Tutorial - Fixed Point Iteration

The matrix

$$\mathbf{L}(s) = \begin{bmatrix} -s & 1 \\ 0 & -0.5 + sin(s) \end{bmatrix} \tag{1}$$

We need the matrices in the form of

$$\mathbf{A}p - s\mathbf{C}p = 0 \tag{2}$$

Matrix in equation (1) can be decomposed into nonlinear($\mathbf{A}$) and linear($\mathbf{C}$) parts;

$$\begin{bmatrix} 0 & 1 \\ 0 & -0.5 + sin(s) \end{bmatrix} p - s \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix} p = 0 \tag{3}$$