Unadaptability in the Scalar Model $f(x, h) = (h^2 - 1)^2 hx + (h^2 - 4)x^2/h^2$

Pre-Training Loss

MSE Loss

- Initial $h = 0.5$
- Initial $h = -0.5$

Pre-Training Steps

Fine-Tuning Loss

- From $h = 0.5$
- From $h = -0.5$
- Loss Gap

Fine-Tuning Steps

Loss Landscape

- Pre-train $h = 1$
- Fine-tune $h = 2$

Learned Model h