

# RENJITH THAZHATHETHIL

NBHM Post Doctoral fellow,  
Statistical and Mathematical Unit,  
Indian Statistical Institute, Bangalore - 560059.

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## Education

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- **PhD** in Mathematics from Indian Institute of Science, Bangalore (2018 - 2023).  
Research Supervisor : Prof. A K Nandakumaran.  
Area of Research : Partial Differential Equations, Homogenization, Optimal Control Problems.  
Title of PhD Thesis : Homogenization of partial differential equations on oscillating boundary domains with  $L^1$  data and optimal control problems.
- **MSc** Mathematics from NSS College, Ottapalam (2015-2017).
- **BSc** Mathematics from NSS College, Ottapalam (2012-2015).

## Publications

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- A K Nandakumaran, Abu Sufian, Renjith T, *Homogenization of elliptic PDE with  $L^1$  source term in domains with boundary having very general oscillations, Asymptotic Analysis.(2022)(DOI: 10.3233/ASY-221808).*
- A K Nandakumaran, Abu Sufian, Renjith T, *Homogenization with strong contrasting diffusivity in a circular oscillating domain with  $L^1$  source term, Ann. Mat. Pura Appl.(2022)(DOI: 10.1007/s10231-022-01259-x).*
- A K Nandakumaran, Abu Sufian, Renjith T, *Homogenization of semi-linear optimal control problems on oscillating domains with matrix coefficients. Applied Mathematics and Optimization (2024)(DOI:10.1007/s00245-024-10113-w).*
- A K Nandakumaran, Abu Sufian, Renjith T, *Semi-linear optimal control problems with strong contrasting diffusivity in rough domains. Ann. Mat. Pura Appl.(2025)(Accepted for publication).*

## Awards/Achievements

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- CSIR JRF Rank 61, December 2017
- NBHM PhD Fellowship, 2018
- Professor Venkatachala Iyengar Scholarship, 2022  
– Awarded by Department of Mathematics, IISc Bangalore.
- NBHM Post Doctoral Fellowship, June 2023

## Research Experiences

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- Research associate,  
Department of Mathematics, IISc Bangalore,  
From 01.02.2023 to 06.12.2023.
- NBHM Post Doctorate Fellow  
Statistical and Mathematics Unit, ISI Bangalore,  
From 12.12.2023.

## Teaching Experiences

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- **Instructor**
  - Partial Differential Equations (M-Math Course at ISI Bangalore )
- **Teaching Assistant (TA)**
  - **IISc Courses**
    - \* Analysis and Linear Algebra (UG Course)
    - \* Ordinary Differential Equations (Int PhD Course)
    - \* Partial Differential Equations (Int PhD Course)
  - **NPTEL Online Courses**
    - \* Measure and Integration(Twice)
    - \* First Course on Partial Differential Equations (Part 1 and 2)(Twice)
    - \* Advanced Partial Differential Equations (Part 1 and 2)(Twice)
- **Temporary Tutor**
  - Algebra II (MSc Course at Zamorin Guruvayoorappan College, Kozhikkode)

## Conferences/Workshops Attended

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- Multiscale Analysis and Theory of Homogenization, ICTS Bangalore, 26-08-2019 to 06-09-2019.
- International Conference on Dynamical Systems, Control and their Applications, IIT Roorkee, 01-07-2022 to 03-07-2022.
- Control Theory meets Theory of Homogenization, IIT Bombay, 28-02-2023 to 04-03-2023.
- International conference on differential equations and control problems, IIT Mandi, 15-07-2023 to 17-07-2022.
- International Conference on Industrial and Applied Mathematics (ICIAM) - 2023, Waseda University, Tokyo, 20-08-2023 to 25-08-2023.
- Workshop on Multiscale Analysis cum Conference on Differential Equations,IIT Ropar, 26-02-2024 to 02-02-2024.
- Discussion meeting on quatitative theory on homogenization, IIT Bombay, 17-02-2025 to 22-05-2025

## References

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1. Prof. A K Nandakumaran  
Professor, Department of Mathematics,  
Indian Institute of Science, Bangalore,  
Email: nands@iisc.ac.in  
(\*PhD Supervisor)
2. Prof. E K Narayanan  
Professor, Department of Mathematics,  
Indian Institute of Science, Bangalore,  
Email: naru@iisc.ac.in  
(\*I served him as TA for the course “Measure theory” twice)
3. Dr. Bidhan Chandra Sardar  
Assistant Professor, Department of Mathematics,  
Indian Institute of Technology, Madras,  
Email: bidhan.math@iitm.ac.in  
(\*Research Collaborator.)