

# CURRICULUM VITAE

## Dr. Haseena A

Assistant Professor  
Department of Mathematics  
Government College Chittur  
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## Educational Qualifications

<i>PhD</i>	Dept of Mathematics, Bharathiar University, Coimbatore, India, 2019 <i>Thesis:</i> Studies on Large Deviation Principles of Nonlinear Stochastic Differential equations
<i>MPhil</i>	Madurai Kamaraj University, Madurai, India, 2005, 62%
<i>MSc</i>	Govt. Victoria College, Palakkad, India, 2003, III Rank(University Level)
<i>BSc</i>	Mercy College, Palakkad, India, 2001, 95.3 %
<i>Pre-degree</i>	Mercy College, Palakkad, India, 1998, 77 %
<i>SSLC</i>	Kanikkamatha Convent English Medium Girls Higher Secondary School, Palakkad, India, 1996, 87%

## Achievements

- Second prize for delivering a talk on “ Large Deviations for Two-Dimensional Stochastic Tidal Dynamics Equations driven by Lévy Noise” in the online Symposium on Differential Equations: Analysis, Computation and Applications organized by the Department of Mathematics, IIT Roorkee on December 2-3, 2021.
- Worked as GATE (Graduate Aptitude Test in Engineering) Fellow, School of Mathematics, Indian Institute of Science Education and Research, Thiruvananthapuram (IISER-TVM), Kerala, India from 3<sup>rd</sup> August 2012 to 4<sup>th</sup> February 2013
- Qualified GATE with All India Rank 97, 2012
- Secured Rank 39/237 in National Eligibility Test (NET) for Lectureship, 2009

- Secured Third Rank in MSc (Mathematics) from University of Calicut, Kerala, India
- Secured Second Position in BSc (Mathematics) at College Level

## **Present Position**

*Assistant Professor* Department of Mathematics, Govt. College Chittur, Palakkad, India (February 2014-)

## **Academic Positions Held**

*Assistant Professor* Department of Mathematics, Govt. Engineering College, Sreekrishnapuram, Palakkad, India (February 2013-February 2014)

*Guest Faculty* In various Aided Colleges, Palakkad, India from 2004 to 2012

## **Research Interests**

- Large Deviations Theory
- Stochastic Partial Differential Equations
- Mathematical Fluid Dynamics
- Mathematical Biology

## **Current Research**

- Stochastic Epidemic Models
- The Exit Problem using Large Deviations
- Stability Analysis of Deterministic and Stochastic epidemic models

## **Professional Affiliations**

- Life Member - Indian Society for Industrial and Applied Mathematics
- Registered as “Women in Science in Kerala” under Women Scientists Division (WSD), Kerala State Council for Science, Technology & Environment (KSCSTE)

## List of Publications

- A. Haseena, M. Suvinthra, Manil. T. Mohan and K. Balachandran, Moderate deviations for stochastic tidal dynamics equations with multiplicative Gaussian noise, *Applicable Analysis*, **101**(4) (2022), 1456-1490.
- A. Haseena, M. Suvinthra and N. Annapoorani, Large deviations for stochastic integrodifferential equations of the Itô type with multiple randomness, *Filomat*, **32**(2) (2018), 473-487.
- A. Haseena, M. Suvinthra and N. Annapoorani, On large deviations of stochastic integrodifferential equations with Brownian motion, *Discontinuity, Nonlinearity, and Complexity*, **6**(3) (2017), 281-294.

## Manuscripts under Review

- A. Haseena, M. Suvinthra, K. Balachandran and N. Annapoorani, Large deviation principle for stochastic differential equations with locally monotone coefficients, *Filomat* (submitted and processing awaited).
- A. Haseena, M. Suvinthra, K. Balachandran and N. Annapoorani, Large deviation principle for stochastic SIRI-PDE epidemic model with multiplicative Lévy noise, *Communications on Stochastic Analysis* (submitted and processing awaited).

## Manuscripts near Completion:

- A. Haseena and Manil. T. Mohan, Large deviations for two-dimensional stochastic tidal dynamics equations driven by Lévy Noise.
- A. Haseena, C. S. Sreedevi and M. Suvinthra, Dynamics of a reaction-diffusion system for SIRI epidemic model with a hostile boundary.

## Invited Talks

- 2022 • Handled a technical session on “Research Trends in Abstract Algebra and its Applications” as resource person in one day seminar organised by Department of Mathematics, Mercy College, Palakkad, India, August 16
- 2019 • Handled a technical session on “Difference and Differential Equations: Applications in Economics ” for postgraduate students of Economics, Government College Chittur, Palakkad, India, October 11

- 2017 • Handled a technical session on “Large Deviations and Applications” as Resource person in National Conference on Stochastic Differential Equations and its Applications, Dr. N. G. P College of Arts and Science College (Autonomous)”, Coimbatore, India, December 27

## List of Presentations

- 2023 • “ Large Deviations for Two-Dimensional Stochastic Tidal Dynamics Equations driven by Lévy Noise” in the 10th International Congress on Industrial and Applied Mathematics, held in Waseda University, Tokyo, Japan, August 20 – 25.
- 2021 • “ Large Deviations for Two-Dimensional Stochastic Tidal Dynamics Equations driven by Lévy Noise” in the online Symposium on Differential Equations: Analysis, Computation and Applications organized by the Department of Mathematics, IIT Roorkee on December 2-3
- 2019 • “Well Posedness and Large Deviations of a Stochastic SIRI Epidemic Model with Locally Lipschitz Coefficients”, International Conference of Industrial and Applied Mathematics (IC-ISIAM 2019), Bharathiar University and Anna University Regional Campus, Coimbatore, India, December 5-7
- 2019 • “Large Deviations for SIRI Epidemic Model Driven by Multiplicative Lévy Noise”, National Conference on Control and Inverse Problems, Dept of Mathematics, Central University of Tamil Nadu, Thiruvavur, India, March 1-2
- 2017 • “Large Deviations for a General Nonlinear Stochastic Integrodifferential Equation of the Itô type, International Conference on Differential Equations and Applications, Dept of Mathematics, Bharathiar University Coimbatore, India, March 15-16

## Semiars/Workshops Co-ordinated

- 2022 • Co-ordinated a webinar on “Civil Service Orientation Programme”, Career Guidance and Placement Cell , Government College Chittur, Palakkad, India, February 20.
- 2021 • Co-ordinated a one day workshop on “ Career Opportunities and Entrepreneurship”, Career Guidance and Placement Cell , Government College Chittur, Palakkad, India, January 12-14

- 2017 • Co-ordinated the three day seminar on Linear Algebra, Dept of Mathematics, Government College Chittur, Palakkad, India, January 12-14
- 2013 • Co-ordinated the three day national workshop on “Linear Algebra and Applications”, Dept of Mathematics, Govt. Engineering College, Sreekrishnapuram, Palakkad, India, October 31- November 2

## Conferences Participated

- 2023 • The 10th International Congress on Industrial and Applied Mathematics (ICIAM 2023), Waseda University, Tokyo, Japan, August 20-25.
- 2020 • National Conference on Partial Differential Equations and Applications, Dept of Mathematics, Periyar University, Salem, March 5-6
- 2019 • International Conference of Industrial and Applied Mathematics (IC-ISIAM 2019), Bharathiar University and Anna University Regional Campus, Coimbatore, India, December 5-7
  - National Conference on Stochastic Differential Equations and Applications, Dept of Mathematics, IIST Trivandrum, June 6-7
  - National Conference on Control and Inverse Problems (CIP 2019), Dept of Mathematics, Central University of Tamil Nadu, Thiruvarur, March 1-2
- 2016 • International Conference on Nonlinear Dynamical Systems, Dept of Mathematics, Bharathiar University, Coimbatore, India, March 24-26
- 2015 • National Conference on Recent Trends in Theory and Applications of Partial Differential Equations, Dept of Mathematics, Bharathiar University, Coimbatore, India, March 26-27
- 2012 • Winter School on Stochastic Analysis and Control of Fluid Flow, IISER-Thiruvananthapuram, India, December 3-20

## Workshops Participated

- 2020 • Workshop on Applications of Differential Equations, Dept of Applied Mathematics, Bharathiar University, Coimbatore, February 12-14
- 2017 • Lecture Series on Stochastic Differential Equations in Biological Models, DRDO-BU Center for Life Sciences, Bharathiar University Campus, Coimbatore, June 21-25
- 2014 • Three day National workshop on “Green Chemistry”, Govt. Engineering College, Sreekrishnapuram, Palakkad, India, January 15-17

- 2013 • Research Methodology & Intellectual Property Rights, CERD Satellite Center, Govt. Engineering College, Sreekrishnapuram, Palakkad, November 21-23
- IISc Mathematics Initiative Workshop on Differential Equations, Dept of Mathematics, Govt. College Chittur, Palakkad, India, May 15-21

## **Seminars Participated**

- 2020 • National Seminar on Graph Theory and its Applications, Dept of Mathematics, Govt. College Chittur, Palakkad, January 3-4
- 2018 • National Seminar on Measure Theory, Dept of Mathematics, Govt. College Chittur, Palakkad, December 3-4
- 2017 • Two Day National Seminar on “Operators and Matrices”, Dept of Mathematics, Govt. Victoria College, Palakkad, November 2-3
- National Seminar on Calculus of Variations, Dept of Mathematics, Govt. College Chittur, Palakkad, December 8-9
- 2015 • Two Day National Seminar on “Cryptography, Number Theory & Algebra”, Dept of Mathematics, Mercy College Palakkad, July 22-23
- “Large Deviations for SIRI Epidemic Model Driven by Multiplicative Lévy Noise”, National Conference on Control and Inverse Problems (CIP 2019), Dept of Mathematics, Central University of Tamil Nadu, Thiruvavur, March 1-2

## **Webinars Participated**

- 2022 • “An Introduction to the Distribution Theory”, Department of Mathematics, St Berchmans College, Changanassery, August 13
- “Localization and its Applications”, Department of Mathematics, St Berchmans College, Changanassery, June 11
- 2021 • Symposium on Differential Equations: Analysis, Computation and Applications, Dept of Mathematics, IIT Roorkee, Roorkee, December 2-3
- International Webinar on “An Introduction to Mathematical Optimal Control Theory”, Sree Narayana College for Women, Kollam, May 24
- 2020 • “Preparing for Online Teaching”, Sacred Heart College, Kochi, May 21
- Two Day International Webinar on “Interesting Research Directions and the Process of Obtaining Fellowships”, Dept of Mathematics, Dr. R. V. Arts and Science College, Karamadai, June 23-44
- “Optimal Control of Partial Differential Equations and Applications”, IIIT Kottayam, July 3
- “Modelling the Invisible Mathematics”, Dept of Mathematics, St. Aloysius College, Edathua, Alappuzha, July 25
- “Introduction to Mathematical Modeling”, Dept of Mathematics, Mar Ivanios College (Autonomous), Thiruvananthapuram, August 6
- “Basics of Infectious Disease Modeling”, Dept of Mathematics, Mar Ivanios College (Autonomous), Thiruvananthapuram, August 7
- “International Webinar on Dynamical Systems and its Applications (IWDSA-2020)”, Department of Applied Mathematics, Bharathiar University, Coimbatore, August 17-21
- “Promotion under CAS-UGC Guidelines”, Carmel College, Mala, September 19

## **Trainings Attended**

- 2022 • Refresher Course (online mode) in Mathematics organised by UGC HRDC, University of Hyderabad, Hyderabad, India, Sept 12-24
- One week Faculty Development Programme (online) on ”Academic Writing for Research” organised by TLC, New Delhi, March 21-27
- 2021 • Workshop on Leadership Development Programme organised (online mode) by UGC HRDC, Bharathiar University, Coimbatore, India, March 9-15

- 2020 Short-Term Course on Yoga for Mental Health organised (online mode) by UGC HRDC, Doctor Harisingh Gour Vishwavidyalaya, Sagar, India, July 5-25
- 2017 Refresher Course in Applied Mathematics and Statistics organised by UGC HRDC, Bharathiar University Coimbatore, India, July 5-25
- 2014 Orientation programme organised by UGC –Academic Staff College, Bharathiar University Coimbatore, India, September 3-30

## Student Research Projects

- 2020* Title: “Analysis of Groundwater Discharge, Contaminant Transport and Salt Intrusion in Coastal Aquifers using PDEs”  
Funding Agency: KSCSTE  
Student Investigators: Likhitha M, Saudabi A and Reshma R  
Status: Completed
- 2020* Title: “Marital Interactions and Divorce Prediction using Nonlinear Difference equations: A Cross Sectional Analysis”  
Funding Agency: KSCSTE  
Student Investigators: Krishna Priya U, Aiswarya K & Athira Mohan  
Status: Completed
- 2019* Title: “Large Deviations: Origin, Significance and Applications to Epidemiology”  
Funding Agency: KSCSTE  
Student Investigators: Anitta Mariya Devasya, Anjali P, Akilandeswari and Javina S J  
Status: Completed

## Student Related Extension Activities

- Member*                                   •Remedial Coaching Cell (June 2022-)  
  •Red Ribbon Club (June 2022-)
- Convenor*                                Career Guidance and Placement Cell (November 2021-June 2022)
- Coordinator*                           Spoken Tutorial, an initiative of National Mission on Education through ICT, MHRD, Govt. of India in collaboration with IIT Bombay, 2015, 2016.
- Resource person*                      Scholar Support Programme, a Kerala Government Initiative to provide remedial coaching for undergraduate students, 2014, 2020



## Personal Details

*Date of Birth* : 11.05.1981  
*Nationality* : Indian  
*Marital Status* : Single  
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## References

- Dr. K. Balachandran  
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- Dr. Manil T. Mohan  
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