



VINAYAKA MISSIONS SIKKIM UNIVERSITY

(A state private University under Act 11 of 2008 of Govt of Sikkim)

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Phone: 03592-232417/232588

Half-Yearly Progress Report of Ph.D. Research Scholar

1. Name (in Capital Letters) : ANIL KUMAR TRIVEDI

2. Degrees for which, he/she has registered : PHD MATHS

3. Registration No. with date of registration : PHD/2018-19/0014

5. Name of the Supervisor : DR PRADEEP GOEL

6. Title of the research project : TO STUDY THE APPLICATION OF WAVELETS TO
VARIOUS MATHEMATICAL MODELS ARISING IN MATHEMATICAL
ENGINEERING

7. Period of Progress Report : apr2019-sep2019

8. Books/journals consulted :
If more space required, please attach a separate sheet

9. Experimental work done :

10. Field work done, if any :
If more space required, please attach a separate sheet

11. Percentage of research work completed : 60%
(As per your assessment)

12. Whether writing of thesis started? : yes

13. Whether presented any Seminar on your Research :
Work?
14. Courses, as required passed :
15. Any other matter you may like to report :

Date of submission:

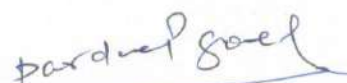


Signature of the Research Scholar

For Supervisor/s

Forwarded with comments

The chapters in the thesis that are based on review articles are meant to help current and future scholars update and improve their expertise so that their publications will contain more rich information. Our findings may prove helpful for a variety of applications, including the clinical diagnosis of degenerative synovial joints, the creation of artificial joints, the analysis of life-threatening diseases using wavelet-based methods in medical imaging, the study of blood flow turbulence, and optimization procedures.



Signature of the Supervisor

Signature of the HoD

Signature of the Chairman, DC



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3. Registration No. with date of registration : PHD/2018-19/0014
5. Name of the Supervisor : DR PRADEEP GOEL
6. Title of the research project : **TO STUDY THE APPLICATION OF WAVELETS TO VARIOUS MATHEMATICAL MODELS ARISING IN MATHEMATICAL ENGINEERING**
7. Period of Progress Report : OCT2019-APR2020
8. Books/journals consulted :
If more space required, please attach a separate sheet
9. Experimental work done :
10. Field work done, if any :
If more space required, please attach a separate sheet
11. Percentage of research work completed : 20%
(As per your assessment)
12. Whether writing of thesis started? : yes

13. Whether presented any Seminar on your Research :
Work?

14. Courses, as required passed :

15. Any other matter you may like to report :

Date of submission:

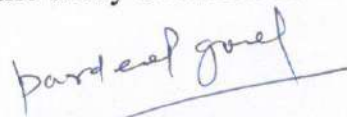


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6. Title of the research project : **TO STUDY THE APPLICATION OF
WAVELETS TO VARIOUS MATHEMATICAL MODELS ARISING IN
MATHEMATICAL ENGINEERING**
7. Period of Progress Report : JUNE 2020-OCT2020
8. Books/journals consulted :
If more space required, please attach a separate sheet
9. Experimental work done :
10. Field work done, if any :
If more space required, please attach a separate sheet
11. Percentage of research work completed : 80%
(As per your assessment)
12. Whether writing of thesis started? : YES
13. Whether presented any Seminar on your Research :
Work?
14. Courses, as required passed :
15. Any other matter you may like to report :

Date of submission:

Arvinder

Signature of the Research Scholar

For Supervisor/s

Forwarded with comments

The goal of the research is to show how wavelet analysis and wavelet-based approaches are superior to standard numerical methods in a variety of domains, including biomedical science, information technology, medical imaging, optimization theory, and more. According to a recent literature review, wavelet analysis has greatly benefited the selected fields.

Pardeep goel

Signature of the Supervisor

Signature of the HoD

Signature of Chairman



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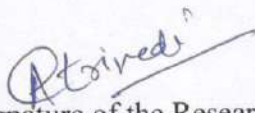
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MATHEMATICAL ENGINEERING**
7. Period of Progress Report : NOV2020-APR2021
8. Books/journals consulted :
If more space required, please attach a separate sheet
9. Experimental work done :
10. Field work done, if any :
If more space required, please attach a separate sheet
11. Percentage of research work completed : 100%
(As per your assessment)
12. Whether writing of thesis started? : YES
13. Whether presented any Seminar on your Research :
Work?
14. Courses, as required passed :
15. Any other matter you may like to report :

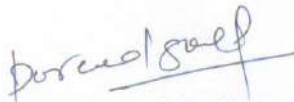
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In the following part of the thesis, and beginning with this chapter, the research work aims to emphasize scientific investigations leading to practical applications, highlighting the role played by wavelets specifically in fluid mechanics, optimization theory, biomedical engineering, and medical imaging as chosen fields. Wavelet analysis techniques have been successfully used to a variety of fields in recent decades, including but not limited to signal processing, picture compression, pattern recognition, medical imaging, and fluid dynamics.


Signature of the Supervisor

Signature of the HoD

Signature of Chairman