

Parameter Searching for VMD

Leader level (Outer Optimization)

Leader Agent

Objective: Minimize FIC

$$K^* = \arg \min_{K \in \mathcal{K}} \text{FIC}(K, \alpha^*(K))$$

Next K Iteration

Choose $K \in \mathcal{K}$

Evaluation Processor

Calculate and compare:

$$\text{FIC}_K = \text{FIC}(K, \alpha^*(K))$$

if $\text{FIC}_K < \text{FIC}_{\text{best}}$

Decision K

$$(K^*_{\text{Stackelberg}}, \alpha^*(K^*_{\text{Stackelberg}})) \leftarrow (K, \alpha^*(K))$$

Pass Fixed K

Return Best Response $\alpha^*(K)$

Follower Agent

Objective: Given K minimize MIC

$$\alpha^*(K) = \arg \min_{\alpha \in \mathcal{A}(K)} \text{MIC}(K, \alpha)$$

Follower level (Inner Optimization)

