

$$\begin{aligned}
& (\text{mu}_{\mathcal{U}}^{\mathbf{P}} \circ \text{Unc}(\mathbf{f}))([[\textcolor{teal}{p}_{11}, \textcolor{teal}{p}_{12}], [\textcolor{teal}{p}_{21}, \textcolor{teal}{p}_{22}]]^*, [\textcolor{red}{q}_1, \textcolor{red}{q}_2]) \\
&= \bigvee_{[p_1, p_2] \in \text{Int}(\mathbf{P})} ((\textcolor{teal}{p}_{11} \leq \textcolor{red}{p}_1) \wedge (\textcolor{teal}{p}_{12} \leq \textcolor{red}{p}_1) \wedge (\textcolor{teal}{p}_{21} \leq \textcolor{red}{p}_2) \wedge (\textcolor{teal}{p}_{22} \leq \textcolor{red}{p}_2)) \\
&\wedge (\mathbf{f}(\textcolor{teal}{p}_1^*, \textcolor{red}{q}_1) \wedge \mathbf{f}(\textcolor{teal}{p}_2^*, \textcolor{red}{q}_2)).
\end{aligned}$$