Algorithm 7.4.2 (Inward Recursions):

$$
\begin{array}{lll}
\mathbf{f}_n^P & \leftarrow & m_n \ddot{\mathbf{c}}_n - \mathbf{f} \\
\mathbf{n}_n^P & \leftarrow & \mathbf{I}_n \dot{\boldsymbol{\omega}}_n + \boldsymbol{\omega}_n \times \mathbf{I}_n \boldsymbol{\omega}_n - \mathbf{n} + \boldsymbol{\rho}_n \times \mathbf{f}_n^P \\
\texttt{If R then} & & \\
\tau_n & \leftarrow & (\mathbf{Q}_n \mathbf{n}_n^P)_z \\
\texttt{else} & & \\
\tau_n & \leftarrow & (\mathbf{Q}_n \mathbf{f}_n^P)_z \\
\texttt{For i} = \texttt{n} - \texttt{1 to 1 step} -\texttt{1 do} & & \\
\quad \boldsymbol{\phi}_{i+1} & \leftarrow & \mathbf{Q}_{i+1} \mathbf{f}_{i+1}^P \\
\quad \mathbf{f}_i^P & \leftarrow & m_i \ddot{\mathbf{c}}_i + \boldsymbol{\phi}_{i+1} \\
\quad \mathbf{n}_i^P & \leftarrow & \mathbf{I}_i \dot{\boldsymbol{\omega}}_i + \boldsymbol{\omega}_i \times \mathbf{I}_i \boldsymbol{\omega}_i + \boldsymbol{\rho}_i \times \mathbf{f}_i^P + \mathbf{Q}_{i+1} \mathbf{n}_{i+1}^P + \boldsymbol{\delta}_i \times \boldsymbol{\phi}_{i+1} \\
\texttt{If R then} & & \\
\tau_i & \leftarrow & (\mathbf{Q}_i \mathbf{n}_i^P)_z \\
\texttt{else} & & \\
\tau_i & \leftarrow & (\mathbf{Q}_i \mathbf{f}_i^P)_z \quad \texttt{enddo}
\end{array}
$$

Note that, within the do-loop of the foregoing algorithm, the vectors to the left of the arrow are expressed in the $(i+1)$st frame, while $\mathbf{f}_{i+1}^P$ and $\mathbf{n}_{i+1}^P$, to the right of the arrow, are expressed in the $(i+2)$nd frame.