

MATLAB Fix

$$(x_0, p_0) \quad \dots \quad (x_n, p_n)$$

$$\tilde{x}_i = x_{i+1} \quad \tilde{p}_i = p_{i+1} \quad n+1$$

$$\{Q_{ij}\}_{i,j=0}^n \longrightarrow \{\tilde{Q}_{ij}\}_{i,j=1}^{n+1}$$

$$\tilde{Q}_{ij} = Q_{i+1,j+1}$$

For $i = 1, \dots, n$

For $j = 1, \dots, i$

$$\tilde{Q}_{i+1,j+1} \leftarrow \frac{(\tilde{x}_i - \tilde{x}_{i-j}) \tilde{Q}_{i+1,j} - (\tilde{x}_i - \tilde{x}_i) \tilde{Q}_{i+1,j-1}}{\tilde{x}_i - \tilde{x}_{i-j}}$$

End j

End i

$$Q_{i,0} = P_i \quad 0 \leq i \leq n$$

$$\tilde{Q}_{i+1,1} = \tilde{P}_{i+1} \quad 0 \leq i \leq n$$

$$(x \tilde{Q}_{i,1} = \tilde{P}_i \quad 1 \leq i \leq n+1)$$

Check

$$\hat{i} \cdot \hat{j} = (4, 1)$$

$$Q_{4,1} \leftarrow \frac{(x - x_3) Q_{4,0} - (x - x_4) Q_{3,0}}{x_4 - x_3}$$

$$\tilde{Q}_{5,2} \leftarrow \frac{(x - \tilde{x}_4) \tilde{Q}_{5,1} - (x - \tilde{x}_5) \tilde{Q}_{4,1}}{\tilde{x}_5 - \tilde{x}_4}$$