Your Future Starts Here

Yusnita Rahayu <yusnita.rahayu@lecturer.unri.ac.id>

[ACES] Editor Decision

5 messages

Sami Barmada via River Publishers <noreply@journals.riverpublishers.com> Wed, Apr 24, 2024 at 9:54 PM
Reply-To: Sami Barmada <sami.barmada@unipi.it>
To: Yusnita Rahayu <yusnita.rahayu@lecturer.unri.ac.id>, Fildza Arifa <fildza@graduate.utm.my>, Mudrik Alaydrus <mudrikalaydrus@mercubuana.ac.id>, anhar <anhar@lecturer.unri.ac.id>, Teguh Praludi <teguhpraludi@gmail.com>, Huriatul Masdar <huriatul.masdar@gmail.com>

Dear Dr Yusnita Rahayu, Fildza Arifa, Mudrik Alaydrus, anhar, Teguh Praludi, Huriatul Masdar:

We have reached a decision regarding your submission to The Applied Computational Electromagnetics Society Journal (ACES), "Correlations of Salivary and Blood Glucose Level Detection using Flexible Sensor Technique".

Our decision is: Revisions Required

Revisions must be **received within 3 weeks** of this email. Revisions made should be clearly visible / highlighted in your paper. If you cannot send in your revision within the allotted time, please contact us immediately.

You should also **upload a Reply Letter containing your responses to each comment**. Failure to do so will result in your article being delayed in the review process or being rejected.

Authors are also encouraged to check ACES Journal publications, which are freely available on ACES archival site at

Archives | The Applied Computational Electromagnetics Society Journal (ACES) (riverpublishers.com)

and then reference in their revised paper the appropriate related published ACES Journal articles.

We look forward to seeing your revision.

Reviewer A:
Recommendation: Revisions Required

Please provide details on where this submission falls short of the ideal (*Automatically required if the total score for the questions above is less than 21*)

> The research article is interesting of measuring technology presentation.However, there is a need to add additional content to suit.
> 1. Edit the abstract to include sections on simulation results and measurement results, summary and recommendations.
> 2. Introduction revised to allow comparison of the proposed technique with other methods. In order to see the highlights of the research presented.
> 3. The research methodology was revised to present the design. Simulation results of the presented research. There is no mention in this topic. and explain the measurement steps clearly Both through measuring tools and new test sample sets.
> 4. Adjust all images to be clear, sharp, and explain the results better.
> 5. Explain new experimental results.

Please provide details on what the strengths, unique qualities of this paper are (*Automatically required if the total score for the questions above is greater than 21*)

Please provide any specific and detailed comments for the authors to consider:

> The research article is interesting of measuring technology presentation.However, there is a need to add additional content to suit.
> 1. Edit the abstract to include sections on simulation results and measurement results, summary and recommendations.

2. Introduction revised to allow comparison of the proposed technique with other methods. In order to see the highlights of the research presented.
3. The research methodology was revised to present the design. Simulation results of the presented research. There is no mention in this topic. and explain the measurement steps clearly Both through measuring tools and new test sample sets.
4. Adjust all images to be clear, sharp, and explain the results better.
5. Explain new experimental results.

Reviewer C:
Recommendation: Request Revision

Is this paper relevant to computational electromagnetics?*

2

_____

Does it advance the state of the art in computational electromagnetics?*

2

_____

Do the authors make it clear that this submission is different from their previous publications on the same topic?(5 can be used for N/A)*

3

_____

Is the paper significantly different from the authors' past publications (especially in ACES conference)?*

3

_____

Does the paper provide sufficient information *so that a knowledgeable reader can reproduce the results?**

2

Is the use of English language acceptable for publication?

No

Please provide details on where this submission falls short of the ideal (*Automatically required if the total score for the questions above is less than 21*)

Lack of novelty, clarity, methodological details.

General comment:

This week deals with the design and test of a flexible microwave sensor for the BGL detection from saliva. The fact that the work is experimental is relevant to the quality of the article.

Specific comments throughout the paper:

Abstract: Please check the formatting style to ensure compliance with the Journal guidelines. The abstract is relatively ok. The authors are not clearly stating what kind of planar sensor topology they are working with. I suggest them to include this detail.

Index terms: please add something about the electromagnetic structures and technologies you are using.

1.

Please check the English language throughout the manuscript.

“Elevated blood sugar (glucose) leads to diabetes. The International Diabetes Federation (IDF) estimates that one in ten people globally suffers from diabetes. ” Mission ref.(s) for this and the following statements containing statistics.

The analysis of the state of the art about blood glucose levels using microwave sensors must be refined a little. More recent work can be added. There also commercial sensors working at mmWaves. I suggest the authors to improve their introduction section. Furthermore, I also suggest to provide a summary table for the cited references to compare your work with.

Per se, the idea is not novel. The authors must explain and demonstrate why the proposed manufacturing and proposed solutions are better than the other previous approaches.

2.

A.

Missing reference for the dielectric properties of the PET substrate.

Also “PET has a relatively stable dielectric constant at various frequencies and temperatures. ” is a statement lacking of ref(s).

Fig. 1 is not of good quality. It is a CST screenshot and an optical image without a scale. I am not sure of what it is shown in Fig. 1b. More details are needed.

The topology is not clear and so the functioning of this sensor. I find it very confusing and difficult to evaluate. S

What current the authors are referring to in A/m? This part is not clear and really misleading. In Fig. 1b no current flow is shown.

There is no rationale and design procedure reported for the selected sensors parameters. The CST simulations details are missing. The sensor sensitivity was tuned using which kind of data, and what it is? The numerical contributions of this work are scarce.

Define ISM as an acronym.

B.

An ethical statement for these volunteers is missing (see Helsinki Declaration).

The authors are re-using always the same sensors/antenna for the experiment, apparently. Did they consider any bio-fouling due to adsorption of blood or saliva proteins and biomolecules on the PET substrate?

3.

A.

The authors did not report the type of VNA used, the calibration info and other relevant methodological details.

Do not mix results and methods.

The measured |S11| curve seems to be very noise, especially at 1 GHz, and probably suffer from downsampling. Please report all the details used for the measurements.

Fig. 4 is of terrible quality, and so are the other figures. Please improve them to provide a clear results presentation.

I am missing some standard deviations for any measurements. What is the reproducibility and the variability?

B.

At least a discussion is provided. And the table I previously requested is given. The authors however are considering the substrate as the key feature and not the microwave sensors topology, the narrow/wideband behavior or any other electromagnetic key feature. This is a shortcoming.

4. (There is an error in the section numbering, please fix)

The conclusion section is fine. Use part of these information to improve the abstract.

The Applied Computational Electromagnetics Society Journal (ACES)

Yusnita Rahayu <yusnita.rahayu@lecturer.unri.ac.id> Thu, Apr 25, 2024 at 7:54 AM
To: fildza@graduate.utm.my

[Quoted text hidden]

Yusnita Rahayu <yusnita.rahayu@lecturer.unri.ac.id> Sun, May 26, 2024 at 8:37 AM
To: Sami Barmada <sami.barmada@unipi.it>

Dear ACES Editor...

Thank you for allowing a resubmission of our manuscript, with an opportunity to address the reviewers' comments.
We are uploading (a) our point-by-point response to the comments, (b) an updated manuscript with red highlighting indicating changes, and (c) a clean updated manuscript without highlights through the system.
I apologize for being late in sending this revision because my mother passed away 2 weeks ago. I really ask for your understanding regarding the condition I am facing. Thank you for your consideration.

Regards

[Quoted text hidden]

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DR. YUSNITA RAHAYU, M.Eng (SMIEEE)
Lecturer
Department of Electrical Engineering
Faculty of Engineeing
University of Riau

Yusnita Rahayu <yusnita.rahayu@lecturer.unri.ac.id> Mon, Jul 1, 2024 at 12:20 AM
To: Sami Barmada <sami.barmada@unipi.it>

Dear Editor...

Good day

We submitted our revised version of the manuscript on May 26th, 2024. We have checked in the system that our paper is still in the second review process and some of the reviewers are overdue. I understand that many papers are under review and appreciate your understanding and concern. However, could you tell us when we can get the decision?

Very thank you for your kind perusal.

Warm regards

Yusnita

[Quoted text hidden]

Yusnita Rahayu <yusnita.rahayu@lecturer.unri.ac.id> Tue, Sep 3, 2024 at 11:33 AM
To: Sami Barmada <sami.barmada@unipi.it>

Dear Editor...

Good day

We submitted our revised version of the manuscript on May 26th, 2024. We have checked in the system that our paper is still in the second review process and some of the reviewers are overdue. I understand that many papers are under review and appreciate your understanding and concern. However, could you tell us when we can get the decision?

Very thank you for your kind perusal.

Warm regards

Yusnita

[Quoted text hidden]

Original Manuscript ID: 24651

Original Article Title: "Correlations of Salivary and Blood Glucose Level Detection Using Flexible Sensor Technique"

To: ACES Editor

Re: Response to reviewers

Dear Editor,

Thank you for allowing a resubmission of our manuscript, with an opportunity to address the reviewers' comments.

We are uploading (a) our point-by-point response to the comments (below), (b) an updated manuscript with red highlighting indicating changes, and (c) a clean updated manuscript without highlights.

Best regards,

Yusnita Rahayu, et al.

Correlations of Salivary and Blood Glucose Level Detection using Flexible Sensor Technique

No	Reviewer Comments	Action
	Reviewer A: The research article is interesting of measuring technology presentation. However, there is a need to add additional content to suit.	Thanks for the comments. All the revised sentences are highlighted on the paper in red colour.
1	Edit the abstract to include sections on simulation results and measurement results, summary and recommendations.	✓ It has been corrected in the abstract on page 1 and highlighted with red colour.
2	Introduction revised to allow comparison of the proposed technique with other methods. In order to see the highlights of the research presented.	✓ It has been explained in the introduction part paragraph 5, page 2.
3	The research methodology was revised to present the design. Simulation results of the presented research. There is no	✓ We have explained more detail the research method on page 3, part b:

	mention in this topic. and explain the measurement steps clearly Both through measuring tools and new test sample sets.	Research Methods, paragraphs 1, and 3
4	Adjust all images to be clear, sharp, and explain the results better.	✓ Thank you for the helpful suggestion. We have provided the high-resolution image and replaced Figure 1 with a new image.
5	Explain new experimental results.	✓ We provide Table 4 for comparison of the past research results, page 6
	Reviewer C	Thank you for the valuable comments.
1	Please check the English language throughout the manuscript. "Elevated blood sugar (glucose) leads to diabetes. The International Diabetes Federation (IDF) estimates that one in ten people globally suffers from diabetes. " ref.(s) for this and the following statements containing statistics. Per se, the idea is not novel. The authors must explain and demonstrate why the proposed manufacturing and proposed solutions are better than the other previous approaches.	✓ We have checked the English with software and proofreading service. ✓ We have added additional references to strengthen the statements. (see introduction part, para 1, pg. 1). ✓ From the several literature studies that have been carried out, for samples in the form of liquids using saliva, no research has been carried out as comprehensive as what we have done. PET substrate is used as a flexible substrate because it has a stable dielectric and is easy to print for repeated use. The saliva sample was chosen because it is easier to use in testing than other bio-samples. The sensor design uses RSCR as its geometry. (Part Introduction, Para 6, pg 2
2	1. Missing reference for the dielectric properties of the PET substrate. Also "PET has a relatively stable dielectric constant at various frequencies and temperatures. " is a statement lacking of ref(s). 2. Fig. 1 is not of good quality. It is a CST screenshot and an optical image without a scale. I am not sure of what it is shown in Fig. 1b. More details are needed.	✓ We have added the ref [12-14] in Part 2: flexible sensor design, para 1, pg 2. ✓ We have redrawn fig 1 with a new image to be clear

	3. The topology is not clear and so the functioning of this sensor. I find it very confusing and difficult to evaluate. 4. What current the authors are referring to in A/m? This part is not clear and really misleading. In Fig. 1b no current flow is shown. 5. There is no rationale and design procedure reported for the selected sensors parameters. The CST simulations details are missing. The sensor sensitivity was tuned using which kind of data, and what it is? The numerical contributions of this work are scarce. • Define ISM as an acronym. • an ethical statement for these volunteers is missing (see Helsinki Declaration). The authors are re-using always the same sensors/antenna for the experiment, apparently. Did they consider any bio-fouling due to adsorption of blood or saliva proteins and biomolecules on the PET substrate?	✓ The sensor has RSCR geometry where the centre of the ring slot is the sensing area. ✓ We have added the simulated E-field for this sensor that is missing before in Fig.4, instead of surface current. ✓ The simulated electric field demonstrates the sensor's sensitivity to any samples placed on its top. Table 2 presents the correlation between the frequency shift and the elevated sugar content in saliva. ✓ We have defined the ISM ✓ We have added the ethical statement to the research method, "This study was conducted in accordance with the principles of the Declaration of Helsinki, and all patients provided verbal informed consent prior to enrolment". ✓ In the research method, in the last paragraph "In this study the author used a sensor with a glass preparation attached to it. so that volunteers could be safe from the potential effects of biomolecules in the saliva and blood of other volunteers because the glass preparation used was only used once by each volunteer and then thrown away"
3	The authors did not report the type of VNA used, the calibration info and other relevant methodological details. Do not mix results and methods. The measured |S11| curve seems to be very noise, especially at 1 GHz, and probably suffer from downsampling. Please report all the details used for the measurements.	✓ We have explained the type of VNA used in research method para 3 and shown in Fig.1. ✓ We do not mix the results and method ✓ We have improved the measured S11 results as shown in Fig. 3.

	Fig. 4 is of terrible quality, and so are the other figures. Please improve them to provide a clear results presentation.	✓ Fig 4 (old) was deleted because more complete results can be shown in Table 3, so that it can make it easier for readers to see the specific results found in various saliva samples for detecting volunteer blood sugar.
	I am missing some standard deviations for any measurements. What is the reproducibility and the variability?	✓ We described the frequency shift that occurs as a result of the fluctuation in blood glucose levels (Table 3).
	At least a discussion is provided. And the table I previously requested is given. The authors however are considering the substrate as the key feature and not the microwave sensors topology, the narrow/wideband behavior or any other electromagnetic key feature. This is a shortcoming.	✓ The design of this sensor is based on a Ring Slot Circular Resonator (RSCR), and its dimensions may be found in Table 1. The simulated electric field was provided to accommodate the selected geometry, with the sensing hot spot located at the centre of the ring slot.
4	(There is an error in the section numbering, please fix)	The numbering has been done sequentially from the first page to the last

Your Future Starts Here

Yusnita Rahayu <yusnita.rahayu@lecturer.unri.ac.id>

[ACES] Editor Decision

2 messages

Sami Barmada via River Publishers <noreply@journals.riverpublishers.com> Sun, Sep 8, 2024 at 5:09 PM
Reply-To: Sami Barmada <sami.barmada@unipi.it>
To: Yusnita Rahayu <yusnita.rahayu@lecturer.unri.ac.id>, Fildza Arifa <fildza@graduate.utm.my>, Mudrik Alaydrus <mudrikalaydrus@mercubuana.ac.id>, anhar <anhar@lecturer.unri.ac.id>, Teguh Praludi <teguhpraludi@gmail.com>, Huriatul Masdar <huriatul.masdar@gmail.com>

Dear Dr Yusnita Rahayu, Fildza Arifa, Mudrik Alaydrus, anhar, Teguh Praludi, Huriatul Masdar:

We have reached a decision regarding your submission to Applied Computational Electromagnetics Society Journal (ACES), "Correlations of Salivary and Blood Glucose Level Detection using Flexible Sensor Technique".

Our decision is to: Accept Submission subject to any required editorial corrections

We will be in touch shortly with details of your publication fees, and any other information we may need before we start the preparation of your paper proof.

Authors are encouraged to check ACES Journal publications, which are freely available on ACES archival site at

Archives | The Applied Computational Electromagnetics Society Journal (ACES) (riverpublishers.com)

and then reference in their revised paper the appropriate related published ACES Journal articles.

Reviewer B:
Recommendation: See Comments

Please provide details on where this submission falls short of the ideal (*Automatically required if the total score for the questions above is less than 20*)

The resolution Fig.2 and Fig.5 should be improved especially the caption of axis in Fig.5

Please provide details on what the strengths, unique qualities of this paper are (*Automatically required if the total score for the questions above is greater than 20*)

Please provide any specific and detailed comments for the authors to consider:

Yusnita Rahayu <yusnita.rahayu@lecturer.unri.ac.id> Sat, Sep 14, 2024 at 11:12 PM
To: Sami Barmada <sami.barmada@unipi.it>

Dear Editor..

I have submitted the revised final manuscript into your system. Thank you for considering my paper to be published in this journal. With this email, I include the revised manuscript and response letter for your reference.

Thank you

Yusnita
[Quoted text hidden]
--
DR. YUSNITA RAHAYU, M.Eng (SMIEEE)
Lecturer
Department of Electrical Engineering
Faculty of Engineeing
University of Riau

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3 attachments

Final_submission_Revision Sep2024.pdf
623K

Final_submission_Revision Sept_2024.docx
1227K

Reply letter as response reviewer Sept 20024.docx
20K

Original Manuscript ID: 24651

Original Article Title: "Correlations of Salivary and Blood Glucose Level Detection Using Flexible Sensor Technique"

To: ACES Editor

Re: Response to Reviewer Comments

Dear Editor,

Thank you for considering my paper to be published in this journal.

We are uploading an updated manuscript with revised resolution of Fig.2 and Fig. 5 as requested.

Best regards,

Yusnita Rahayu, et al.

Correlations of Salivary and Blood Glucose Level Detection using Flexible Sensor Technique

No	Reviewer Comments	Action
	Reviewer B: The resolution Fig.2 and Fig.5 should be improved especially the caption of axis in Fig.5	Thanks for the comments. All the revised Figures are improved.