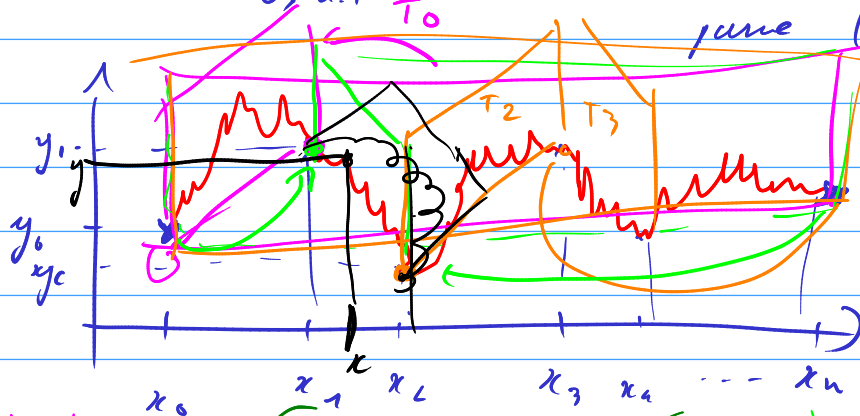


$\mathbb{R}^2$  Curves  $\rightarrow$  Surfaces  
FIF Fractal Interpolated Function

FIF  $\subset$  IFS

$\{T_i\} \rightarrow A\{T_i\} =$  univo curve given

points  $(x_i, y_i) \quad i=0 \rightarrow n$



$$\left[ \begin{array}{l} T_0 \begin{pmatrix} x_0 \\ y_0 \end{pmatrix} = \begin{pmatrix} x_0 \\ y_0 \end{pmatrix} \quad T_0 \begin{pmatrix} x_n \\ y_n \end{pmatrix} = \begin{pmatrix} x_1 \\ y_1 \end{pmatrix} \quad T_1 \begin{pmatrix} x_0 \\ y_0 \end{pmatrix} = \begin{pmatrix} x_1 \\ y_1 \end{pmatrix} \quad T_1 \begin{pmatrix} x_n \\ y_n \end{pmatrix} = \begin{pmatrix} x_2 \\ y_2 \end{pmatrix} \\ T_2 \begin{pmatrix} x_1 \\ y_1 \end{pmatrix} = \begin{pmatrix} x_2 \\ y_2 \end{pmatrix} \quad T_2 \begin{pmatrix} x_n \\ y_n \end{pmatrix} = \begin{pmatrix} x_3 \\ y_3 \end{pmatrix} \quad T_3 \begin{pmatrix} x_0 \\ y_0 \end{pmatrix} = \begin{pmatrix} x_2 \\ y_2 \end{pmatrix} \quad T_3 \begin{pmatrix} x_n \\ y_n \end{pmatrix} = \begin{pmatrix} x_{i+1} \\ y_{i+1} \end{pmatrix} \end{array} \right]$$

$$T_i \begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} a_i & 0 \\ b_i & c_i \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix} + \begin{pmatrix} t_x^i \\ t_y^i \end{pmatrix}$$

$a_i \quad b_i \quad c_i \quad t_x^i \quad t_y^i \quad (x_i, y_i)$

$$T_0(x_n) = T_1(x_0)$$

$$\Pi(s^0) = s^0$$

$$\Pi(s^1) = s^1$$

$$\Pi(s^2) = s^2$$



$$T_0(c_n) = T_n(c_0)$$

$$T_i(c_n) = T_{i+n}(c_0)$$

$$\lim_{n \rightarrow \infty} \Pi(s^n) = s^n = A$$