

Andang Sunarto <andang99@gmail.com>

[Symmetry] Manuscript ID: symmetry-1224888 - Submission Received

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 30 April 2021 22.06

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 Kepada: Andang Sunarto <andang99@gmail.com>

 Cc: Praveen Agarwal <goyal.praveen2011@gmail.com>, Jackel Vui Lung Chew <jackelchew93@ums.edu.my>, Jumat Sulaiman <jumat@ums.edu.my>

Dear Dr. Sunarto,

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Journal name: Symmetry Manuscript ID: symmetry-1224888 Type of manuscript: Article Title: Approximation Solution of Fractional Parabolic Partial Differential Equation by Half-Sweep and Preconditioned Relaxation Authors: Andang Sunarto *, Praveen Agarwal, Jackel Vui Lung Chew *, Jumat Sulaiman Received: 30 April 2021 E-mails: andang99@gmail.com, goyal.praveen2011@gmail.com, jackelchew93@ums.edu.my, jumat@ums.edu.my Submitted to section: Mathematics and Symmetry, https://www.mdpi.com/journal/symmetry/sections/mathematics_symmetry

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Kind regards,

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Andang Sunarto <andang99@gmail.com>

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Renee Chang <renee.chang@mdpi.com> Balas Ke: renee.chang@mdpi.com

2 Mei 2021 00.27

Kepada: Andang Sunarto <andang99@gmail.com>

Cc: Renee Chang <renee.chang@mdpi.com>, Praveen Agarwal <goyal.praveen2011@gmail.com>, Jackel Vui Lung Chew <jackelchew93@ums.edu.my>, Jumat Sulaiman <jumat@ums.edu.my>, Symmetry Editorial Office <symmetry@mdpi.com>

Dear Dr. Sunarto,

Your manuscript has been assigned to Renee Chang for further processing who will act as a point of contact for any questions related to your paper.

Journal: Symmetry Manuscript ID: symmetry-1224888 Title: Approximation Solution of Fractional Parabolic Partial Differential Equation by Half-Sweep and Preconditioned Relaxation Authors: Andang Sunarto *, Praveen Agarwal, Jackel Vui Lung Chew *, Jumat Sulaiman

Received: 30 April 2021 E-mails: andang99@gmail.com, goyal.praveen2011@gmail.com, jackelchew93@ums.edu.my, jumat@ums.edu.my

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Dear Dr. Sunarto,

Thank you again for your manuscript submission:

Manuscript ID: symmetry-1224888 Type of manuscript: Article Title: Approximation Solution of Fractional Parabolic Partial Differential Equation by Half-Sweep and Preconditioned Relaxation Authors: Andang Sunarto *, Praveen Agarwal, Jackel Vui Lung Chew *, Jumat Sulaiman Received: 30 April 2021 E-mails: andang99@gmail.com, goyal.praveen2011@gmail.com, jackelchew93@ums.edu.my, jumat@ums.edu.my Submitted to section: Mathematics and Symmetry, https://www.mdpi.com/journal/symmetry/sections/mathematics_symmetry

Your manuscript has now been reviewed by experts in the field. Please find your manuscript with the referee reports at this link:

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Manuscript ID: Symmetry-1224888

Manuscript Title: Approximation Solution of Fractional Parabolic Partial Differential Equation by Half-Sweep and Preconditioned Relaxation Journal: Symmetry

Respected Editor,

First with the great appreciation, the authors would like to pay their thanks to anonymous reviewer for their valuable comments. We are very thankful to the Associate Editor for his detailed comments and suggestions that we believe make our manuscript more valuable. Below are responses to comment.

Reviewers' comments and Reply

Reviewer 1#:

The aim of this paper is to study the general differential equation of the space-fractional diffusion equation using the Caputo fractional derivative. I have the following comments in this paper:

1- The introduction has been written very well with enough background.

Reply: Many thanks for your valuable comments.

2- Line 15, if 1<beta<2 then how it can be 2 in Line 14?

Reply: Many thanks. We revised as per suggestion. See Page 3 Line 21-22

3- About Algorithm 1, Why epsilon=10^{-10}? For example why it is not 10^{-2} or 10^{-100}? For large values of epsilon you will have only 1 or 2 iterations without finding the accurate results and for small values of epsilon you will have many iterations without improving the accuracy. How do you want to find this problem.

Reply: Many thanks for your valuable suggestion. We revise it. Please see Page 8 Line 1-6

4- Why did you apply the C++ codes for this method? What are the advantages of C++ than other applications such as Mathematica, Maple and other? I propose to present a part of code as appendix.

Reply: See Page 7 Line 22-25. Since the C++ code is under First Author's supervisor's copyright, it cannot be shared or published.

5- Please check your tables. By increasing M from 128 to 2048, the max error should be improved!! But you have same accuracy for m=128 to 2048. This a big fault of this method.

Reply: More discussions related to the tables are added according to comment Please see Page 9 Line 6-17

6- Please add more discussions related to the tables.

Reply: More discussions related to the tables are added according to comment Please see Page 9 Line 6-17

7- Please highlight all corrections.

I propose a major revision.

Reply: We highlighted all the revisions.

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Reviewers' comments and Reply

Reviewer 2#:

Due to results presented in Proceedings of the 5th NA International Conference on Industrial Engineering and Operations Management Detroit, Michigan, USA, August 10 - 14, 2020, the authors should clearly present, what are the new (!!!) results.

Especially in the abstract and conclusions, they should convince the readers that the results discussed in the manuscript are quite new.

Reply: Many thanks for your valuable suggestion. We clearly mention the importance and uniqueness of our results. Please see Page 1 Line 28-33, Page 10 Line 11-18



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∽Submissions Menu ∂	Abstra	ict In th para of th equa	In this research paper, numerical solution of a space-fractional parabolic partial differential equation is considered. The investigation of the solution is made by focusing on the space-fractional diffusion equation (SFDE) problem. The application of the one-dimensional			
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Dear Dr. Sunarto,

Congratulations on the acceptance of your manuscript, and thank you for your interest in submitting your work to Symmetry:

Manuscript ID: symmetry-1224888 Type of manuscript: Article Title: Approximation Solution of Fractional Parabolic Partial Differential Equation by Half-Sweep and Preconditioned Relaxation Authors: Andang Sunarto *, Praveen Agarwal, Jackel Vui Lung Chew *, Jumat Sulaiman Received: 30 April 2021 E-mails: andang99@gmail.com, goyal.praveen2011@gmail.com, jackelchew93@ums.edu.my, jumat@ums.edu.my Submitted to section: Mathematics and Symmetry, https://www.mdpi.com/journal/symmetry/sections/mathematics symmetry https://susy.mdpi.com/user/manuscripts/review info/d25b279abcc1cfbd31f516249c36802e

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