

# Dr. Regan. M

No.128, Saliyamangalam Road,  
Papanasam, Thanjavur Dist  
Pincode - 614205, TamilNadu

+91 9952686867

+91 7904516122

mreganprof@gmail.com



## Experience

- June 2011 - present **Assistant Professor**, Department of Mathematics, Vel Tech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology (Deemed to be University), Chennai, TamilNadu
- June 2010 - April 2011 **UG Assistant**, Christ the King Matriculation Hr. Sec. School, Kumbakonam, TamilNadu

## Education

- 2014 - 2020 **Ph.D. in Mathematics**, Vel Tech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology,, Chennai, Tamil Nadu  
**Thesis Title:** Entanglement and Immutability Analysis of HIV Affected Population Analysis - A Study by Mathematical Modeling.
- 2009 - 2010 **M.Phil. in Mathematics**, Bharathidasan University, Tiruchirappalli, First Class - Exemplary with S Grade
- 2007 - 2009 **M.Sc. in Mathematics**, Bharathidasan University, Tiruchirappalli, First Class - Distinction with D Grade
- 2006 - 2007 **B.Ed. in Mathematics**, University of Madras, Chennai, First Class
- 2006 - 2009 **B.Sc. in Mathematics**, Bharathidasan University, Tiruchirappalli, First Class

## Certificate Course

1. Completed NPTEL online course "**Essentials of Data Science With R Software - 2: Sampling Theory and Linear Regression Analysis**" during January 2022 - April 2022.
2. Completed NPTEL online course "**Descriptive Statistics with R Software**" during August 2021 - October 2021.
3. Completed NPTEL online course "**Dynamical Systems and Control** " during January 2019 - April 2019.
4. Completed Coursera online course "**R Programming**" during March - May 2020.
5. Completed Mathworks online course "**MATLAB Fundamentals**" during the year 2020.
6. Completed Mathworks online course "**Introduction to Symbolic Math with MATLAB**" during the year 2020.

7. Completed Mathworks online course "**Solving Ordinary Differential Equations with MATLAB**" on 2020.
8. Completed Mathworks online course "**Machine Learning Onramp**" during the year 2020.

## Membership

Scopus Author ID: 56085709200

Orchid ID: 0000-0002-0698-4763

## Publications

- Published
1. Rasappan, S., Murugesan, R., "Analysis of Observability and Stability of HIV Epidemiology in a Migrant Heterosexual Population", *Advances in Intelligent Systems and Computing*, 2021, 1292, pp. 323–331, "**Scopus Indexed**".
  2. Rasappan, S., Murugesan, R., "Computation of Threshold Rate for the Spread of HIV in a Mobile Heterosexual Population and its Implication for SIR Model", *Soft Computing Applications and Techniques in Healthcare, CRC press*, "**Talor and Francis**".
  3. Murugesan, R., Rasappan, S., Kumaravel, "S.K.Stability analysis of diffusive predator - Prey model involving intra-specific coefficients with noise", *AIP Conference Proceedings*, 2019, 2112, 020016 2019, "**Scopus Indexed**".
  4. Murugesan, R., Rasappan, S., Rajan, P., Kumaravel, "S.K.Synchronization of Liu-Su-Liu and Liu-chen-Liu chaotic systems by nonlinear feedback control", *Journal of Computational and Theoretical Nanoscience*, 2019, 16(12), pp. 4903–4907, "**Scopus Indexed**".
  5. Murugesan, R., Rasappan, S., "State Estimation of a Stochastic Model for the Spread of HIV in a Mobile Heterosexual Population", *Indian Journal of Public Health Research and Development*, 2019, 10(6), pp. 1444–1454, "**Scopus Indexed**".
  6. Rasappan, S., Murugesan, R., "Randomness, Boundedness and Stability Analysis of HIV Spread in a Mobile Heterosexual Population", *Indian Journal of Public Health Research and Development*, 2019, 10(6), pp. 1563–1573, "**Scopus Indexed**".
  7. Rasappan, S., Murugesan, R., Jothi, N.K., Kumaravel, S.K. "An observer based chaos synchronization of time delay takagi-sugeno fuzzy stochastic system", *Far East Journal of Mathematical Sciences*, 2017, 101(10), pp. 2195–2217, "**Scopus Indexed**".
  8. Mohan Rao, V.L.G., Rasappan, S., Murugesan, R., Srinivasan, "V. S. A prey predator model with vulnerable infected prey consisting of non- linear feedback control", *Applied Mathematical Sciences*, 2015, 9(42), pp. 2091–2102, "**Scopus Indexed**".
  9. Murugesan, R., Rasappan, S., Kumaravel, S.K., Nagaram, N.B., "Analysis of Student's Feedback about Online Class using Fuzzy Matrix Theory", *Advances in Intelligent Systems and Computing - Proceedings of ICMMCS 2022*, "**Springer Nature**".

10. Nagaram, N.B., Rasappan, S., Murugesan, R., Raja Mohan. K., "Hybrid Phase Synchronization for Generalized Stretch, Twist, Fold Flow Chaotic System of Fractional Order", *Advances in Intelligent Systems and Computing - Proceedings of ICMMCS 2022*, **"Springer Nature"**.
  11. Kumaravel, S.K., Rasappan, S., Murugesan, R., Raja Mohan. K., "Opinion of Faculty about the Effectiveness of Online Class during COVID Pandemic" *Advances in Intelligent Systems and Computing - Proceedings of ICMMCS 2022*, **"Springer Nature"**.
  12. Raja Mohan. K., Rasappan, S., Murugesan, R., Kumaravel, S.K., "Secret Information Sharing using Probability and Bilinear Transformation" *Advances in Intelligent Systems and Computing - Proceedings of ICMMCS 2022*, **"Springer Nature"**.
- Accepted
1. Murugesan, R., Rasappan, "Analysis for the Impact of HIV Transmission Dynamics in Heterosexuality and Homosexuality," *Nonlinear Dynamics and Applications: Proceedings of the ICNDA 2022*, **"Scopus Indexed"**.
  2. Murugesan, R., Rasappan, "Factor Analysis for Spread of HIV in a Mobile Heterosexual Population", *AIP Conference Proceedings*, **"Scopus Indexed"**.
  3. Kumaravel, S.K., Rasappan, S., Murugesan R., "Stabilization of the Generalized Lotka-Volterra Three Species System with Backstepping Control", *AIP Conference Proceedings*, **"Scopus Indexed"**.

Under Review

1. Rasappan, S., Murugesan, R., Kumaravel, S.K., "State Estimation of T and Chen Chaotic Dynamics using Sliding Mode Control" *International Journal of Non-Linear Analysis an Applications*, **" Accepted with Minor Revision"**.
2. Murugesan, R., Rasappan, S., Kumaravel, S.K., "Analysis of Growth rate of Feminine Mosquito Through Difference Equation" *Ural Mathematical Journal*, **" Accepted with Minor Revision"**.

## Conference Presentation

1. R. Suresh, M. Regan and N. Nagadevi Bala, "Analysis for the Impact of HIV Transmission Dynamics in Heterosexuality and Homosexuality," International Conference on Nonlinear Dynamics and Applications on from 9th to 11th March 2022.
2. M. Regan, R. Suresh, K. Sathish Kumar , "Analysis of Student's Feedback about Online Class using Fuzzy matrix Theory", International Conference on Mathematical Modeling and Computational Science (ICMMCS-2021 ) to be held online on 28th and 29th October 2021 organized by Lincoln University College, Malaysia.
3. M. Regan, and R. Suresh "Factor Analysis for Spread of HIV in a Mobile Heterosexual Population," 2nd International Conference on Mathematical Techniques and Applications (ICMTA-21), SRM University, Chennai, March 24- 26, 2021.

4. M. Regan, and R. Suresh "Stability Analysis Of Diffusive Predator – Prey Model Involving Intra-Specific Coefficients With The Concept Of Difference Equation", International Conference on Bridging Innovative Trends in Mathematics, Engineering and Technology (ICBITMET-21), Bannari Amman Institute of Technology, Erode, December 18-19, 2021.
5. R. Suresh and M. Regan, "Analysis of Observability and Stability of HIV Epidemiology in a Migrant Heterosexual Population", International Conference on Mathematical Modeling and Computational Science (ICMMCS-2020 ) to be held online on 14th and 15th August 2020 organized by Lincoln University College, Malaysia.
6. R. Suresh, M. Regan and K. Sathish Kumar, "Synchronization of T and Chen chaotic system using sliding mode control", International Conference on New Trends in Mathematical Modelling With Applications-2019 (ICNTMMA-19) on July 29-30, 2019 organized by SVM Arts and Science College, Katteri, Uthangarai, Tamilnadu, India.
7. M. Regan, R. Suresh and K. Sathish Kumar, "Stability Analysis of Diffusive Predator - Prey Model Involving Intra-Specific Coefficients with Noise," 11th National Conference on Mathematical Techniques and Applications (NCMTA-19), SRM University, Chennai, January 11-12, 2019.
8. R. Suresh and M. Regan, "Bifurcation analysis for the spread of HIV in mobile heterosexual population ," National Conference on Future Perspective for Basic Sciences (NCFPBS-19), Vinayaka Mission's Research Foundation, Chennai, March 1-2, 2019.
9. M. Regan, R. Suresh and K. Sathish Kumar, "Stability Analysis of Diffusive Predator – Prey Model Involving Intra-Specific Coefficients with Nonlinear Feedback", International Conference EECCMC on 26th and 28th and 29th January 2018 organized by Priyadarshini Engineering College, Vellore.
10. K. Sathish Kumar, M. Regan and R. Suresh, "Stochastic synchronization of chaotic recurrent neural networks with time varying delays using adaptive feedback control," Third National Conference on emerging Trends in Mathematical Sciences (NCETMS 2018), S. A. Engineering College, Chennai, December 20, 2018.

## **Webinar Attended**

1. Participated in five days National level e-Workshop on "Innovative Techniques in SPSS and Data Analysis" at Sathyabama Institute of Science and Technology, Chennai, during January 03-07, 2022.
2. Participated in DBT-STAR college scheme sponsored Faculty Development Programme on "R Studio - A Tool for Projects on Bio-Statistics" held on 30th March 2022 organised by Sri Sarada Colleg for Women, Salem
3. Participated in online FDP on "Future trends in Artificial Neural Networks" held from 31st December 2021 to 8th January 2022, organised by Rajalakshmi Institute of Technology, Chennai

4. Participated Online FDP titled "Introduction to Artificial Neural Networks" on 8th Feb 2022, conducted by Department of Electrical and Electronics Engineering, Christ The King Engineering College, Coimbatore.
5. Participated Online FDP titled "Graph Theory" on 21st Dec. 2021 to 23rd Dec. 2021, Organized by Department of Mathematics, Vellalar College for Women, Erode
6. Participated in online FDP on "Hands on exposure in latex and Scilab" held on 30th April to 4th May 2020 organised by Department of Mathematics, D.K.M. College for Women, Vellore, Tamil Nadu in association with Spoken Tutorial Project, IIT Bombay, MHRD, Govt. of India
7. Participated in the National Webinar Series III on "Application of Fuzzy Models in The Analysis of COVID'19" held on 20th December 2021.conducted by Dwaraka Doss Govardhan Doss Vaishnav College, Chennai
8. Participated in the National Webinar "MATLAB and its Applications" organized by Department of Mathematics, SCSVMV University, Kanchipuram, Tamil Nadu held on 05th July, 2020
9. Participated in International Virtual Conference on "Mathematical Modelling and Numerical Solution of Air Pollution Problems"(ICMMN2021) organized by Department of Mathematics , Government Arts and Science College, Hosur-635 110 , Tamil Nadu , India on 23 August 2021.
10. Participated in the National Webinar on "Mathematical Approaches in Science and Engineering" organized by Department of Mathematics, Lords Institute of Engineering and Technology on 22nd May 2021

## **Workshops Attended**

1. Participated in Workshop on "Active Learning Methods" for the course on Engineering Mathematics I, held at Vel Tech, Avadi, Chennai, 11th June 2018.
2. Participated in Workshop on "National Level Workshop on LaTeX", held at K. S. Rangasamy College of Arts and Science, Trichengode. September 2018.
3. Participated in Workshop on "Hands on training on MATLAB", held at Hindu college, Avadi, Chennai, 29th Nov. 2018.
4. Participated in Workshop on "Hands on training on MATLAB", held at K. S. Rangasamy College of Arts and Science, Trichengode, 29th and 30th Nov. 2019.
5. Participated in Workshop on "Application of Mathematics in Engineering, held at Vel Tech, Avadi, Chennai, 7th April 2018.
6. Participated in National Seminar on "Recent Trends in Mathematical Sciences and Applications, held at Valliammai Engineering College, Chennai, 15th Dec. 2018.
7. Participated in "Teacher's Enrichment Workshops for Mathematics Teachers of Engineering Colleges, held at The Institute of Mathematical Sciences, Chennai, 21st to 26th Nov. 2016.
8. Participated in the Online National Workshop on "Basics of Documentation using Latex" held on 24th, 25th, 29th and 30th April 2020 organized by the Department of Mathematics, Stella Maris College(Autonomous), Chennai

## Extracurricular Activities:

1. N.C.C. 'B' and 'C' certificates holder.
2. Participated in Computer cum internet literacy program

## Computer Skills

Programming Skills MATLAB SCILAB, R- PROGRAMMING, C-PROGRAMMING,

Type setting L<sup>A</sup>T<sub>E</sub>X, MS OFFICE, POWER POINT

## Key Skills and Competencies:

- Expertise in applying outcome based education in teaching methodologies.
- Designing and framing curriculum and syllabus as per the student requirements.
- Mentoring and counseling students and faculties to promote better academic records.
- Good team member and Hard Worker.
- Honest, Sincere with a high level of Integrity.
- My research degree gives support to encourage the students with their Math related projects.
- Helping students address any academic gaps and their needs.
- Providing students with an understanding of how to solve the problems by working through them step by step.
- Maintaining appropriate students results attainment.
- Monitoring student's performance and taking meaningful action to improve.
- Promoting the learning of Mathematics through out of hour activities.
- Reviewing the class material with students and discussing the difficult topics.
- Marking and grading the work of pupils and giving suitable feedback on it.

## Languages

Mothertongue Tamil

- *Read, Write, Speak*

Intermediate English

- *Read, Write, Speak*

## Personnel Details

Nationality Indian

Religion Hindu

Sex Male

Civil Status Married

Date of Birth 13-06-1986

Father K. Murugesan

Mother M. Kalairani

## References

- 1 **Dr. A.M.S. Ramasamy**, Professor(Retd.), Department of Mathematics, Ramanujan School of Mathematical Sciences, Pondicherry University, Puducherry  
Email: amsramasamy@gmail.com, Mobile: 94422 45607
- 2 **Dr. R. Suresh**, Professor, Department of Mathematics, University of Technology and Applied Sciences Ibri, Sultanate of Oman.  
Email: suresh.rasappan@ibrict.edu.om, Mobile: 90034 35320

## Declaration

I hereby declare that the above mentioned details are true, complete and correct to the best of my knowledge and belief.

Signature  
(Dr. M. Regan)