Dear Editor,

We are resubmitting a revised version of our research article (JCGS-16-148) “Gradient-based Regularization Parameter Selection for Problems with Non-smooth Penalty Functions “ for consideration in the Journal of Computational and Graphical Statistics. We appreciated the feedback from the Associate Editor and have addressed them.

This new revision is substantially updated from the initial submission. Our proposal is now presented with the appropriate context. The introduction provides a more thorough review of previous research in tuning hyperparameters in regression problems. We highlight that our key contribution is showing that the gradient of the validation loss can be calculated with respect to the penalty parameters for many popular regression problems with non-smooth penalty functions; where previous gradient techniques only addressed smooth penalty functions. The simulation studies now benchmark against grid search, Nelder-Mead, and the Bayesian optimization technique by Snoek et. al. (2012). We find that, by using the gradient information, our method is significantly more efficient at finding models with lower validation error.

Once again we thank the JCGS editorial board for the constrictive criticism of our initial submission. We look forward to hearing back from the journal regarding our latest revision.

Sincerely,

Jean Feng

Noah Simon