

Methods	Complexity
Our method	Mild (closed-form solution with known $\varepsilon, \rho$ ; otherwise estimate them by solving 1-D OT problems)
<b>CP under covariate shift</b> (Tibshirani et. al, 2019)	Moderate (requires density estimation in high-dimension, which can be expensive)
<b>CP under label shift</b> (Podkopaev & Ramdas, 2021)	Moderate (requires density estimation in high-dimensions, which can be expensive)
<b>* CP under f-divergence shift</b> (Cauchois et. al, 2024)	Mild (closed-form solution with known $\rho$ , but requires absolute continuity of density; estimating $\rho$ requires minimizing a non-convex function over a d-dimensional domain)
<b>* Adversarial CP with randomized smoothing</b> (Gendler et. al, 2022)	Moderate (needs vast repeated forward model evaluations with noisy inputs)
<b>* Wasserstein-regularized CP</b> (Xu et. al, 2025)	Heavy (requires training neural network model)
<b>* Identifiable X-shift and <math>Y X</math>-shift</b> (Ai & Ren, 2024)	Moderate (requires density estimation in high-dimension, which can be expensive)
<b>CP beyond exchangeability</b> (Barber et. al, 2023)	Mild (requires re-weighting scheme, which is not trivial to get and needs additional computation based on the design)

Table 1: Additional complexity comparison with other methods, \* marks important papers mentioned by the reviewers;  
Complexity: Light, Mild, Moderate, Heavy;  
Orange: CP under different shift models