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**IEEE Transactions on Power Electronics - Decision on Manuscript ID TPEL-Reg-2023-02-0439**1 mesaj

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**IEEE Transactions on Power Electronics** <onbehalf@manuscriptcentral.com>

10 Nisan 2023 17:26

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10-Apr-2023

Dear Dr. Keysan:

Manuscript ID TPEL-Reg-2023-02-0439 entitled "Variable Carrier Phase Shift Method for Integrated Contactless Field Excitation System of Electrically Excited Synchronous Motors" which you submitted to the IEEE Transactions on Power Electronics, has been reviewed. The comments of the reviewer(s) are included at the bottom of this letter.

The reviewer(s) have recommended a major revision. This is not a conditional acceptance, but it is an opportunity for you to respond to the editors and reviewers major concerns and to incorporate improvements in the paper according to their suggestions. It is also an opportunity for you to add new results. We normally only permit one major revision before an accept or reject decision is made. So please take the concerns of the reviewers seriously. Therefore, I invite you to respond to the reviewer(s)' comments and revise your manuscript within six weeks from the date of this email.

To revise your manuscript, log into <https://mc.manuscriptcentral.com/tpeel-ieee> and enter your Author Center, where you will find your manuscript title listed under "Manuscripts with Decisions." Under "Actions," click on "Create a Revision." Your manuscript number has been appended to denote a revision.

You will be unable to make your revisions on the originally submitted version of the manuscript. Instead, revise your manuscript using a word processing program and save it on your computer. Please also highlight the changes to your manuscript within the document by highlighting or bolding the text or changing the font color. We do not permit the use of track changes, which often make the paper more difficult for reviewers to read.

Once the revised manuscript is prepared, you can upload it and submit it through your Author Center. To expedite the production process, please make sure your files correspond to the email attachment.

When submitting your revised manuscript, you will be able to respond to the comments made by the reviewer(s) in the space provided. You can use this space to document any changes you make to the original manuscript. In order to expedite the processing of the revised manuscript, please be as specific as possible in your response to the reviewer(s). In addition, please upload your complete response to reviewers as a supplemental file labelled "Response to Reviewers."

**IMPORTANT:** Your original files are available to you when you upload your revised manuscript. Please delete any redundant files before completing the submission.

Because we are trying to facilitate timely publication of manuscripts submitted to the IEEE Transactions on Power Electronics, your revised manuscript should be uploaded as soon as possible. If it is not possible for you to submit your revision in a reasonable amount of time, we may have to consider your paper as a new submission.

Once again, thank you for submitting your manuscript to the IEEE Transactions on Power Electronics and I look forward to receiving your revision.

Sincerely,  
Prof. Yaow-Ming Chen  
Editor in Chief, IEEE Transactions on Power Electronics  
[ntuymchen@ieee.org](mailto:ntuymchen@ieee.org)

Editors' Recommendations:

Recommendation #1: Revision (6 weeks, neither accept nor reject)

Recommendation #2: Revision (6 weeks, neither accept nor reject)

Co-EIC: 1

Comments to the Author (Required):

I agree with AE.

Associate Editor: 2

Comments to the Author (Required):

It is suggested to improve the work according to the reviewers' comments.

Reviewer Responses:

Reviewer: 1

Comments:

Thanks the author for putting together a nice paper. It is a very interesting work.

In terms of content, the authors need to provide derivations of all of the equation in your paper, especially the math-heavy equation (1-8). The full derivation can be done in appendix, with more detailed explanation of equation in correspondign section.

Technically, I wonder how the WPT system is tuned. In equation (16), the capacitance is compensating the inductance. But what does this mean in terms of the voltage (field) gain and the output power on the secondary side. This is useful for future design.

I would also be interested in the specific control used in the paper. Based on figure 8, it would be nice if authors can include the parameters and control block diagram.

In terms of figure, I would recommend author use larger fonts. They should be close to the size of the fonts in the paper. This problem is prominent especially in figure 12.

Reviewer: 2

Comments:

The following issues need to be considered:

1. This method may actually increase the control complexity. Will the proposed control method be better than independent drivers in terms of efficiency?
2. Whether the proposed VCPSM control strategy will affect the motor stator current needs to be supplemented with stator current experiments.
3. Closed-loop dynamic testing experimental results are needed, to verify the control effect on the current excitation current.

Reviewer: 3

Comments:

1. Section 4 "The design of the WPT system" is somewhat simple. The author should further describe the design idea of system parameters and whether different parameters affect system performance.
2. The switching frequency of the motor drive is 65 kHz, but the resonant frequency of the WPT system is 56.7 kHz. The author should explain it.
3. The "Fig. 3" on line 52 on page 3 of the paper should be Fig. 4. The authors need to revise it.
4. The format of Figure 9 is not standardized. The authors need to revise it.
5. The meaning of waveform should be marked in Fig. 12. At the same time, the graduation values V/div of C1 and C3 in the lower left corner should be changed to A/div.

EIC : After each revision, we suggest authors update their references with relevant publications. You may also wish to consider early access papers from power electronics journals, such as those on IEEE Xplore, which may have been added while your paper has been in review.



\* **Help-for-Authors-2016.pdf**

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