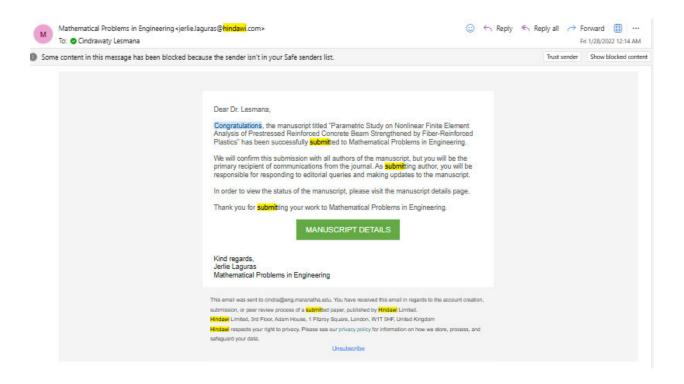
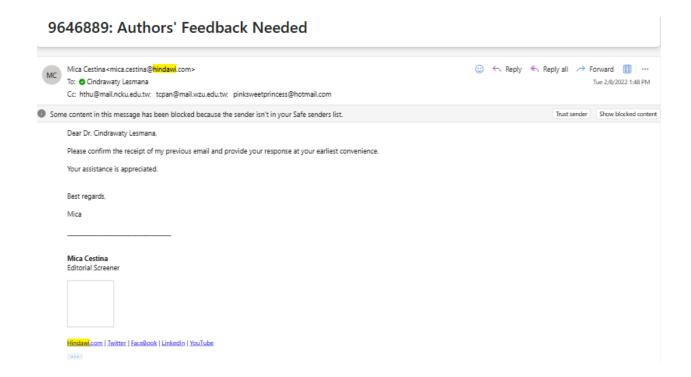
- 1. Submitted to the journal (28-1-2022)
- 2. Authors' Feedback Needed (8-2-2022)
- 3. First revision: Major Revision Requested (20-2-2022)
- 4. Revised version received (15-4-2022)
- 5. Second revision: Minor Revision Requested (7-5-2022)
- 6. Your response is required: 9646889 (5-24-2022)
- 7. Respond (26-5-2022)
- 8. Paper accepted for publication (28-5-2022)
- 9. Manuscript is moving into production (31-5-2022)
- 10. Galley Proofs (11-6-2022)
- 11. Galley Proofs Replied (16-6-2022)
- 12. Article has been published (17-6-2022)

### 1. Submitted to the journal (28-1-2022)

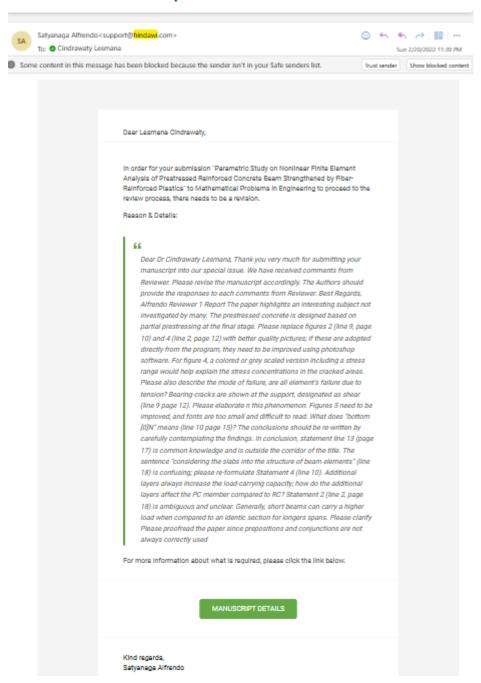


### 2. Authors' Feedback Needed (8-2-2022)



#### 3. First revision: Major Revision Requested (20-2-2022)

## 9646889: Revision requested



#### Decision

Major Revision Requested Alfrendo Satyanaga

GE

20.02.2022

#### Message for Author

Dear Dr Cindrawaty Lesmana, Thank you very much for submitting your manuscript into our special issue. We have received comments from Reviewer. Please revise the manuscript accordingly. The Authors should provide the responses to each comments from Reviewer.

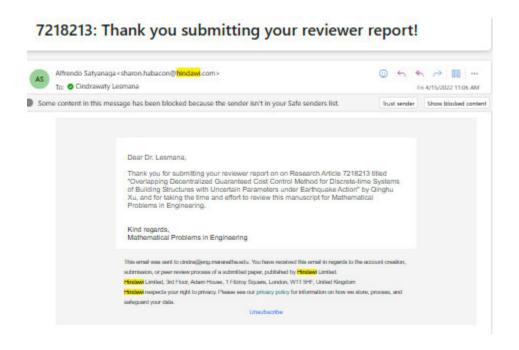
Best Regards,

Alfrendo

Reviewer 1 Report

- The paper highlights an interesting subject not investigated by many. The prestressed concrete is designed based on partial prestressing at the final stage.
- Please replace figures 2 (line 9, page 10) and 4 (line 2, page 12) with better quality pictures; if these are adopted directly from the program, they need to be improved using photoshop software.
- For figure 4, a colored or grey scaled version including a stress range would help explain the stress concentrations in the cracked areas.
- Please also describe the mode of failure, are all element's failure due to tension?
- Bearing-cracks are shown at the support, designated as shear (line 9 page 12). Please elaborate n this phenomenon.
- Figures 5 need to be improved, and fonts are too small and difficult to read. What does "bottom [0]N" means (line 10 page 15)?
- The conclusions should be re-written by carefully contemplating the findings.
- In conclusion, statement line 13 (page 17) is common knowledge and is outside the corridor of the title.
- The sentence "considering the slabs into the structure of beam elements" (line 18) is confusing; please re-formulate Statement 4 (line 10).
- Additional layers always increase the load-carrying capacity; how do the additional layers affect the PC member compared to RC?
- Statement 2 (line 2, page 18) is ambiguous and unclear.
- Generally, short beams can carry a higher load when compared to an identic section for longers spans.
- Please clarify Please proofread the paper since prepositions and conjunctions are not always correctly used

### 4. Revised version received (15-4-2022)



Subject: Submission of a Revised Article for Evaluation

Reference: Paper entitled "Parametric Study on Nonlinear Finite Element Analysis of Prestressed Reinforced Concrete Beam Strengthened by Fiber-Reinforced Plastics" by Cindrawaty Lesmana , Hsuan-Teh Hu , Tsun-Chen Pan , and Zih-Shu Lin for Mathematical Problems in Engineering – Special Issue: Uncertainty in Computational Method for Application in Civil Engineering.

Dr. Alfrendo Satyanaga Lead Editor

May 1, 2022

#### Dear Dr. Satyanaga:

Thank you for the valuable insight from the reviewer. I am pleased to submit the following attached revised article entitled "Parametric Study on Nonlinear Finite Element Analysis of Prestressed Reinforced Concrete Beam Strengthened by Fiber-Reinforced Plastics" for publication consideration in the Mathematical Problems in Engineering – Special Issue: Uncertainty in Computational Method for Application in Civil Engineering.

We believe that this manuscript is appropriate for publication by this special issue because it presents the nonlinear finite element analysis for better understanding the design principles of structural analyses for strengthened prestressed concrete beams using Fiber Reinforced Polymer.

This manuscript has not been published and is not under consideration for publication elsewhere.

Correspondence concerning this paper should be addressed to my co-author:

Hsuan-Teh Hu
Department of Civil Engineering
National Cheng Kung University, Tainan, Taiwan 701, R.O.C.
Tel: 886-6-2757575ext63168, Fax: 886-6-2358542
e-mail: hthu@mail.ncku.edu.tw

Thank you in advance. We are looking forward to hearing from you.

Sincerely yours,

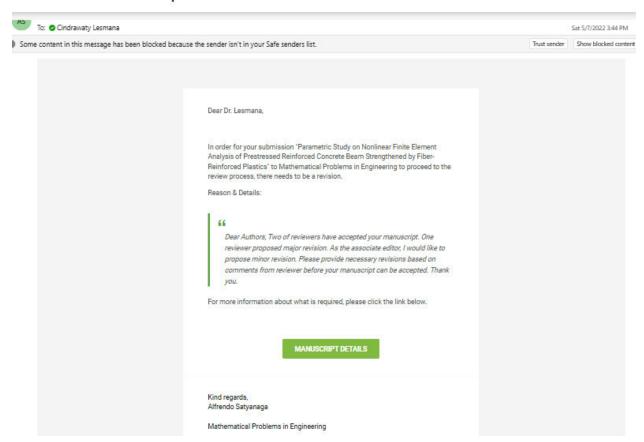
Hsuan-Teh Hu Department of Civil Engineering National Cheng Kung University, Tainan, Taiwan 701, R.O.C.

# **Author's Response to the Comments of Reviewer**

Comments of Reviewer #1	Authors' Response to Reviewer #1
Please replace figures 2 (line 9, page 10) and 4 (line 2, page 12) with better quality pictures; if these are adopted directly from the program, they need to be improved using photoshop software.	Thank you for reviewer's suggestion. Figure 2 (line 9, page 9) and 4 (line 2, page 12) have been replaced with better quality pictures.
Please also describe the mode of failure, are all element's failure due to tension?	After the reviewer's first comment is addressed in the revised paper, it is quite clear that the new insight in this paper is:  Beams that set under-reinforced, hence expect to appear in tension failure because yielding of steel was responsible for continued higher strains in concrete, resulting in its failure.  The sentence has been added at page 12 line 7.
Bearing-cracks are shown at the support, designated as shear (line 9 page 12). Please elaborate this phenomenon.	The authors agree that the cracks show at the support. This phenomenon indicates shear failure that can be avoided by providing additional shear reinforcements near the support where the shear stress is maximum. This statement has been added at page 13 line 3.
Figures 5 need to be improved, and fonts are too small and difficult to read. What does "bottom [0]N" means (line 10 page 15)?	Thank you for reviewer's suggestion. Figure 5 have been replaced with better quality pictures. The explanation about fiber orientation has been stated in page 15 line 5.
The conclusions should be re-written by carefully contemplating the findings.  In conclusion, statement line 13 (page 17) is common knowledge and is outside the corridor of the title.	The authors quite agree with the reviewer's comment, the statement has been deleted from the conclusion.
The sentence "considering the slabs into the structure of beam elements" (line 18) is confusing; please reformulate Statement 4 (line 10).	The statement has been rewrite.
Additional layers always increase the load-carrying capacity; how do the additional layers affect the PC member compared to RC?	Thank you for reviewer's suggestion. However, since the title and purpose are focused in PC member for rectangular and T-beams so the authors will put this suggestion into next manuscript.
Statement 2 (line 2, page 18) is ambiguous and unclear.	The statement has been rewritten.

### 5. Second revision: Minor Revision Requested (7-5-2022)

# 9646889: Revision requested



Subject: Submission of a Revised Article for Evaluation

Reference: Paper entitled "Parametric Study on Nonlinear Finite Element Analysis of Prestressed Reinforced Concrete Beam Strengthened by Fiber-Reinforced Plastics" by Cindrawaty Lesmana, Hsuan-Teh Hu, Tsun-Chen Pan, and Zih-Shu Lin for Mathematical Problems in Engineering – Special Issue: Uncertainty in Computational Method for Application in Civil Engineering.

Dr. Alfrendo Satyanaga Lead Editor

May 11, 2022

#### Dear Dr. Satyanaga:

Thank you for the valuable insight from the reviewer. I am pleased to submit the following attached revised article entitled "Parametric Study on Nonlinear Finite Element Analysis of Prestressed Reinforced Concrete Beam Strengthened by Fiber-Reinforced Plastics" for publication consideration in the Mathematical Problems in Engineering – Special Issue: Uncertainty in Computational Method for Application in Civil Engineering.

We believe that this manuscript is appropriate for publication by this special issue because it presents the nonlinear finite element analysis for better understanding the design principles of structural analyses for strengthened prestressed concrete beams using Fiber Reinforced Polymer.

This manuscript has not been published and is not under consideration for publication elsewhere.

Correspondence concerning this paper should be addressed to my co-author:

Hsuan-Teh Hu Department of Civil Engineering National Cheng Kung University, Tainan, Taiwan 701, R.O.C. Tel: 886-6-2757575ext63168, Fax: 886-6-2358542

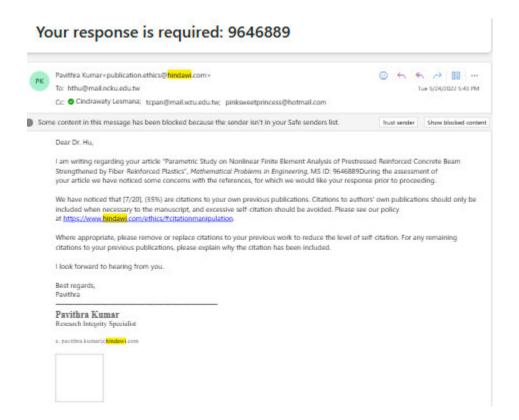
e-mail: hthu@mail.ncku.edu.tw

Thank you in advance. We are looking forward to hearing from you.

Sincerely yours,

Cindrawaty Lesmana
Department of Civil Engineering
Universitas Kristen Maranatha, Bandung, Indonesia
e-mail: cindra@eng.maranatha.edu

### 6. Your response is required: 9646889 (5-24-2022)



#### 7. Respond (26-5-2022)

## Re: Your response is required: 9646889







On Thu, 26 May at 8:42 AM , hthu <hthu@ncku.edu.tw> wrote: Dear Pavithra:

We have deleted some self-references as suggested in your email. However, we still keep 3 selfreferences since it is the assumption of the model and verification testing of the model against experimental data that not duplicated in this manuscript. Since I cannot find the slot on your website to submit the revised paper, I will send the revised filles to you (attached to this e-mail).

Please let me know if the paper is ok or not?

Regards,

Hsuan-Teh Hu

From:Pavithra Kumar < publication.ethics@hindawi.com>

Techthu<hthu@mail.ncku.edu.tw>

Cescindra «cindra@eng.maranatha.edu»,tcpan «tcpan@mail.wzu.edu.tw»,pinksweetprincess «pinksweetprincess@hotmail.c

Date: Tue, 24 May 2022 18:42:51

Subject: Re: Your response is required: 9646889

Dear Dr. Hu,

I am writing regarding your article "Parametric Study on Nonlinear Finite Element Analysis of Prestressed Reinforced Concrete Beam Strengthened by Fiber-Reinforced Plastics", Mathematical Problems in Engineering, MS ID: 9646889During the assessment of your article we have noticed some concerns with the references, for which we would like your response prior to proceeding.

We have noticed that [7/20], (35%) are citations to your own previous publications. Citations to authors' own publications should only be included when necessary to the manuscript, and excessive self-citation should be avoided. Please see our policy at https://www.hindawi.com/ethics/#citationmanipulation.

Where appropriate, please remove or replace citations to your previous work to reduce the level of self-citation. For any remaining citations to your previous publications, please explain why the citation has been included.

I look forward to hearing from you.

Best regards, Pavithra

#### Pavithra Kumar

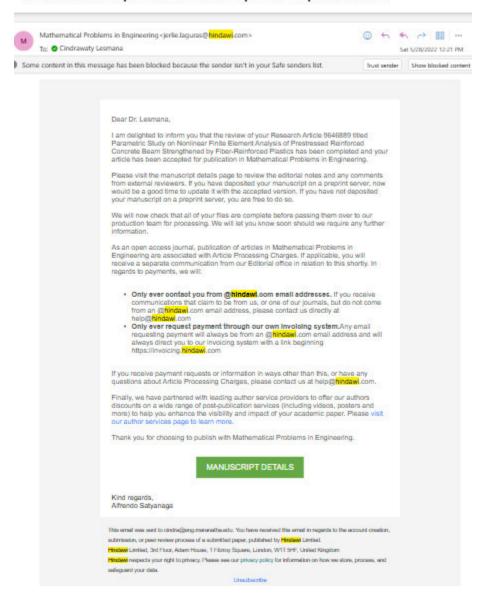
Research Integrity Specialist



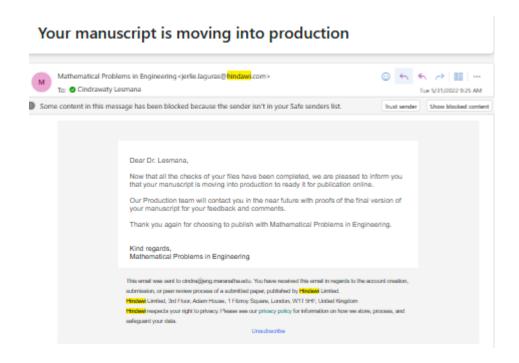


#### 8. Paper accepted for publication (28-5-2022)

## Your manuscript has been accepted for publication

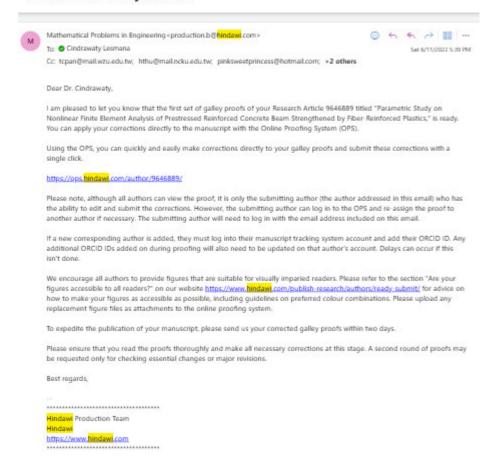


### 9. Manuscript is moving into production (31-5-2022)



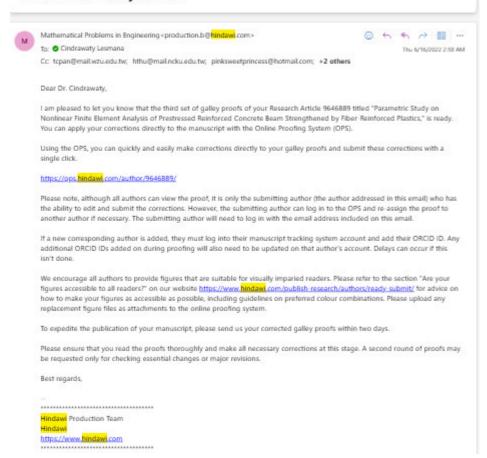
#### 10. Galley Proofs (11-6-2022)

## 9646889: Galley Proofs



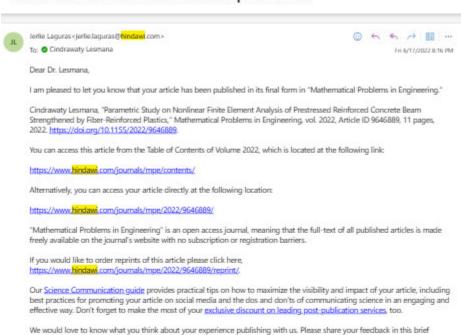
#### 11. Galley Proofs Replied (16-6-2022)

## 9646889: Galley Proofs



#### 12. Article has been published (17-6-2022)

## 9646889: Your article has been published



Survey Link

Thank you for publishing your article with Hindawi, and we hope that you continue to choose Mathematical Problems in Engineering as a home for your research.

Best regards,

Jerlie Laguras Mathematical Problems in Engineering

survey, which should take less than a minute to answer.

https://www.hindawi.com/