

$$L \equiv \left[ \begin{array}{c|c|c} 1 & & \\ \hline -A_{JI}A_{II}^{-1} & 1 & \\ \hline & & 1 \end{array} \right], \quad U \equiv \left[ \begin{array}{c|c|c} 1 & -A_{II}^{-1}A_{IJ} & \\ \hline & 1 & \\ \hline & & 1 \end{array} \right].$$