## Well-trained **Uniformly sample** *M* **tasks** + Meta-parameters $\theta$ Meta-parameters $\theta$ Fingerprints A' Fingerprints A Support Support Support **Meta-test Stage Environmental Solutions** Variation $oldsymbol{ heta}_2'$ (Localization) Query Query Query (A) AP Localization Obstacle **Estimation** Receiver **Historical Environments New Environments Historical Environments New Environments** Compute $\nabla_{\theta}$ Challenges Update $\theta$

The Proposed MetaLoc

**Meta-training Stage**