

$$(g_{\mu\nu}) = \begin{pmatrix} 0 & 0 & \dots & 0 & -1 \\ 0 & 1 & & & 0 \\ \vdots & & \ddots & & \vdots \\ 0 & & & 1 & 0 \\ -1 & 0 & \dots & 0 & 0 \end{pmatrix}$$