

# Detailed experimental results

Xi-Lin Li

Please refer to parameter\_settings.txt for parameter settings to get these typical results.

To keep our figures less crowded, results for PSGD with approximated Hessian-vector products are not shown.

Totally, there are 12 plots as listed below.

A. *data\_model\_criteria\_cifar10\_autoencoder\_example*

B. *data\_model\_criteria\_cifar10\_lrelu\_example*

1) Raw test classification error rates:

2) Smoothed test classification error rates:

C. *data\_model\_criteria\_lstm\_add\_example*

D. *data\_model\_criteria\_lstm\_xor\_example*

1) In linear scale:

2) In log scale:

E. *data\_model\_criteria\_mnist\_autoencoder\_example*

F. *data\_model\_criteria\_mnist\_tanh\_example*

1) Raw test classification error rates:

2) Smoothed test classification error rates:

G. *data\_model\_criteria\_rnn\_add\_example*

H. *data\_model\_criteria\_rnn\_xor\_example*

1) In linear scale:

2) In log scale:

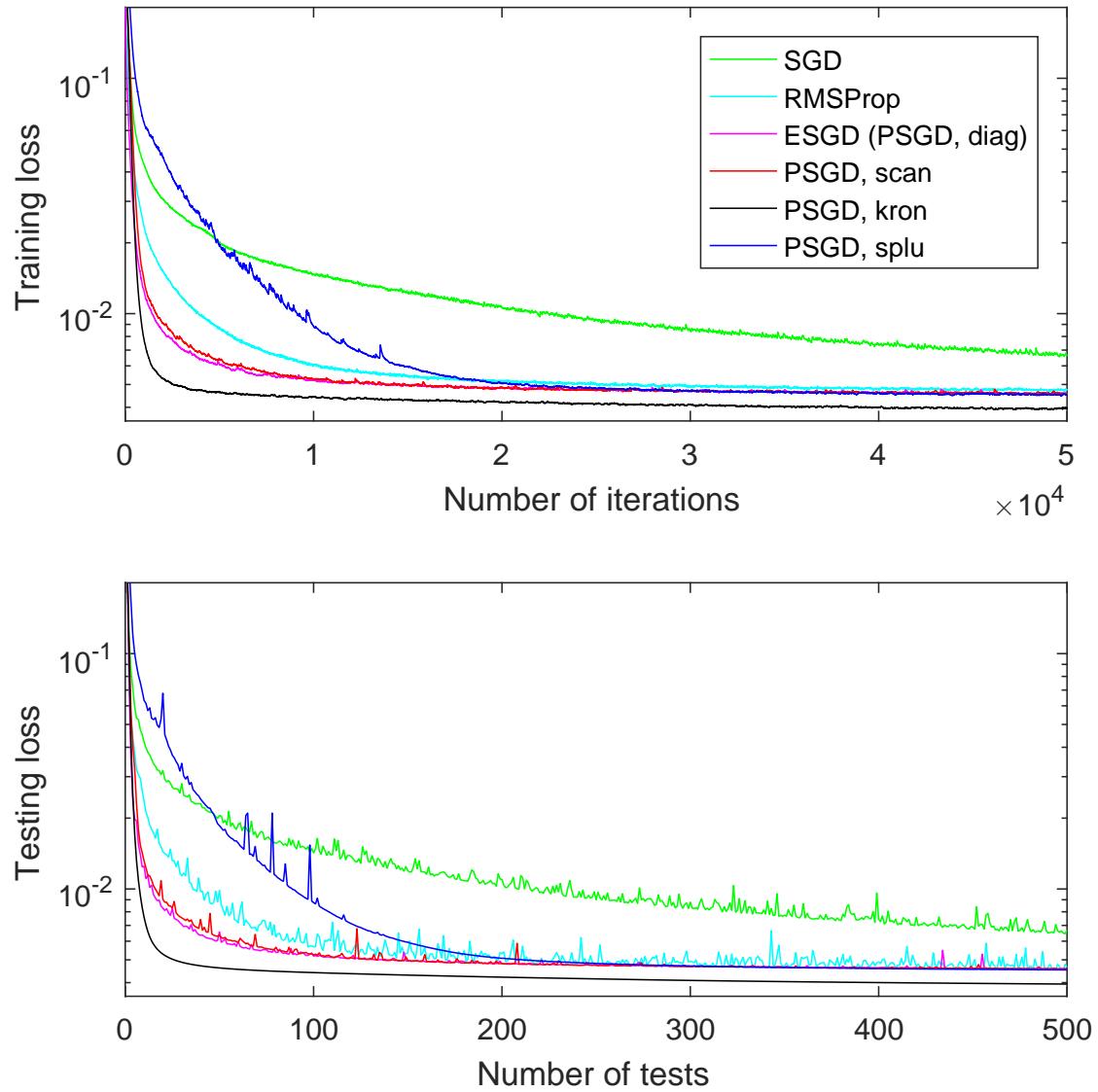


Fig. 1. data\_model\_criteria\_cifar10\_autoencoder\_example

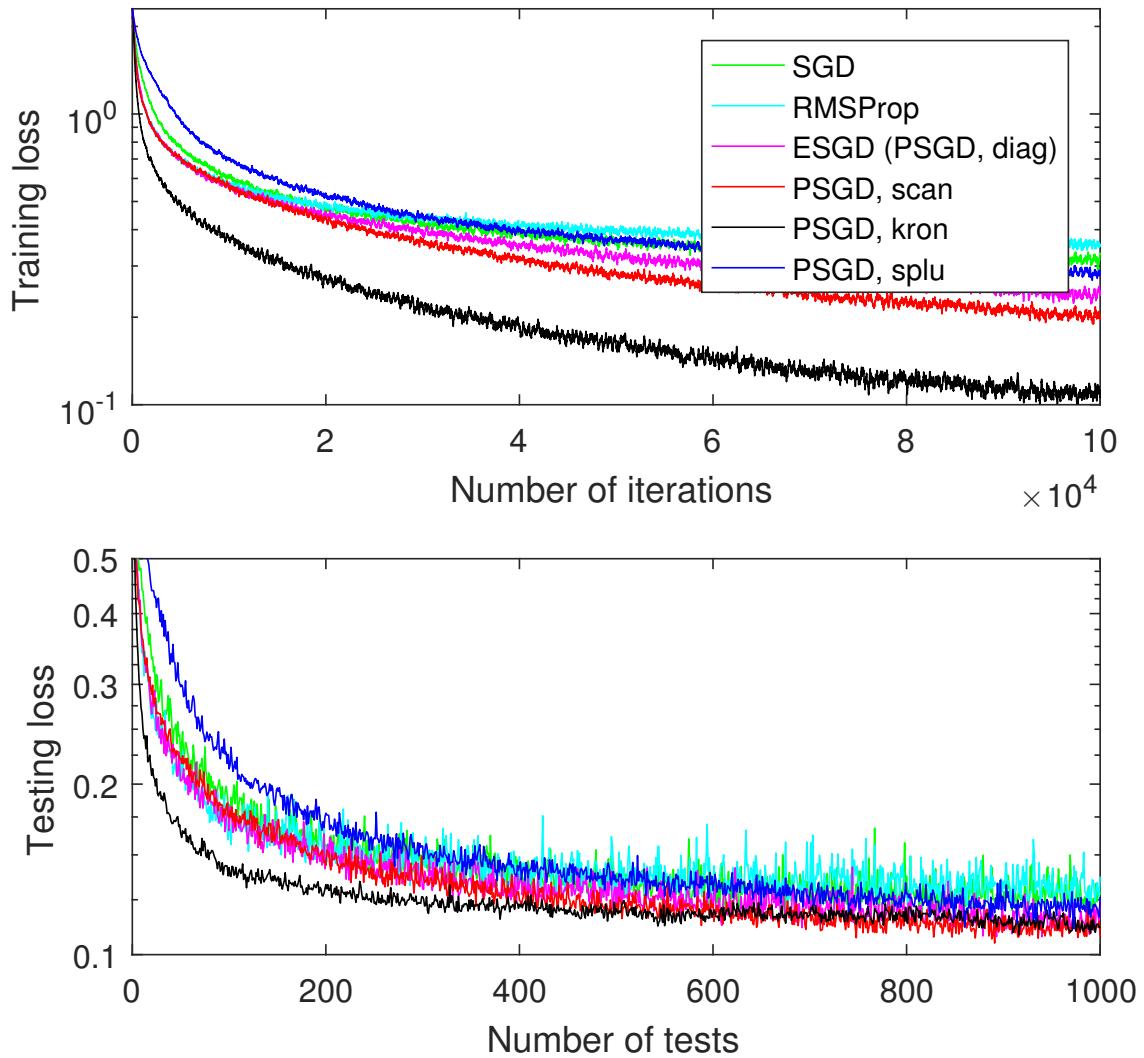


Fig. 2. `data_model_criteria_cifar10_lrelu_example`, raw test classification error rates

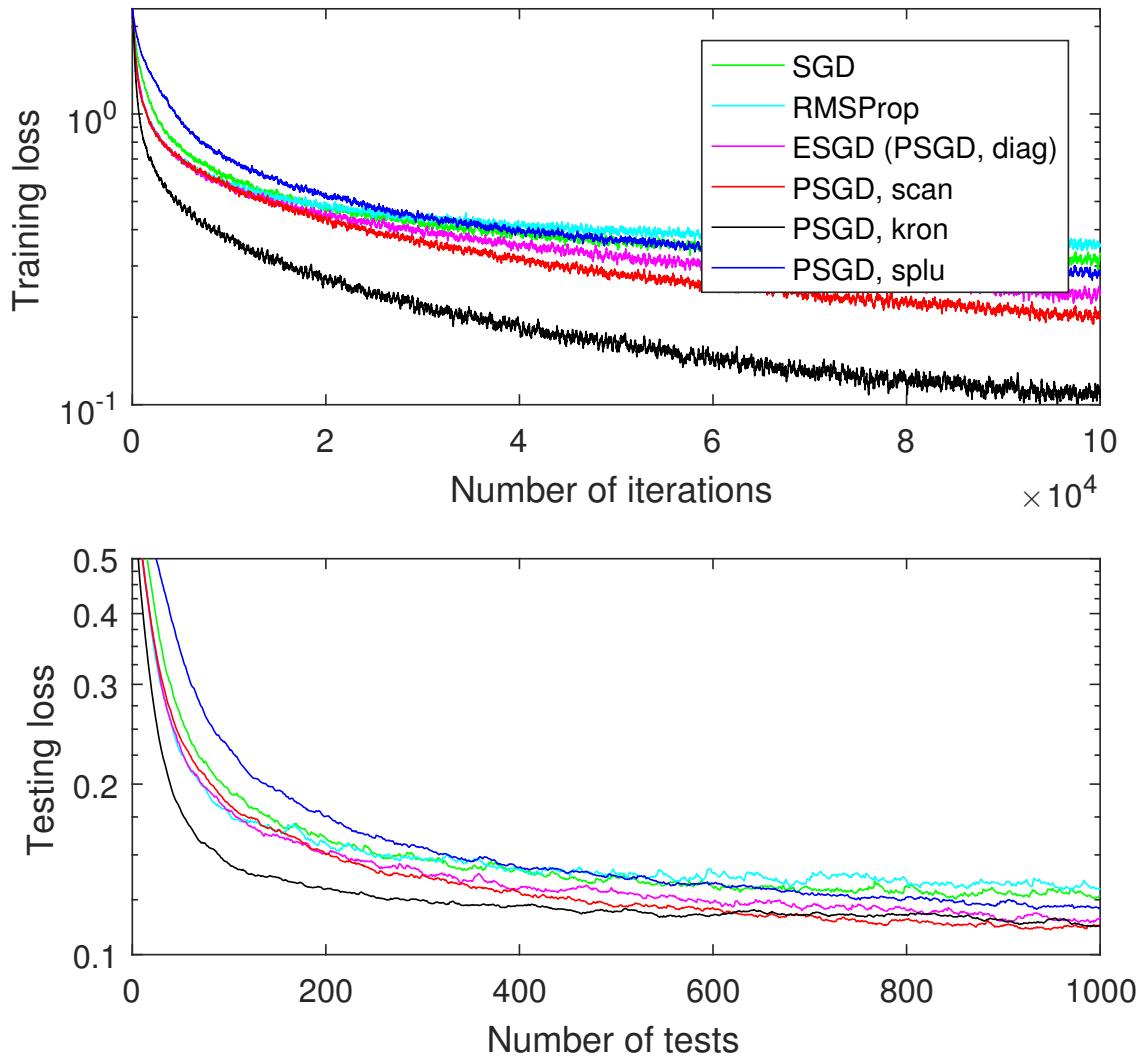


Fig. 3. `data_model_criteria_cifar10_lrelu_example`, smoothed test classification error rates

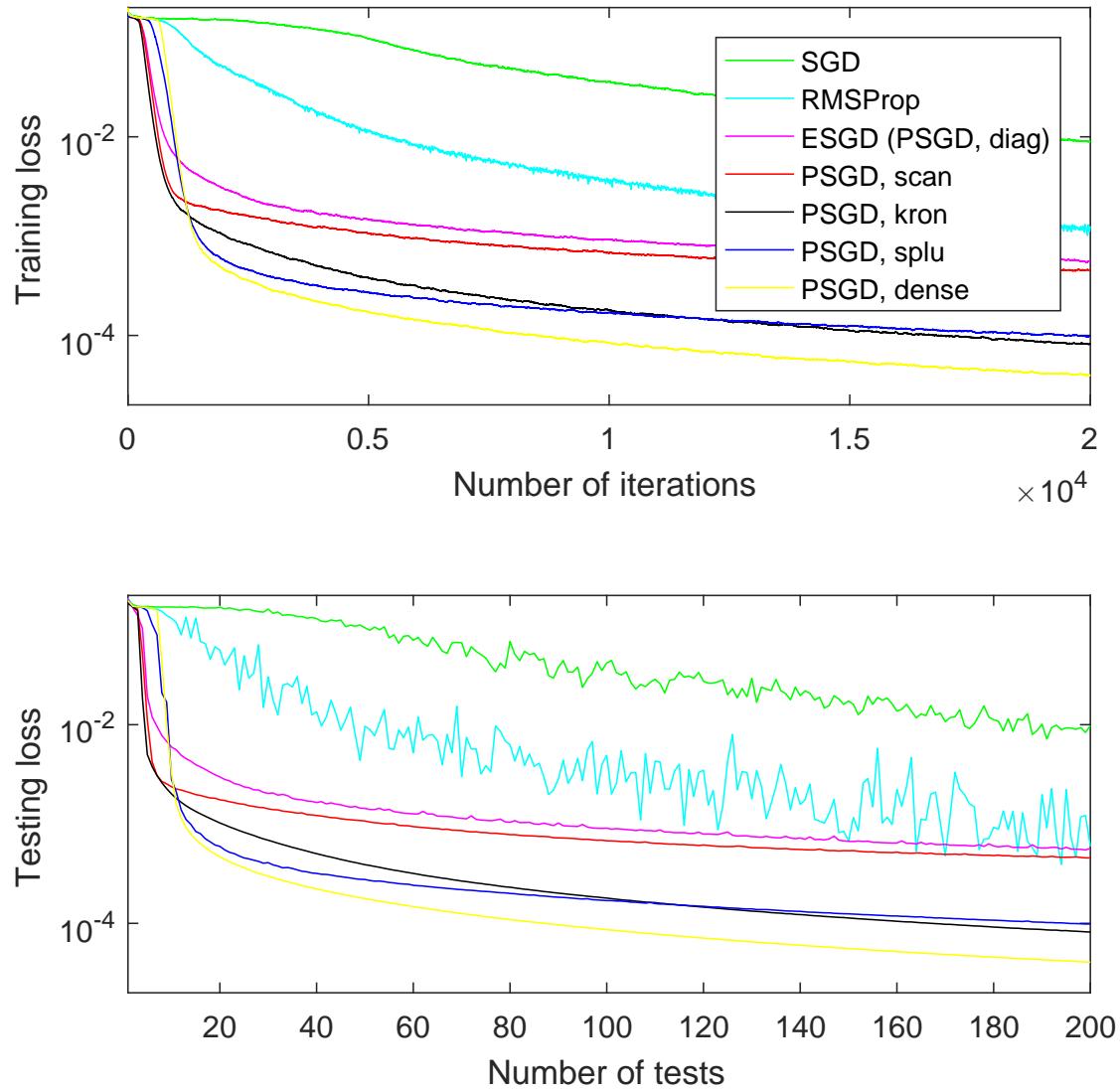


Fig. 4. data\_model\_criteria\_lstm\_add\_example

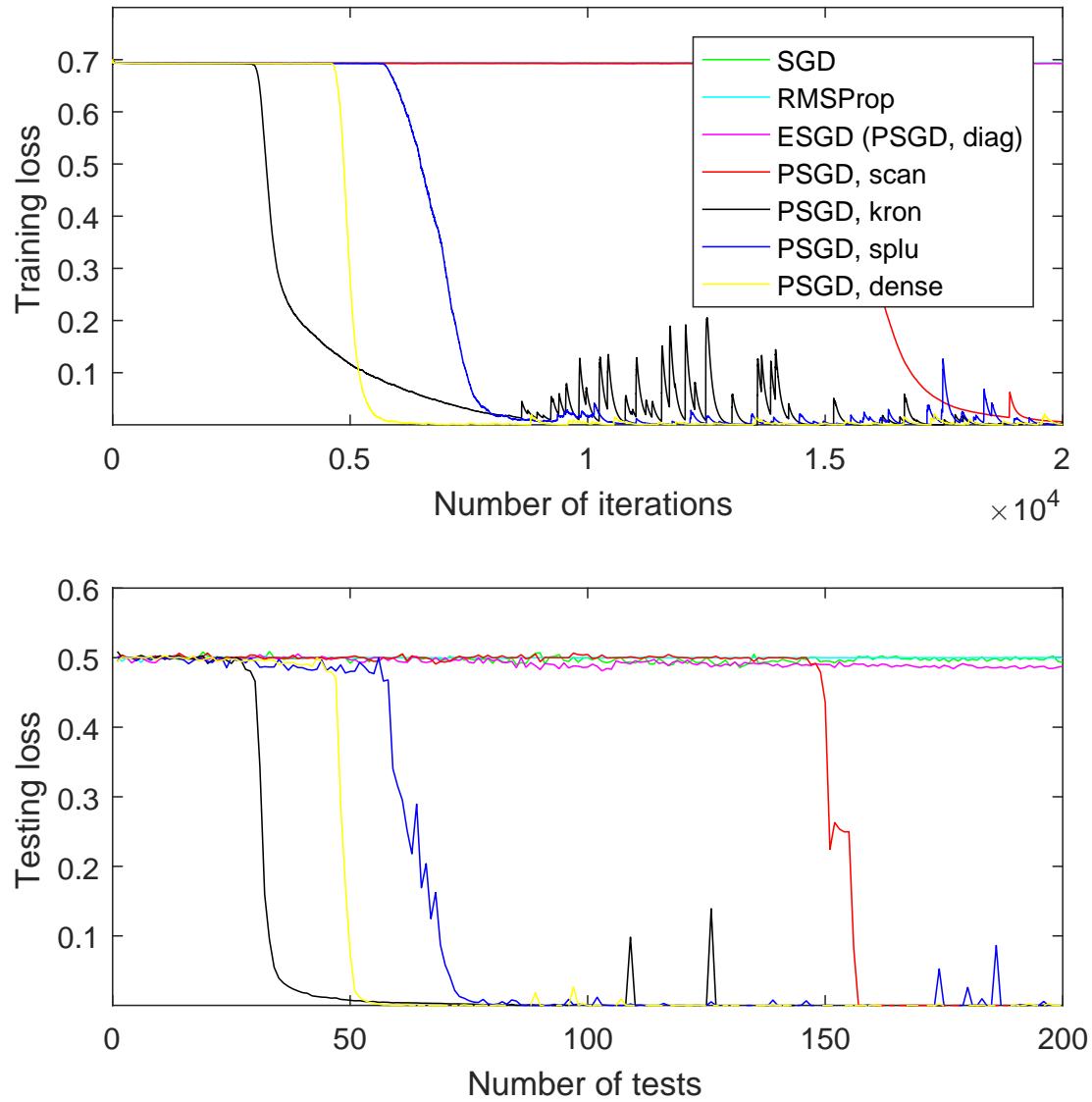


Fig. 5. data\_model\_criteria\_lstm\_xor\_example, linear scale

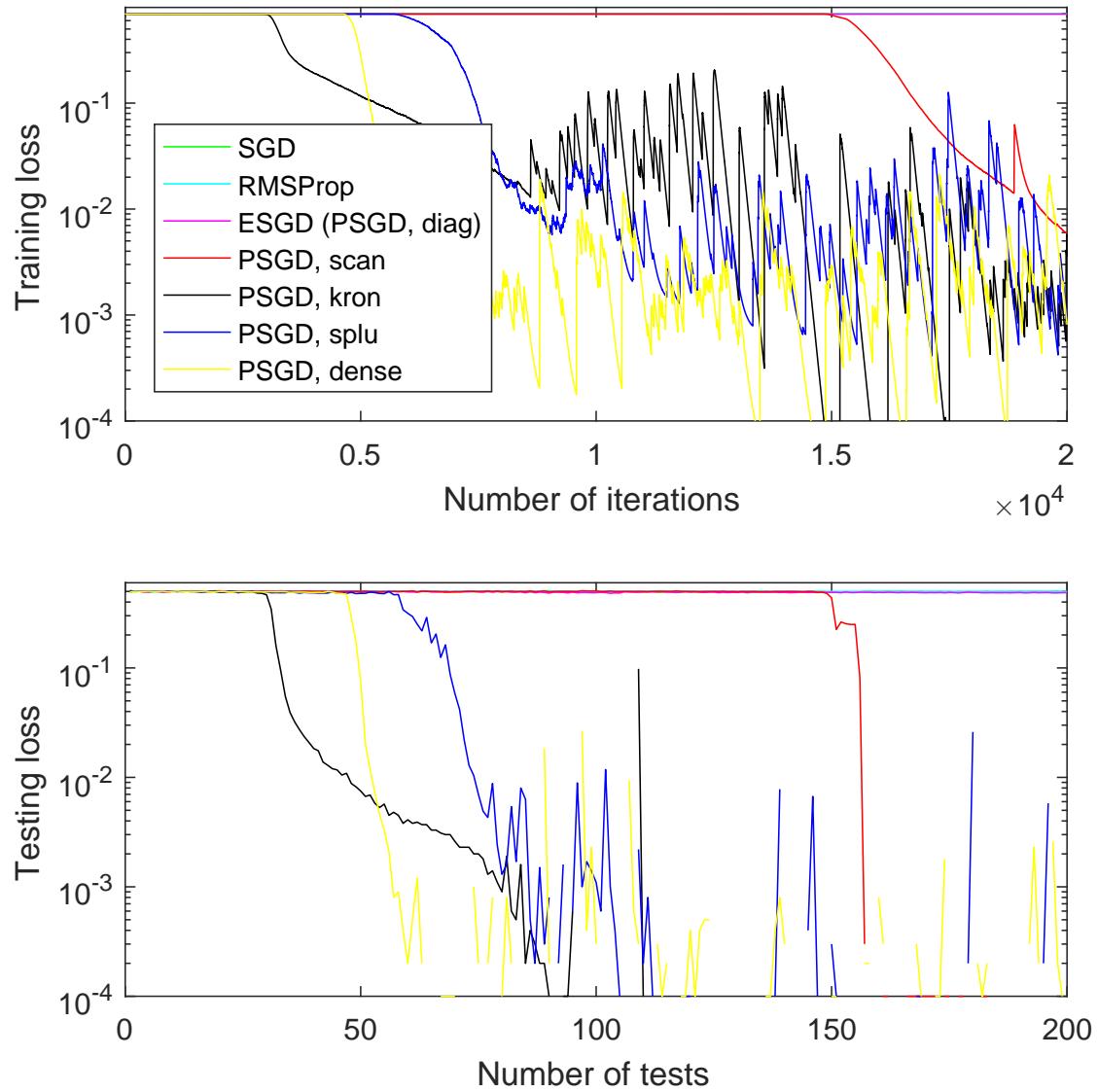


Fig. 6. `data_model_criteria_lstm_xor_example`, log scale

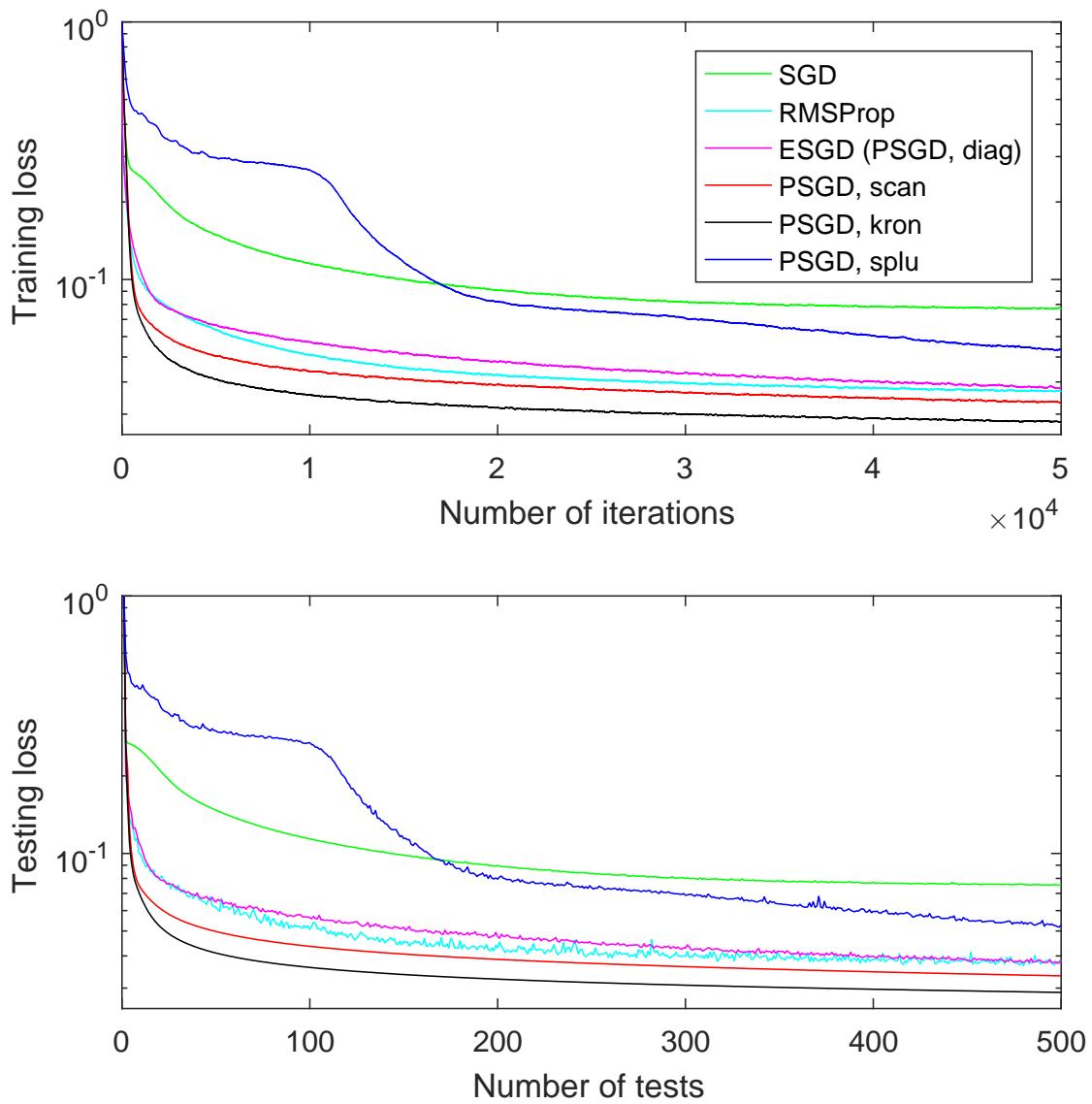


Fig. 7. data\_model\_criteria\_mnist\_autoencoder\_example

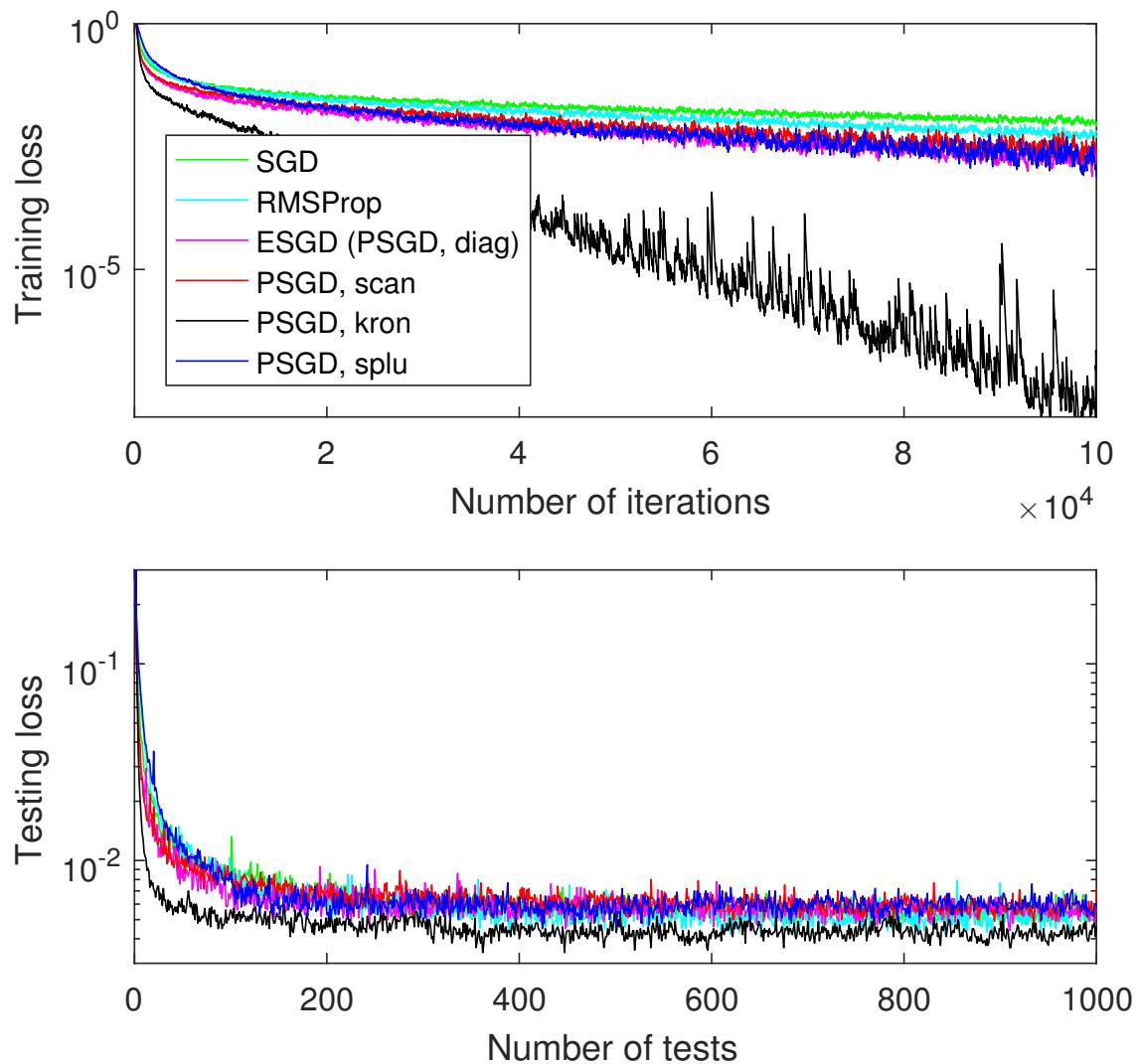


Fig. 8. `data_model_criteria_mnist_tanh_example`, raw test classification error rates

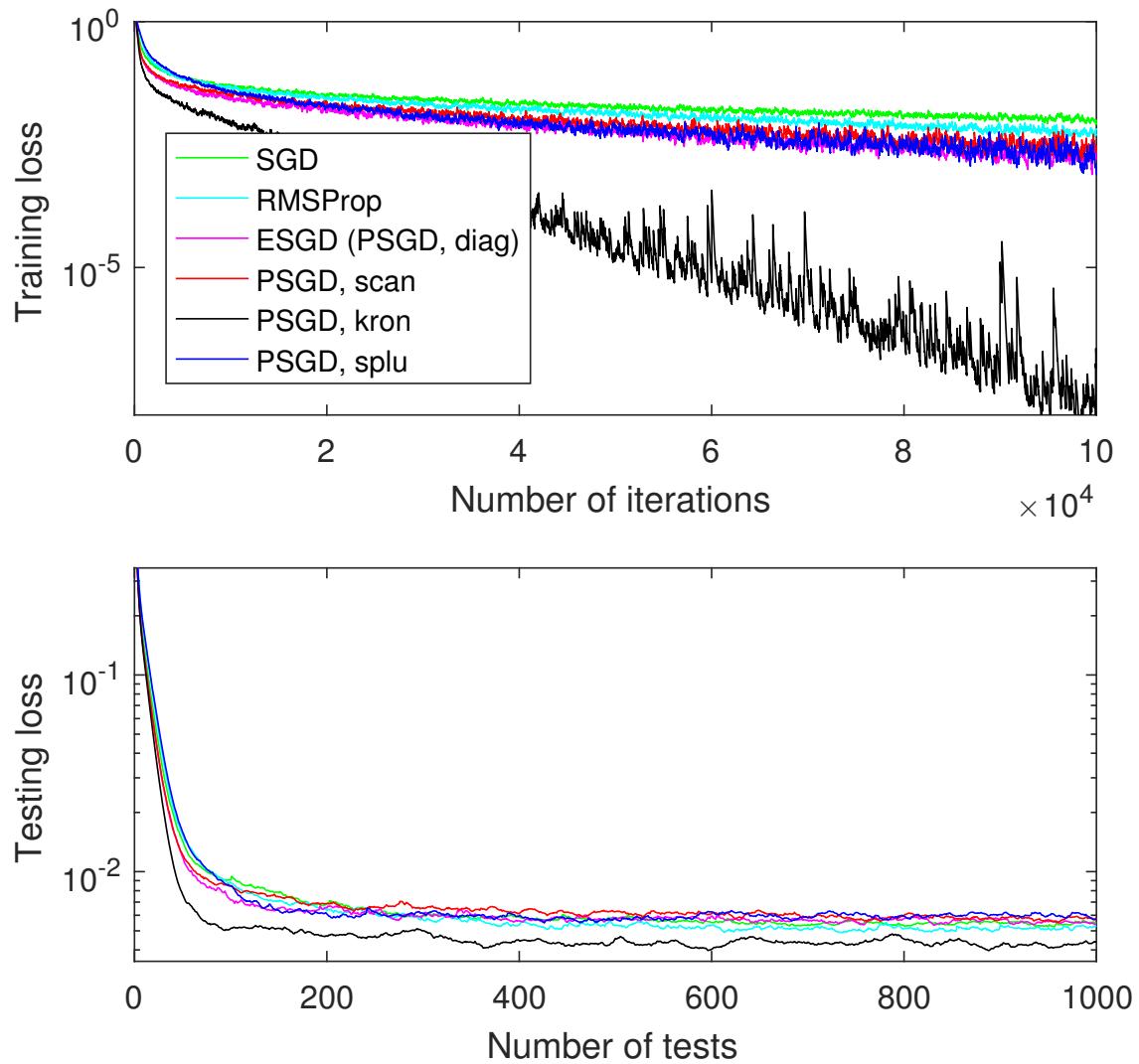


Fig. 9. `data_model_criteria_mnist_tanh_example`, smoothed test classification error rates

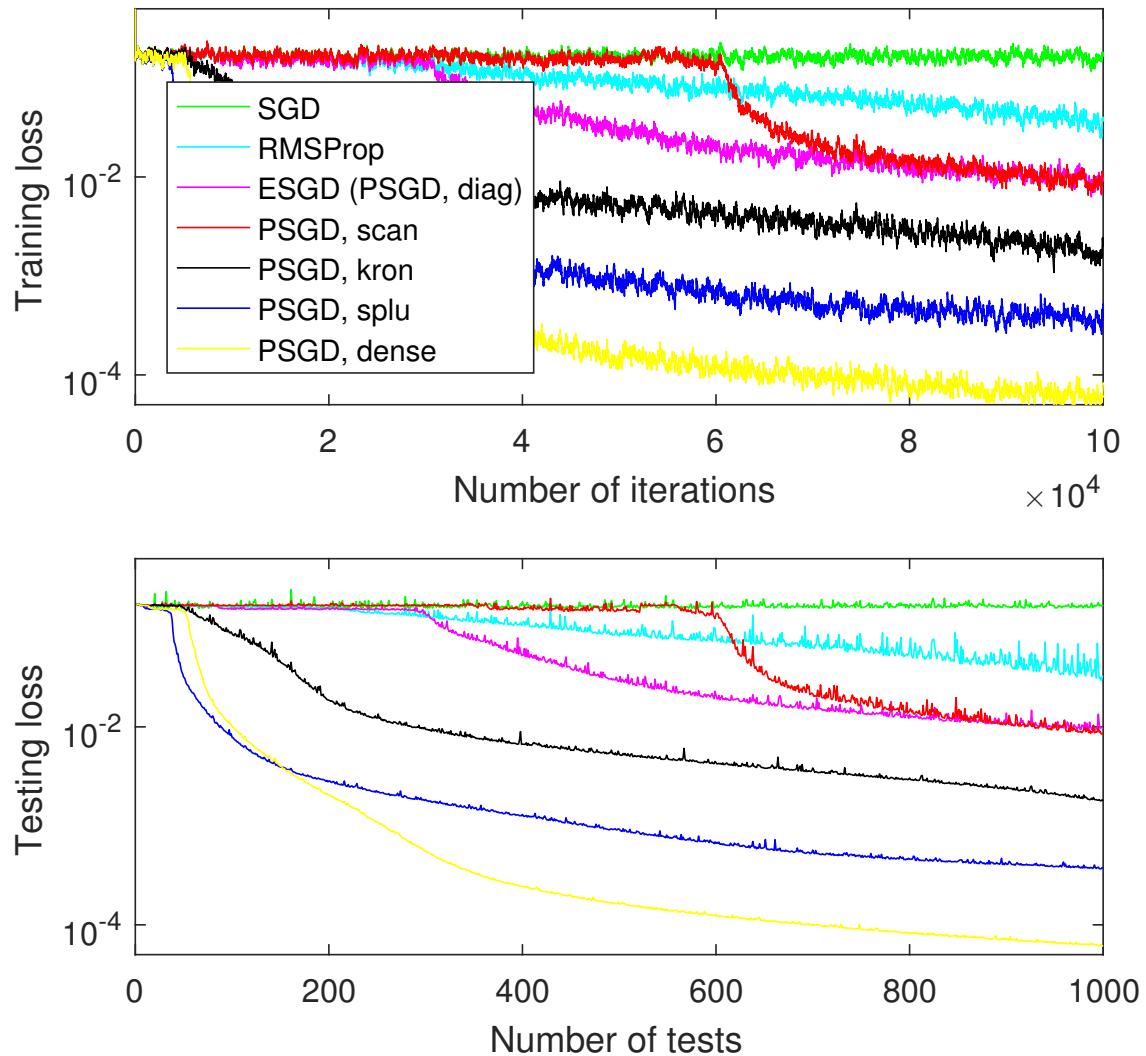


Fig. 10. `data_model_criteria_rnn_add_example`

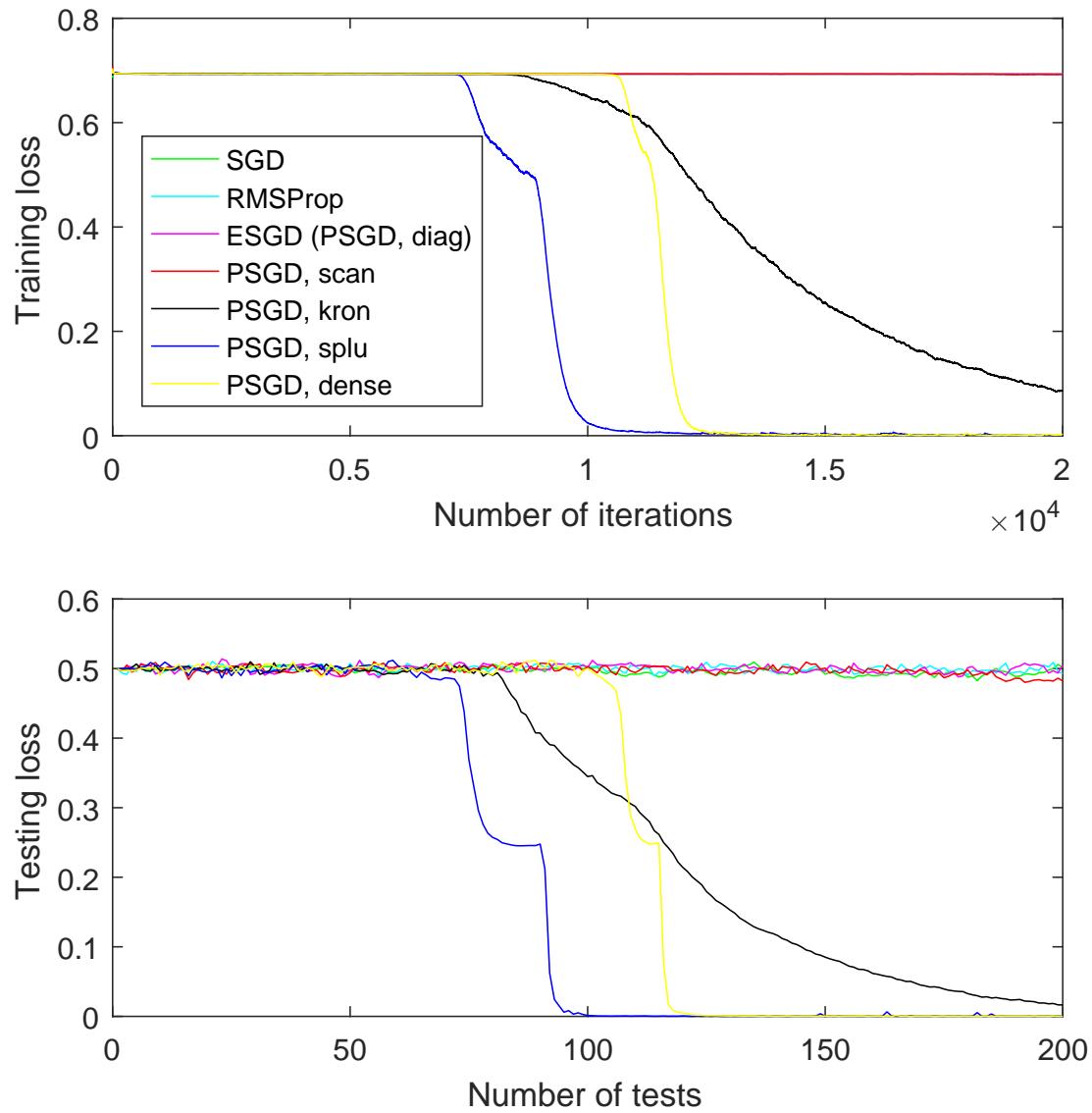


Fig. 11. `data_model_criteria_rnn_xor_example`, linear scale

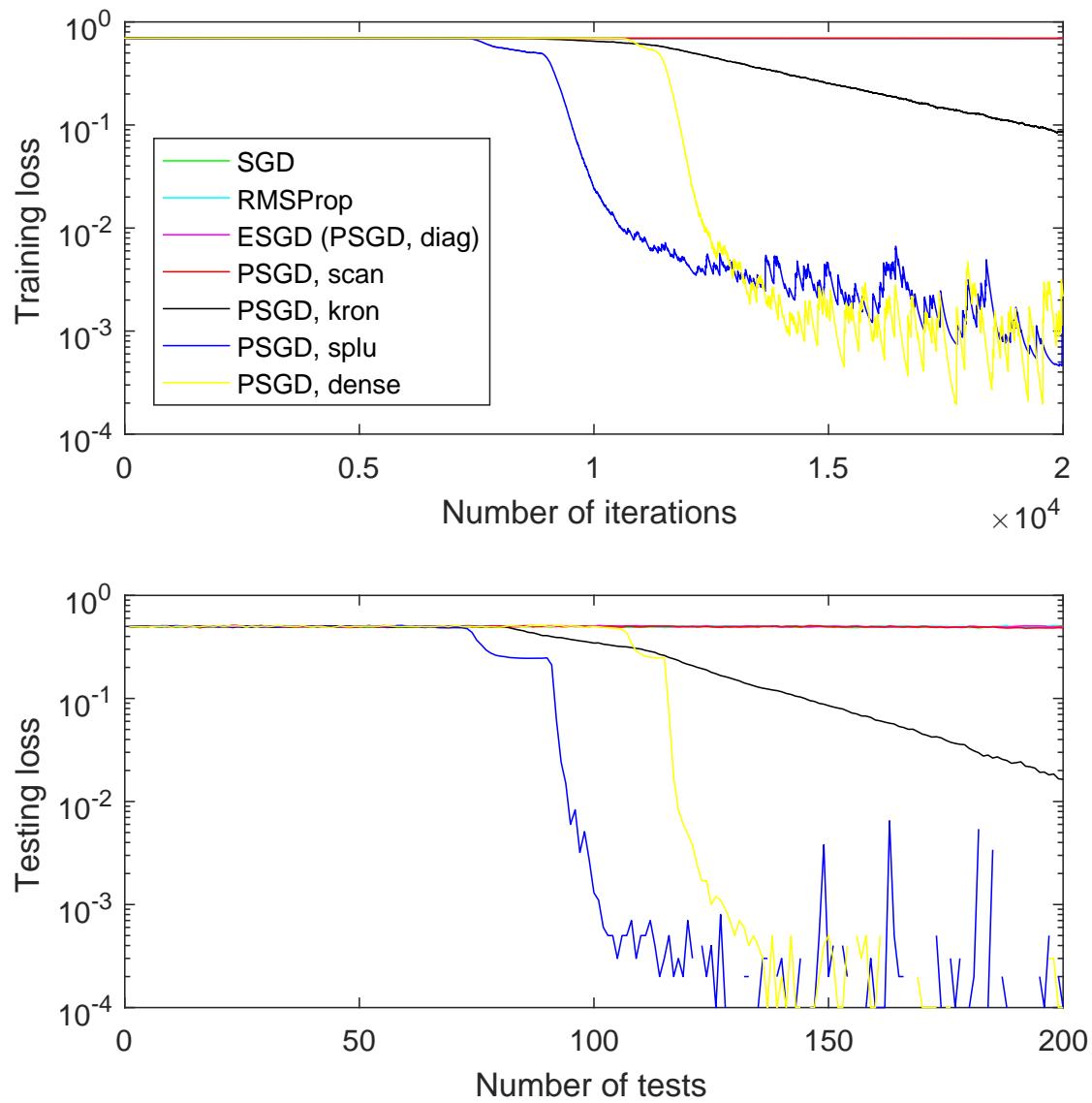


Fig. 12. `data_model_criteria_rnn_xor_example`, log scale