

# Reply to the Comments on the Paper Entitled "gplsim: An R Package for Generalized Partially Linear Single-index Models"

*by Tianhai Zu and Yan Yu*

Dear Editor,

We thank you for tentatively accepting our paper, and we thank the reviewers for the time and expertise they have invested in the review.

Enclosed please find our revision with a point-by-point response letter. We believe that we have successfully addressed all the comments.

Again, thank you for the great suggestions from all of the review team. We appreciate it very much!

We look forward to hearing from you soon!

Sincerely,

Tianhai Zu and Yan Yu

## Responses to Referee's Report

### Point-by-point responses to comments:

> Adding tests via testthat is good, but I wouldn't add it in the abstract.

Thank you for this comment. Now we move it to the section where we discuss the package implementation.

> After "the function gam from the state-of-the-art R package mgcv" you should include  
> a citation for the package/methods, see citation("mgcv") in R.

Thank you for pointing this out. Now we have properly cited the mgcv package and the referenced methods.

> This sentence "The state-of-the-art mgcv package for generalized additive models  
> (GAM, Hastie and Tibshirani 1990)" is confusing, as it makes it sound as if Hastie and  
> Tibschirani authored the package, which, however, was authored by Simon Wood.  
> Note also, that the methods implemented in the 'gam' package (Hastie + Tibs) is  
> somewhat different to the methods in 'mgcv' package.

Good catch! Thanks for the suggestion. We have clarified the confusion by citing [Wood \(2011\)](#) along with [Hastie and Tibshirani \(1986\)](#) for GAMs in a separated sentence.

> below the function signature of gplsim you explain the different parameters. I think  
> it will be hard to follow for uninitiated users which parameters are refering to the  
> gplsim package and which to mgcv package. For example, you write penalty\_type  
> could be L2 or L1, but mgcv only supports L2 if I remember correctly. For 'bs'  
> argument you list some options and mention there are others. But how can user find  
> out which? A reference to help page of the 's' function in mgcv would be helpful  
> here. etc.

Thanks for the comment. Inspired by your suggestion, we reorganized this section to improve the readability of function parameters. Now arguments implemented only in **gplsim** are discussed separately from the arguments that will be passed into functions of **mgcv**. We removed the optional argument `penalty_type` as it may confuse users, as you suggested. The reference to the help page of 's' function is also added.

Again, thank you so much for all your valuable suggestions. We appreciate it very much!

### Bibliography

- T. Hastie and R. Tibshirani. Generalized additive models. *Statistical Science*, 1(3):297–310, Aug. 1986. ISSN 0883-4237, 2168-8745. doi: 10.1214/ss/1177013604. [p2]
- S. N. Wood. Fast stable restricted maximum likelihood and marginal likelihood estimation of semiparametric generalized linear models. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, 73(1):3–36, 2011. ISSN 1467-9868. doi: 10.1111/j.1467-9868.2010.00749.x. URL <https://rss.onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-9868.2010.00749.x>. [p2]