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IEEE Access - Decision on Manuscript ID Access-2020-31789

3 pesan

IEEE Access <onbehalf@manuscriptcentral.com>

18 Juli 2020 pukul 12.19

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18-Jul-2020

Dear Prof. Rahardjo:

I am writing to you in regards to manuscript # Access-2020-31789 entitled "Slant Polarization and Bandwidth Controller in Filtering Antenna Using Two Inverted Resonator Structures" which you submitted to IEEE Access.

Please note that IEEE Access has a binary peer review process that does not allow revisions. Therefore, in order to uphold quality to IEEE standards, an article is rejected even if it requires minor edits.

Your manuscript has not been recommended for publication in IEEE Access in its current form; however, we do encourage you to revise and resubmit your article once you have addressed the concerns and criticisms of the reviewers detailed at the bottom of this letter.

Please revise your manuscript based on reviewers' feedback and resubmit; elaborate on your points and clarify with references, examples, data, etc. If you do not agree with the reviewers' views, then include your arguments in the updated manuscript. Also, note that if a reviewer suggested references, you should only add ones that will make your article better and more complete. Recommending references to specific publications is not appropriate for reviewers and you should report excessive cases to ieeeaccessEIC@ieee.org.

We highly recommend that you review the grammar one more time before resubmitting. IEEE offers a 3rd party service for language polishing, which you may utilize for a fee: <https://www.aje.com/c/ieee> (use the URL to claim a 10% discount).

Please be advised that authors are only permitted to resubmit their article ONCE. If the updated manuscript is determined not to have addressed all of the previous reviewers' concerns, the article may be rejected and no further resubmissions will be allowed.

When resubmitting, please submit as a new manuscript and include the following 3 files:

- 1) A document containing your response to reviewers from the previous peer review. The "response to reviewers" document (template attached) should have the following regarding each comment: a) Reviewer's concern, b) your response to the concern, c) your action to remedy the concern. The document should be uploaded with your manuscript files as a "Supplemental File for Review."
- 2) Your updated manuscript with all your individual changes highlighted, including grammatical changes (e.g. preferably with the yellow highlight tool within the pdf file). This file should be uploaded with your manuscript files as a "Supplemental File for Review".
- 3) A clean copy of the final manuscript (without highlighted changes) should be submitted as the "Formatted (Double Column) Main File – PDF Document Only."

We sincerely hope you will update your manuscript and resubmit soon. Please contact me if you have any questions.

Thank you for your interest in IEEE Access.

Sincerely,

Prof. Giorgio Montisci
Associate Editor, IEEE Access
giorgio.montisci@unica.it, giorgio.montisci@gmail.com

Reviewer(s)' Comments to Author:

Reviewer: 1

Recommendation: Reject (updates required before resubmission)

Comments:

This manuscript presents beam switchable patch antenna by controlling via holes. The analysis and design results have good agreement with the authors' proposal. However, the electrical switching method is not mentioned. So, consequently, this paper shows two similar antennas with another beams.

1. Please show how to switch the antenna status from SIFA I to SIFA II.
2. In fig. 1, please explain the layer configuration. Two resonators and a feedline are located on a 2nd layer?
3. The last paragraph in Introduction should be moved to Conclusion section.
4. In general, antenna gain has limited frequency band due to its resonance characteristics. What is the filtering structure in the proposed antenna?

Measurement setup for Fig. 11 is required. The S12 is sensitive to the network calibration. and a distance btw. tx. and rx. antennas.

Additional Questions:

Does the paper contribute to the body of knowledge?: Yes.

Is the paper technically sound?: The design is clear, but most idea is already published in [16].

Is the subject matter presented in a comprehensive manner?: Yes

Are the references provided applicable and sufficient?: Yes.

Reviewer: 2

Recommendation: Reject (updates required before resubmission)

Comments:

1. For the filtering antenna, the rejection level is poor, please explain the reason.
2. The author should explain clearly how to control the polarization. How about one resonator or 3 resonators?
3. The cross-polarization performance is needed to be improved.
4. Comparisons among the published dual-polarized filtering antennas should be added.

Additional Questions:

Does the paper contribute to the body of knowledge?: Yes

Is the paper technically sound?: Not sufficient

Is the subject matter presented in a comprehensive manner?: Not enough

Are the references provided applicable and sufficient?: Yes

Reviewer: 3

Recommendation: Reject (updates required before resubmission)

Comments:

The authors presents a kind of filtering antenna design with slant polarization.

I have the following questions:

- 1) The authors claimed the geometry and synthesis of a 3rd-order filtering antenna. However, only two reflection zeros (RZs) were found in the S-parameter response in Figure 4, it was not matched with 3rd-order filtering response. Furthermore, when controlling the bandwidth of proposed structure in Figure 8, it is not right to only change the coupling value $M_{1,2}$ depended by distance ' d ' while remaining the value $M_{2,3}$,

- since value $M_{1,2}$ should be equal to $M_{2,3}$ as discussed in Sec. III.
- 2) The unloaded quality factors (Q_u) of strip resonator and patch resonator should be given, respectively.
 - 3) Comparison among the proposed design with the other ones should be discussed.

Additional Questions:

Does the paper contribute to the body of knowledge?: Yes

Is the paper technically sound?: Not really

Is the subject matter presented in a comprehensive manner?: Yes

Are the references provided applicable and sufficient?: Yes

Reviewer: 4

Recommendation: Reject (updates required before resubmission)

Comments:

This paper gives in-depth theory analysis, generic design procedures, simulation results, and experimental validation of slant polarized (+45/-45 degrees) antenna design using two inverted resonators. Compared to the authors' previous publication (reference [16]), -45/+45 degrees slant polarized can be achieved by switching via hole positions at two resonators which control current flowing directions. Generally speaking, this work is interesting and promising, however, I would like to provide the following suggestions and concerns for further improvement.

1, Besides the polarization direction from 75 degrees to 45 degrees, could the authors elaborate more innovation/improvement points in this paper compared to previous study, reference [16]?

2, Although authors use the term "controllable" slant polarization, bandwidth and gain in this paper, from my point of view, these parameters cannot be realized in a single antenna design but have to be on different antennas with different design parameters (e.g. different via hold position in SIFAI and SIFA II). For example, once the antenna radiates with +45 degrees polarized, it cannot have -45 slant polarization. Is "controllable" the best/correct term to use or "switchable" could be an better option? Could the authors explain this part more?

3, The gain is flat over the whole bandwidth however since the θ/ϕ magnitude ratio will change at different frequency, the purity of slant polarization may be affected when the magnitude ratio is high like 1.7 as mentioned in the paper. Will the "not-1" ratio change the polarization purity much? Could the authors talk more about this part?

Non-technical concerns:

1, Line 40, column 2, page 4. Please change "hasa" to "has".

2, Line 16, column 1, page 6. Font of "radiation" looks incorrect.

Additional Questions:

Does the paper contribute to the body of knowledge?: Yes. However, the paper is similar to its previous work and more different need to be highlighted as mentioned in my comment to the author.

Is the paper technically sound?: Yes.

Is the subject matter presented in a comprehensive manner?: Yes.

Are the references provided applicable and sufficient?: Yes.

Reviewer: 5

Recommendation: Reject (do not encourage resubmit)

Comments:

In this paper, the authors presented design of two filtering antennas with a +45° and -45° slant polarization, using the co-design of a third-order filter and a rectangular patch antenna. Here are my comments for the paper:

1- The author said that the main contribution here that, "he applies two inverted and parallel strip resonators that perform a 45° polarization thus, there is no

extra component or rotation of the radiator and feedline" but the author designed two antennas one to perform positive 45 and the other -45 depending on the current and the direction of current so how can he use one antenna to perform +45 and -45.

2- The author said that the antenna bandwidth can be controlled but I saw that the bandwidth can be controlled by changing the distances between resonators this means if I want to change the bandwidth I have to change the antenna and change the distance between resonators.

3- The author should discuss how the filter dimensions can be realized from the equations 3-6 in details. Start from the filter specifications and then end with the filter realization.

4- The author should compare the frequency response of the circuit to the frequency response of the structure. In this way, one can justify the validity of the circuit model.

5- The author should show why he used the proximity feed technique to feed the antenna

6- The author should update the references between 2018-2020.

7- The author should compare his work with others to show the novelty of the work.

8- The fabricated photo front and back view of the two antennas should be added with good quality.

Additional Questions:

Does the paper contribute to the body of knowledge?: yes

Is the paper technically sound?: yes

Is the subject matter presented in a comprehensive manner?: yes

Are the references provided applicable and sufficient?: no

Reviewer: 6

Recommendation: Reject (updates required before resubmission)

Comments:

In this manuscript, authors present a stacked inverted filtering antenna for the LTE applications. Even though authors addressed design, results and discussion, the proposed antenna includes insufficient information. The manuscript is required to major revision for the publication. For the manuscript, my comments are as follows:

1. In Fig.1, the author has to describe the feeding line and the input port of the proposed antenna.
2. A title has to include the main contribution of this manuscript. However, the title of this manuscript is not appropriate. I recommend the title revision by considering the proposed antenna. For example, A stacked inverted filtering antenna with $\pm 45^\circ$ slant polarization for LTE applications.
3. Describe the impedance variation with regard to the positions of via holes in Fig. 3.
4. In Figs. 13 and 14, it is necessary to add the $\phi = -45^\circ$ and the $\phi = 45^\circ$ in the radiation pattern, respectively.
5. Describe the total efficiency of the proposed antenna.
6. Explain how the patch size of the proposed antenna was determined.

Additional Questions:

Does the paper contribute to the body of knowledge?: Yes

Is the paper technically sound?: No.

Is the subject matter presented in a comprehensive manner?: Yes

Are the references provided applicable and sufficient?: Yes

If you have any questions, please contact article administrator: Ms. Namrata Sinha sinha.n@ieee.org

2 lampiran

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Kepada: teguhfirmansyah@untirta.ac.id

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20 Juli 2020 pukul 13.47

Assalamu'alaikum,

Yus dan Dian, ini hasil reject dan review IEEE access yg kemarin. Spya kita sama2 belajar dan antisipasi ke depannya utk paper masing2. Aku sampai gemeter bacanya, kmarin refreshing beli anggrek oncidium sampai habis 1 jutaan...wkwkwk, klo dibeliin ayam kampung dah dapat 12 ekor itu.

----- Forwarded message -----

Dari: **IEEE Access** <onbehalf@manuscriptcentral.com>

Date: Sab, 18 Jul 2020 pukul 13.19

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[Kutipan teks disembunyikan]

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IEEE Access - Decision on Manuscript ID Access-2020-56931

2 pesan

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4 Desember 2020 pukul 12.31

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04-Dec-2020

Dear Prof. Rahardjo:

Your manuscript entitled "Switchable Slant Polarization Filtering Antenna Using Two Inverted Resonator Structures for LTE Application" has been accepted for publication in IEEE Access. The comments of the reviewers who reviewed your manuscript are included at the foot of this letter. We ask that you make changes to your manuscript based on those comments, before uploading final files.

However, NO CHANGES to the author list or the references will be permitted.

Finally, please improve the English grammar and check spelling, as it is only lightly edited before publication.

Once you have updated your article accordingly, please send all final versions of your files through the "Awaiting Final Files" queue in your Author Center on ScholarOne Manuscripts. Once you have completed the submission of your final files, you will not be able to make changes until you have received your page proofs from IEEE.

When submitting final files, you must submit all of the items in the list below. All files intended for publication need to be submitted during this step, even if some files are unchanged from initial submission. If you do not submit all files during this step, it will delay the publication of your article, or result in certain files not being published.

- 1) Manuscript in MS Word or LaTeX with all author biographies and photos included.
- 2) A PDF of the final manuscript in double column, single-spaced format named "FINAL Article.pdf".
- 3) A Graphical Abstract (GA) which provides a concise, visual summary of the findings of your article. The GA should be a figure or image from the accepted article. If you submitted a video with your article, the video will automatically become the GA and you will need to supply a still image to act as an overlay. For more information on the GA, please visit <https://ieeaccess.ieee.org/submitting-an-article/>
- 4) Video(s) included in peer review (if any)
- 5) A Word file that indicates: a) the file name(s) of the GA and overlay (if applicable), b) a caption for the GA that should not exceed 60 words.
- 6) If the figures/photos are not embedded directly within the final article, please submit them as a separate PDF, Word, .eps, .ps, or .tiff files

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Thank you for your fine contribution. On behalf of the Editors of IEEE Access, we look forward to your continued contributions to IEEE Access.

Sincerely,
Prof. Giorgio Montisci
Associate Editor, IEEE Access
giorgio.montisci@unica.it, giorgio.montisci@gmail.com

Reviewer(s)' Comments to Author:

Reviewer: 1

Recommendation: Accept (minor edits)

Comments:

No comments

Additional Questions:

- 1) Does the paper contribute to the body of knowledge?: Yes
- 2) Is the paper technically sound?: Yes
- 3) Is the subject matter presented in a comprehensive manner?: Yes
- 4) Are the references provided applicable and sufficient?: Yes
- 5) Are there references that are not appropriate for the topic being discussed?: No
- 5a) If yes, then please indicate which references should be removed.:

Reviewer: 2

Recommendation: Accept (minor edits)

Comments:

Some minor edits are required:

- 1) No x- or y-axis are found in Fig. 10, as it is discussed in Sec. V, paragraph 1.
- 2) In Sec. V measurement part, it should be Fig. 25(a) and (b) instead of Fig. 24(a) and (b).
- 3) Some other minor edits should be carefully checked and revised.
- 4) In Fig. 10, E-field directions are on the x-y plane, while in Fig. 3, the E-field direction for slant polarization is 45 degree to x-y-z, could the authors tell more about this?

Additional Questions:

- 1) Does the paper contribute to the body of knowledge?: Yes
- 2) Is the paper technically sound?: Yes
- 3) Is the subject matter presented in a comprehensive manner?: Yes
- 4) Are the references provided applicable and sufficient?: Yes
- 5) Are there references that are not appropriate for the topic being discussed?: No
- 5a) If yes, then please indicate which references should be removed.:

Reviewer: 3

Recommendation: Accept (minor edits)

Comments:

The authors respond to all my previous questions and made corrections/updates accordingly. I recommend publication of this updated version.

Additional Questions:

- 1) Does the paper contribute to the body of knowledge?: Yes
- 2) Is the paper technically sound?: Yes
- 3) Is the subject matter presented in a comprehensive manner?: Yes

- 4) Are the references provided applicable and sufficient?: Yes
- 5) Are there references that are not appropriate for the topic being discussed?: No
- 5a) If yes, then please indicate which references should be removed.:

Reviewer: 4

Recommendation: Accept (minor edits)

Comments:

Authors have addressed design, results and discussion with proper explanations by considering my comments. Several insufficient information has been revised and added. I recommend the publication of this paper in this journal.

Additional Questions:

- 1) Does the paper contribute to the body of knowledge?: Yes
- 2) Is the paper technically sound?: Yes
- 3) Is the subject matter presented in a comprehensive manner?: Yes
- 4) Are the references provided applicable and sufficient?: Yes
- 5) Are there references that are not appropriate for the topic being discussed?: No
- 5a) If yes, then please indicate which references should be removed.:

If you have any questions, please contact article administrator: Mr. Nishant Shukla n.shukla@ieee.org

Eko Tjipto Rahardjo <eko@eng.ui.ac.id>

6 Desember 2020 pukul 11.02

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Original Manuscript ID: Access-2020-56931

Original Article Title: Switchable Slant Polarization Filtering Antenna Using Two Inverted Resonator Structures for LTE Application

Dear Prof. Giorgio Montisci,
Assoc. Editor IEEE Access

cc: Mr. Nishant Sukla

Thank you for accepting our manuscript for publication in IEEE Access. We appreciate the time and effort you and the reviewers have put in reviewing this manuscript.

Regarding the title of our manuscript, we have just considered that the application of our proposed antenna is more appropriate for 5G rather than LTE application. We propose to revise the title to "Switchable Slant Polarization Filtering Antenna Using Two Inverted Resonator Structures for 5G Application". Other LTE words in the manuscript will also be replaced with 5G.

And I believe this correction would not affect the content technically.

Thank you for your kind assistant and we look forward to your response.

Eko Tjipto Rahardjo

Professor of Electrical Engineering
Universitas Indonesia
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INDONESIA

[Kutipan teks disembunyikan]