

(b) ResNet50

 $3.0 - \times 10^{6}$

(a) ResNet9

NTK submatrices where m = nd and d = 10, from ResNet9 on 64-bit precision (a) and ResNet50 on 32-bit precision (b) trained on CIFAR-10 with 50,000 datapoints. Values are computed using MEMDET with LDL decomposition (black curves, overlaid by colored curves). FLODANCE is fitted in a small region (shaded gray) and extrapolated over a much larger interval. The yellow curve in the interval $(n_0, n_s) = (10^2, 5 \times 10^3)$ represents the fit, while the red

curve in $(n_s, n) = (5 \times 10^3, 5 \times 10^4)$ shows the extrapolation. The blue curves, corresponding to the right axis in each panel shows the relative error, reaching impressive 0.05% in (a) and 0.02% in (b).