

$$\begin{aligned}
 \text{TG}_{i_-, j_-} [\mathcal{F}_-] &:= \text{Expand} \left[ \mathcal{F} / . \left\{ \right. \right. \\
 &\quad \mathcal{F}_- \cdot \mathbf{v}_{k_-} \Rightarrow \text{Plus} \left[ \mathcal{F} \mathbf{v}_k / . \mathbf{v}_j \rightarrow (1 - t_i) \mathbf{v}_i + t_i \mathbf{v}_j, \right. \\
 &\quad \left. (1 - t_i^{-1}) \left( t_i \partial_{t_i} \mathcal{F} - t_j \partial_{t_j} \mathcal{F} \right) \right. \\
 &\quad \left. (\mathbf{u}_k / . \mathbf{u}_j \rightarrow (1 - t_i) \mathbf{u}_i + t_i \mathbf{u}_j) \mathbf{u}_i \mathbf{w}_j, \right. \\
 &\quad \left. \text{K}\delta_{k, i} \mathcal{F} (\mathbf{u}_j - \mathbf{u}_i) \mathbf{u}_i \mathbf{w}_j \right], \\
 &\quad \mathbf{u}_j \rightarrow (1 - t_i) \mathbf{u}_i + t_i \mathbf{u}_j, \\
 &\quad \left. \left. \mathbf{w}_i \rightarrow \mathbf{w}_i + (1 - t_i^{-1}) \mathbf{w}_j, \quad \mathbf{w}_j \rightarrow t_i^{-1} \mathbf{w}_j \right\} \right];
 \end{aligned}$$