Dear Professor and Executive Editor Michael Kane,

I am glad to send you our response, point-by-point, to the reviewers of our paper 'DChaos: An R Package for Chaotic Time Series Analysis'. As you will see, we have made all the changes suggested by the two reviewers.

I send you a pdf with the new modified version of our paper including the changes and recommendations proposed by the reviewers. And, as part of those changes also implied a small adjustment in the DChaos package, I attach also the new version *DChaos v0.1-6* that is already uploaded and accepted in CRAN.

Thank you for considering our revised manuscript. We look forward to hearing from you.

Kind regards,

Lorenzo Escot, Complutense University of Madrid, Spain
Julio E. Sandubete, Complutense University of Madrid, Spain

Reviewer #1

We really appreciate all the comments, suggestions and advice proposed by the Reviewer #1. We are strongly agreed with all positive remarks made by this reviewer regarding the structure, content and relevance of the paper as well as those concerning possible improvements to the *DChaos* library itself. In fact, we have incorporated all of them in a new version of the package (*DChaos v0.1-6*) that has just been published on CRAN.

Let us focus on the changes made at the proposal of the Reviewer #1.

1. As a suggestion for improvement, I would propose that the authors incorporate optional pass-through arguments in some functions. They have already done this in the *summary.lyapunov* function. So, it would not take much effort to consider it in some other function like *netfit,* where other parameters of the functions that belong to other libraries are incorporated. In any case, this is a minor change.

We have included the possibility to introduce the parameters of the *nnet* function in our functions by incorporating the optional pass-through arguments in some functions (*netfit*, *jacobian.net*, *lyapunov* and *w0.net*) following the suggestion proposed by the Reviewer #1. In the rest of the functions, it does not make sense to insert these arguments.

2. A minor issue. The package is well documented, but the help archive for *lyapunov function* shows a function *javcobian.net* that should appear as *jacobian.net*.

We have corrected the small mistake in the naming of the *jacobian.net* function that existed when generating the help document as commented by the Reviewer #1.

3. Despite all this the authors could make some improvements regarding the code style applying the *styler package*, but probably the development is likely to improve over time.

We have applied the styler package to the 12 functions included in the new version of the *DChaos v.0.1-6* package, improving the code style as suggested by the Reviewer #1.

We have taken into account in the revised manuscript all the comments, suggestions and advice proposed by the Reviewer #1. We reiterate our gratitude.

Reviewer #2

We really appreciate all the comments, suggestions and advice proposed by the Reviewer #2. We are strongly agreed with all positive remarks made by this reviewer regarding the structure, content and relevance of the paper as well as those concerning possible improvements to the *DChaos* library itself. As we said before, we have incorporated all of them in a new version of the package (*DChaos v0.1-6*) that has just been published on CRAN.

Let us focus on the changes made at the proposal of the Reviewer #2.

1. The paper is clear and I have enjoy reading it. The Introduction give enough background information to understand the context of the software's development and use, although I missed at least a paragraph on the relevance of the positive exponent. I guess that the people who read the article like me are familiar with the concept, but an occasional reader would greatly get hooked on the relevance of the paper with a small explanation at the beginning.

We have introduced the following paragraph in the revised manuscript (Page 1, Section 1, Second paragraph, Lines 3-11) where we have explicitly included at the beginning of the paper some comments in line with the remark proposed by the Reviewer #2 regarding to the relevance of a positive Lyapunov exponent:

The existence of a positive Lyapunov exponent makes it possible to distinguish whether an apparently erratic, non-cyclical and aperiodic dynamic system is random or chaotic. In this sense a positive Lyapunov exponent allows us to evidence that a deterministic generating system exists behind that chaotic system in spite of showing an apparently random dynamic behaviour. This fact would provide us to take advantage of this deterministic character to be able to seek modelling of time series using non-linear dynamic models, make reliable predictions, at least within the limits established by the sensitivity to the initial conditions and control over the variables of these chaotic deterministic dynamic systems, see Fernández-Díaz (2019).

2. Maybe it could be advisable to include the progress bar when estimating the Lyapunov exponents by the bootstrap method. I understand that this progress bar is useful for knowing how the process is going, and how long it takes to finish, but

I've noticed that when you request the estimation by the bootstrap blocking method, the process is delayed without any informational progress bar appearing (as it appears in the first part of the computing process). I would personally appreciate information about the remaining computing time.

The Reviewer #2 is right. We have included the progress bar in the estimation of the exponents through the bootstrap method (in both the *lyapunov.max* and *lyapunov.spec* functions) because as the reviewer argues, it is useful for knowing how the process is going, and how long it takes to finish.

3. I think the paper is well written, although I missed some coma through the paper. I recommend check this in the proofreading phase.

We have revised the wording and grammar of the text, correcting any possible mistakes and adding some commas to make it easier to read and understand, in accordance with the suggestion made by Reviewer #2.

4. On page 3, there is a reference missed, I guess in the process of compiling the Latex file.

The Reviewer #2 is right again. We have now corrected the reference that had not been compiled properly using the latex file (Page 3, Section 2, Second paragraph, line 5).

We have taken into account in the revised manuscript all the comments, suggestions and advice proposed by the Reviewer #2. We reiterate our gratitude.