

Dataset	#Nodes	%Nodes in LCC
Cornell	183	100 %
Texas	183	100 %
Wisconsin	251	100 %
Flickr	89,250	100 %

Table 1: Dataset summary statistics. LCC: Largest connected component.

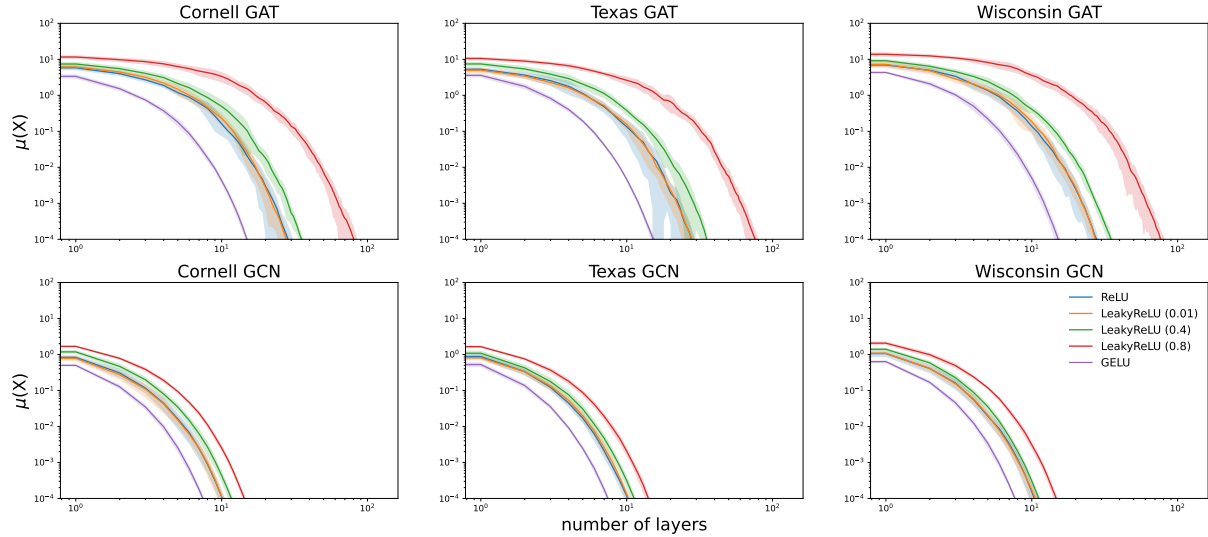


Figure 1: Evolution of $\mu(X^{(t)})$ (in log-log scale) on the largest connected component of three heterophilic benchmark datasets: Cornell, Texas, and Wisconsin. Similar to the experimental results provided in the paper, oversmoothing happens exponentially in both GCNs and GATs with the rates varying depending on the choice of activation function. Notably, GCNs demonstrate faster rates of oversmoothing compared to GATs.

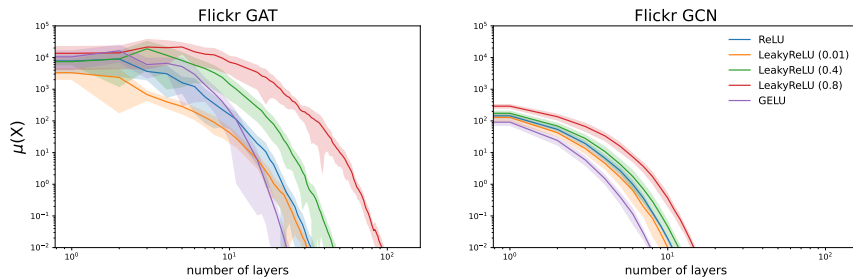


Figure 2: Evolution of $\mu(X^{(t)})$ (in log-log scale) on the largest connected component of the large-scale benchmark dataset: Flickr.