110-layer ResNet on CIFAR-10 with Varving Survival Probabilities 8.0 1.0 6.27 6.25 Stochastic Depth (linear decay) Stochastic Depth (uniform) Constant Depth 6.16 5.84 5.88 5.72 5.89 0.9 (%) speedup 5.59 5.64 0.8 6.29 5.66 5.56 test error b 1.67x 0.7 6.42 5.98 5.72 5.43 5.39 6.10 5.94 5.42 0.6 5.69 5.5 1.33x 0.5 9.39 6.40 5.79 5.61 5.25 0.1 0.3 0.6 0.7 0.8 0.9 1.0 20 38 74 92 110 network depth (in layers) survival probability  $p_L$