

# RENJITH THAZHATHETHIL

NBHM Post Doctoral fellow,  
Statistical and Mathematical Unit,  
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## Education

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- **PhD** in Mathematics from Indian Institute of Science, Bangalore (2018 - 2023).
  - Thesis Title: Homogenization of partial differential equations on oscillating boundary domains with  $L^1$  data and optimal control problems.
  - Area of Research: Partial Differential Equations, Homogenization, Optimal Control Problems.
  - Research Supervisor: Prof. A. K. Nandakumaran.
- **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)**.
- 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)**.
- 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)**.
- A K Nandakumaran, Abu Sufian, Renjith T, *Semi-linear optimal control problems with strong contrasting diffusivity in rough domains*. **Ann. Mat. Pura Appl.(2025)**.

## 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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- Worked as a research associate in the Department of Mathematics, IISc Bangalore from 01.02.2023 to 06.12.2023.
- Working as NBHM Post Doctorate in the 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
  - First Course on Partial Differential Equations (Part 1 and 2)
  - Advanced Partial Differential Equations (Part 1 and 2)
- **Workshops**
  - PDE and Applications (NCM Workshop)

## Conferences/Workshops Attended

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- Multiscale Analysis and Theory of Homogenization, ICTS Bangalore, 26-08-2019 to 06-09-2019.
- Multiscale Analysis: Thematic Lectures and Meeting(Online), ICTS Bangalore, 15-02-2021 to 19-02-2021.
- 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 quantitative theory on homogenization, IIT Bombay, 17-02-2025 to 22-05-2025