

Figure 1. Complexity vs. accuracy on MNIST. Resnet - 3 layers -  $20 \times 20$  kernels - square width

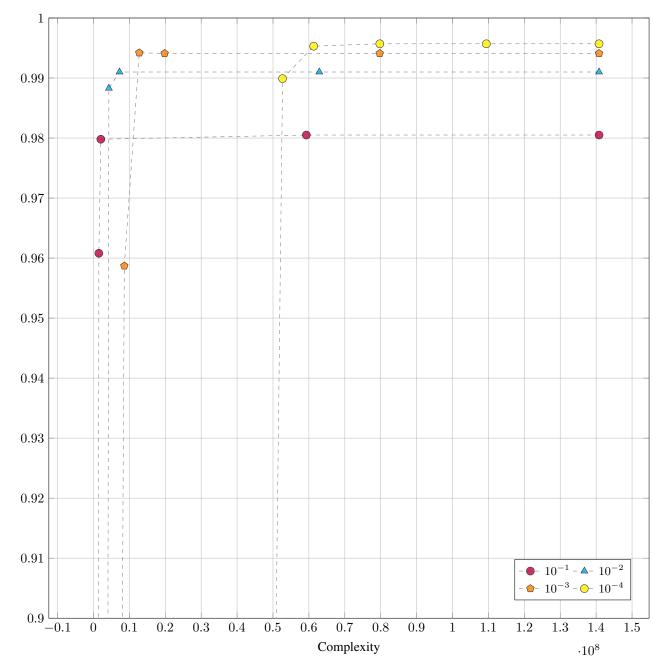


Figure 2. Complexity vs. accuracy on MNIST. Resnet - 10 layers -  $5\times 5$  kernels

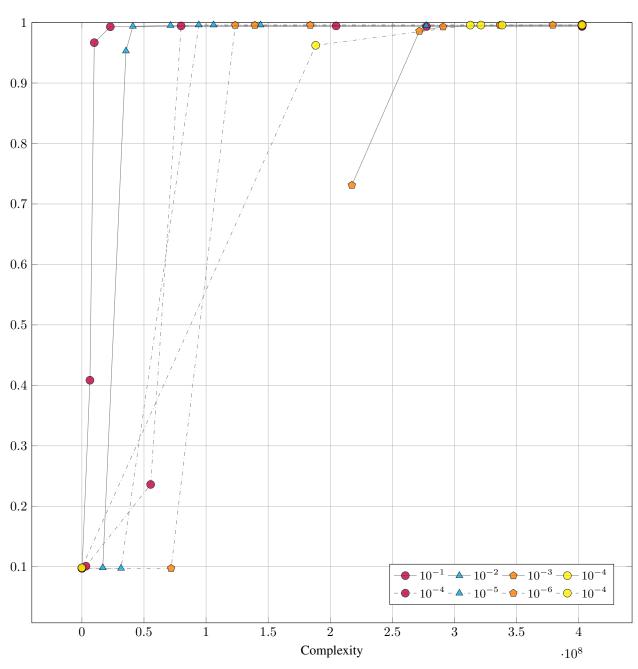


Figure 3. Complexity vs. accuracy on MNIST. Resnet - 10 layers -  $5 \times 5$  kernels - square width

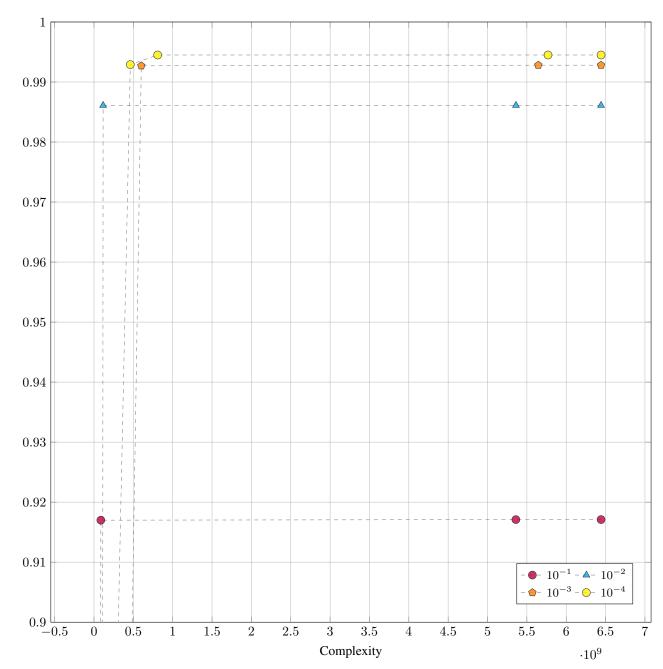


Figure 4. Complexity vs. accuracy on MNIST. Resnet - 10 layers -  $20 \times 20$  kernels - square width

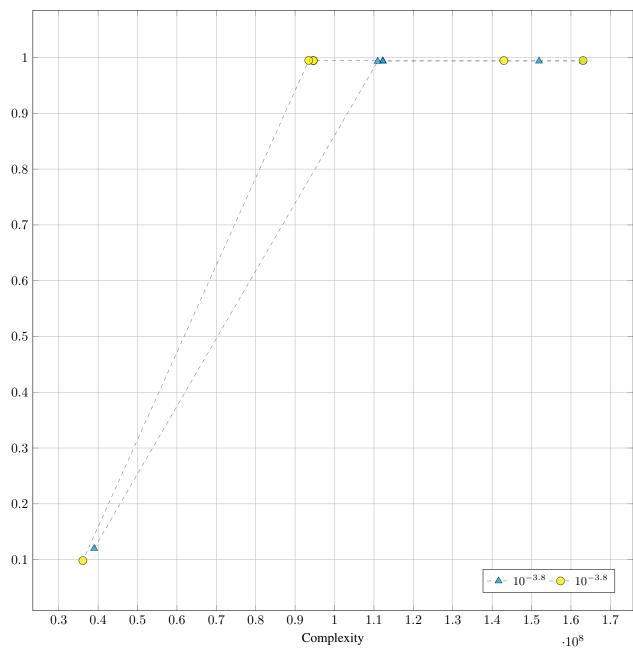
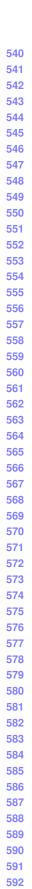


Figure 5. Complexity vs. accuracy on MNIST. Resnet - 4 layers - 20 × 20 kernels - square width - Convexity testing



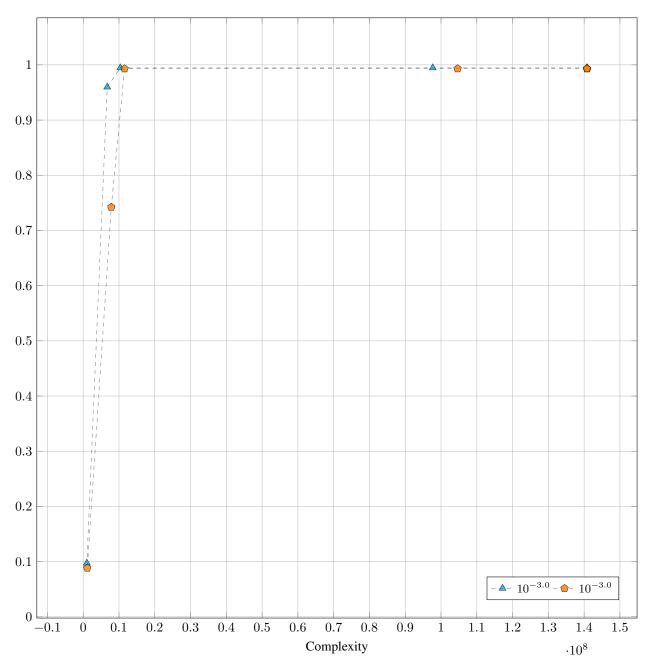


Figure 6. Complexity vs. accuracy on MNIST. Resnet - 10 layers -  $5 \times 5$  kernels - Convexity testing

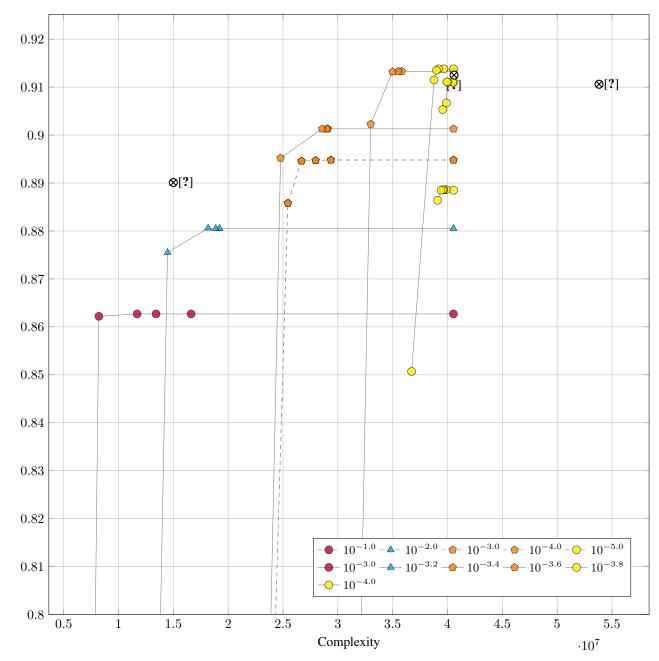


Figure 7. Complexity vs. accuracy on CIFAR10. Resnet - 20 layers -  $3 \times 3$  kernels

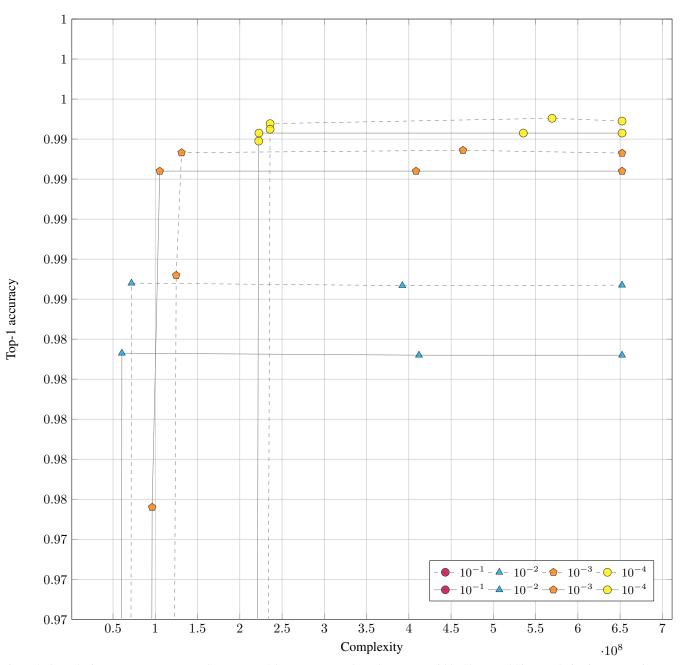


Figure 8. Complexity vs. accuracy on MNIST. Resnet - 3 layers -  $20 \times 20$  kernels - square width. Shape and Size regularization comparison

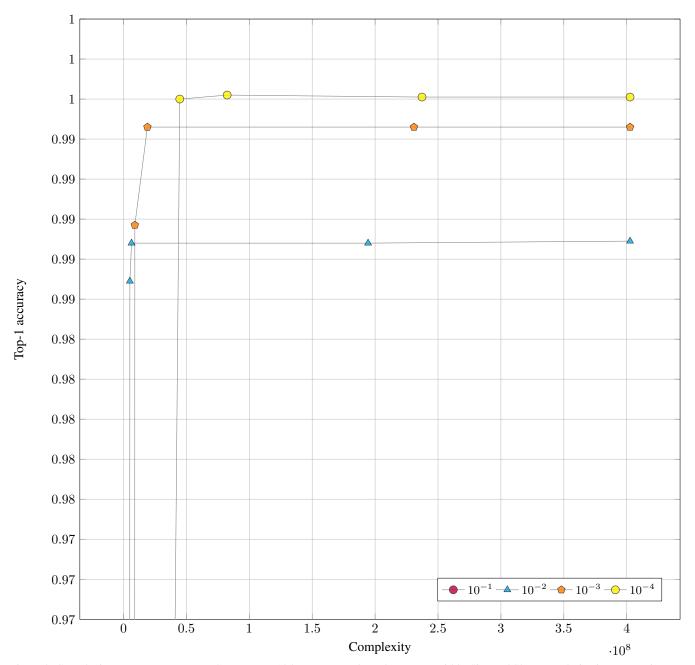


Figure 9. Complexity vs. accuracy on MNIST. Resnet - 10 layers -  $5 \times 5$  kernels - square width. Size and Shape regularization comparison

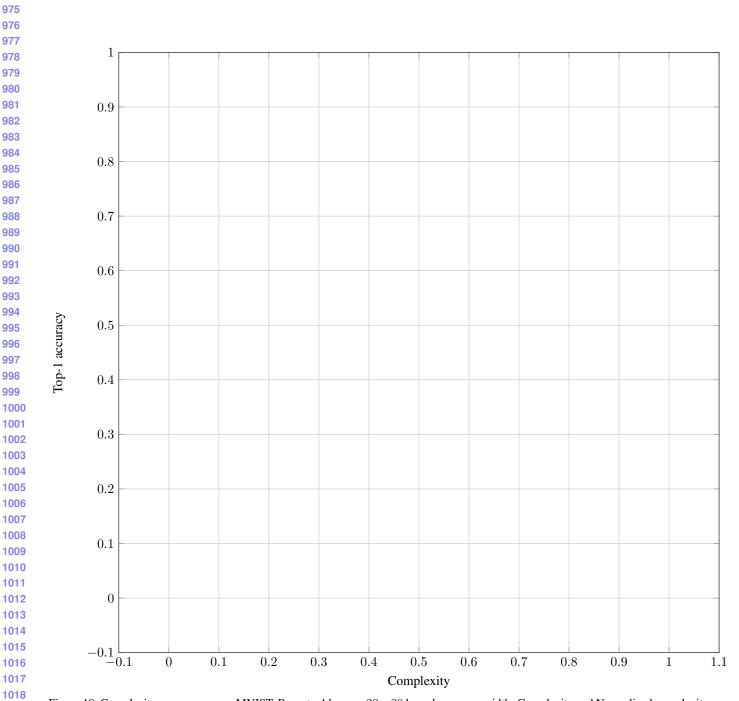


Figure 10. Complexity vs. accuracy on MNIST. Resnet - 4 layers - 20 × 20 kernels - square width. Complexity and Normalized complexity comparison

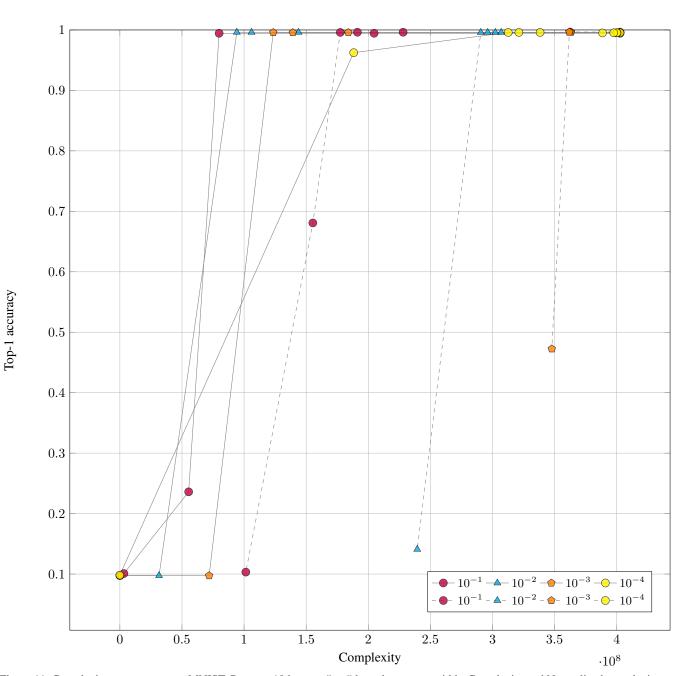


Figure 11. Complexity vs. accuracy on MNIST. Resnet - 10 layers -  $5 \times 5$  kernels - square width. Complexity and Normalized complexity comparison