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List of Acronyme

\begin{itemize}
\item \textit{CTMC} - Continuous time Markov Chain.
\item \textit{Diag} - Diagonal matrix.
\item \textit{ER} - Erlang distribution.
\item \textit{EX} - Exponential distribution.
\item \textit{Exp(.)} - Exponential distribution with parameter \((.)\).
\item \textit{FIFO} - First in First out.
\item \textit{IP} - Interruption Clock.
\item \textit{LIQBD} - Level independent Quasi death Process.
\item \textit{MAP} - Markovian Arrival Process.
\item \textit{MC} - Markov Chain.
\item \textit{MMAP} - Marked Markovian Arrival Process.
\item \textit{PH} - Phase type distribution.
\item \textit{SC} - Super Clock.
\item \textit{TC} - Threshold Clock.
\end{itemize}

List of symbols

\begin{itemize}
\item \(\otimes\) - Kronecker product.
\item \(A \oplus B\) - Kronecker sum of matrices \(A\) and \(B\). ie, \(A \otimes I + I \otimes B\).
\item \(e\) - The column vector of dimension \(r\) consisting of 1's.
\item \(\varepsilon\) - column vector of 1's of appropriate order.
\item \(e_j(r)\) - Column vector of dimension \(r\) with 1 in the \(j^{th}\) place and zero elsewhere.
\item \(I_r\) - Identity matrix of dimension \(r\).
\item \(m \times n\) - \(m\) by \(n\).
\item \(E_s\) - Expected time of service completion.
\item \(\mu_{\tilde{T}}\) - Mean of \(PH(\alpha, \tilde{T})\).
\item \(\sigma_{\tilde{T}}^2\) - Variance of \(PH(\alpha, \tilde{T})\).
\item \(\tilde{\cdot}\) - Denote transpose of a matrix.
\item \(R\) - Denote rate matrix.
\item \(G\) - Stochastic matrix.
\item \(*\) - Convolution.
\item \(\text{diag}[A_1, A_2]\) - Denote a diagonal matrix with diagonal elements \(A_1, A_2\).
\item \(\text{diag}[F_{(i,i-1)}]\) - A diagonal matrix whose \(i^{th}\) diagonal element is \(F_{(i,i-1)}\).
\end{itemize}