals

length $(I_{s_0 \cdots s_n}) < \frac{1}{\lambda^{n+1}}$.

Let $x \in \Lambda$

$S(x) \in \Sigma_2$ $\quad S(x) = (s_0 s_1 \cdots)$ "Itinerary for x".

$$F^j(x) \in I_{s_j} \qquad j \ge 0$$

$$x \in I_{s_0 \cdots s_n} \qquad \forall n \ge 0$$

so $x \in \bigcap_{n \ge 0} I_{s_0 \cdots s_n}$.

But $\left\{ I_{s_0 \cdots s_n} \right\}_{n \geq 0}^{\infty}$ is a nested sequence of non-empty closed intervals whose diameters shrink to zero

so $\bigcap_{n \geq 0} I_{s_0 \cdots s_n}$ is a singleton.

In fact, $\bigcap_{n \geq 0} I_{s_0 \cdots s_n} = \{x\}$

which we will identify with x when convenient.

Theorem 1.7.2 $S : \Lambda \to \Sigma_2$ is a homeomorphism

Theorem 1.7.3 $S \circ F_\mu = \sigma \circ S$

So S is a topological conjugacy twixt F_μ & σ

so the dynamics of $F : \Lambda \to \Lambda$ are exactly the same as $\sigma : \Sigma_2 \to \Sigma_2$