

FACULTY PROFILE TEMPLATE FOR WEBSITE

Basic Details:

- **Name:** Dr. S. Sindu Devi
- **Designation:** Assistant Professor(Sr.G)
- **PhoneNumber:**9500128128
- **Email Id:** sindudes@srmist.edu.in
- **Area of Specialization:** Fuzzy Differential Equations,Fuzzy Mathematical Modelling,Fuzzy Optimization.
- **Affiliation:**Department of Mathematics, College of Science and Humanities,Ramapuram Campus, SRM Institute of Science and Technology

Educational Details:

- **Degree** –M.Sc., M.Phil., Ph.D.,
- **Area or Subject** –Fuzzy Differential Equations, Fuzzy Mathematical Modelling, Fuzzy Optimization.
- **University** – Manonmaniam Sundharanar University, Alagappa University, SRM Institute of Science and Technology
- **Awarded Year** –1997, 1998, 2019

Other Details:

- **Courses:** Mathematics – I, Mathematics – II, Mathematics – III, Probability, Business Statistics, Discrete Mathematics, Operations Research, Numerical Methods, Differential Equations, Business Statistics.
- **Research Interests:** –Fuzzy Differential Equations, Fuzzy Mathematical Modelling, Fuzzy Optimization.

Selected Publications

- S. Sweatha, P. Monisha and **S. Sindu Devi**, An SIR Model for COVID-19 Outbreak in India, Communications in Mathematics and Applications, **13(2)**, (2022), pp. 661-669,10.26713/cma.v13i2.1729
- P.Monisha,Sweatha.S and **Sindu Devi, S.**, Fuzzy Drugaddiction and Abuse Growth Model, AIP Conference Proceeding2463,030005-1-030005-9; (2022), <http://doi.org/10.1063/5.0081065>.
- Sweatha. S, and **Sindu Devi, S.**,FuzzyEpidemic Model for the Transmission of Zika Virus,ECS Transactions, 107(1)(2022) pp:16851-16858.<http://doi.org/10.1149/10701.16851ecst>.
- Monisha.P, and **Sindu Devi, S.**,Fuzzy SIR Epidemic for Transition of Malaria Model for the Transmission of ZikaVirus,ECS Transactions,107(1) (2022) pp:17691-17698.<http://doi.org/10.1149/10701.17691ecst>
- **Sindu Devi, S.** and Ganesan, K., Fuzzy Mathematical Modeling of Dynamical System, Indian Journal of National Sciences, **13(69)**, (2021), pp. 35842 – 35846.

- Kumar. R, **Sindu Devi, S.**, Mary Henrietta. H, Ashwini. K. and Stanley Raj. A., Analyzing A Periodic Inventory Model and Determining the Optimal Values In Fuzzy Sense With Varying Demands, *Advances In Mechanics*, **9(3)**, (2021). pp. 1037 – 1042.
- Sweatha. S, Monisha. P. and **Sindu Devi, S.**, Infectious Disease Modelling in Leishmaniasis, *Annals of R.S.C.B*, **25(5)**, (2021), pp. 1508 – 1514.
- **Sindu Devi, S.** and Ganesan, K., Higher Order Fuzzy Initial Value Problem Through Taylor's Method, *International Journal of Mathematics and Computer Science*, **15**, (2020), pp. 1243-1251.
- **Sindu Devi, S.** and Ganesan, K., A New Approach for the solution of Fuzzy Initial value Problems Through Runge - Kutta Method, *Journal of informatics and mathematical science* **12(2)**, (2020), pp. 149-157.
- **Sindu Devi, S.** and Ganesan, K., Application of Fuzzy Derivatives in Physical Science, *TEST Engineering & Management*, **83**, (2020), pp. 13795-13800.
- **Sindu Devi S.** and Ganesan, K., An Approximate Solution of Fuzzy Initial Value Problem through Euler's Modified Method, *Journal of Advanced Research in Dynamical and Control Systems*, **12(5)**, (2020) pp.1281-285.
- **Sindu Devi, S.**, and Ganesan, K., Modelling Electric Circuit Problem with Fuzzy Differential Equations, *Journal of Physics: Conference Series*, 1377 (1), (2019), 012024.
- **Sindu Devi, S.** and Ganesan, K., Application of linear fuzzy differential equation in day to day life, *AIP Conference Proceedings* 2112, 020169 (2019); <https://doi.org/10.1063/1.5112354>.
- **Sindu Devi, S.** and Ganesan, K., Fuzzy Picard's method for derivatives of second ODI, *Journal of Physics: Conf. Series* **1000**, (2018), 0120,38. DOI:10.1088/1742-6596/1000/1/012038.
- **Sindu Devi, S.**, and Ganesan, K., Solving nth Order Fuzzy Differential Equations by Taylor's Method, *International Journal of Pure and Applied Mathematics*, **119(13)**, (2018), pp. 327-335.
- **Sindu Devi, S.** and Ganesan, K., An approximate solution by fuzzy Taylor's method, *International Journal of Pure and Applied Mathematics*, **113(13)**, (2017), pp. 236-243.
- **Sindu Devi, S.** and Ganesan, K., Numerical Solution of First Order Fuzzy Differential Equations by Simpson's Rule, *British Journal of Mathematics and Computer Science*, **18**, (2016), pp. 01-13.
- **Sindu Devi, S.** and Ganesan, K., Solution of First order fuzzy differential equations by fuzzy Laplace Transform, *Global Journal of Pure and Applied Mathematics*, **12**, (2016), pp. 381-387.
- **Sindu Devi, S.** and Ganesan, K., Solution of second order fuzzy differential equations by fuzzy Laplace Transform, *Global Journal of Pure and Applied Mathematics*, **12(2)**fourth-order. 354-360.
- **Sindu Devi, S.** and Ganesan, K., A fourth-order Runge – Kutta Method for the Numerical Solution of first order Fuzzy Differential Equations, *International Journal of Scientific and Engineering Research*, **6(3)**, (2015), pp. 295-299.
- **Sindu Devi, S.** and Ganesan, K., Runge Kutta Method of Order Two for Second-Order Fuzzy Differential Equation, *International Journal of Contemporary Architecture*, **8(2)**, (2021), pp. 375 – 382.

Papers Presented:

- Sindu Devi S, "Modelling Electric circuit problem with Fuzzy Differential Equations", National Conference on Progress in Mathematics Towards Industrial Applications, SRM IST, Ramapuram, Chennai, September 2019.
- Sindu Devi S, "Numerical Algorithm for Fuzzy Differential Equations", International Conference on Soft Computing and Optimising Techniques, Kamaraj College, Thoothukudi, August 2019.
- Sindu Devi S, "Real Life Application of First Order Linear Fuzzy Differential Equations", 11th National Conference on Mathematical Techniques and Applications, SRM University, Kattankulathur, January 2019.
- Sindu Devi S, "A New Approach For The Solution of Fuzzy IVP'S Through Runge - Kutta Method", Second National Conference on Recent Trends In Fuzzy Mathematics & Its Applications, Ramapuram, October 2018.
- Sindu Devi S, "Solving nth Order Fuzzy Differential Equation by Taylor's Method", National Conference on Recent Trends In Mathematics And Its Applications, SRM Institute of Science & Technology, vadapalani, February 2018.
- Sindu Devi S, "Fuzzy Picard Method For Derivatives of Second Order", 10th National Conference on Mathematical Techniques and Applications, SRM Institute of Science and Technology, Kattankulathur, January 2018.
- Sindu Devi S, "A Modified Euler's Method For The Numerical Solution of Higher Order Fuzzy Differential Equations", International Conference on Mathematical Modeling and Computational Methods In Science and Engineering, Alagappa University, Karaikudi, February 2017.
- Sindu Devi S, "An Approximate Solution of Fuzzy Ordinary Differential Equations by Taylor's Method", National Conference on Mathematical Techniques and their Applications, SRM University, Kattankulathur, January 2017.
- Sindu Devi S, "Solution of Second Order Fuzzy Differential Equations by Fuzzy Laplace Transform", National Conference on Recent Trends In Mathematics And Its Applications, SRM University, Vadapalani, February 2016.
- Sindu Devi S, "Solution of First Order Fuzzy Differential Equations by Fuzzy Laplace Transform", National Conference on Recent Trends In Mathematics And Its Applications, SRM University, Kattankulathur, January 2016.
- Sindu Devi S, "Numerical Solution of First Order Fuzzy Differential Equations by Simpson's Rule", National Conference Organised by Department of Science & Humanities, Bharath University, Selaiyur, March 2015.
- Sindu Devi S, "A Fourth Order Runge - Kutta Method for the Numerical Solution of First Order Fuzzy Differential Equations", National Conference on Mathematical Techniques And Its Applications, SRM University, Kattankulathur, January 2015.

Working Papers:

- Fuzzy Mathematical Modelling.

Work in Progress-real-life application of fuzzy differential equation.

Academic Experience:

- Working in SRM Institute of Science and Technology since 2007.
- Lecturer, Kamaraj College, Thoothukudi, 2000-2007.

Other Professional Experience: NIL**Workshops /Seminars/Conferences:**

- Workshop attended "Differential Equations and its Applications" on 07.03.2019 at SRMIST- Ramapuram
- Conference attended "National Conference on Recent Trends in Fuzzy Mathematics and its Applications on 03.11.2017 & 04.11.2017 at SRMIST- Ramapuram
- Conference attended 2nd National conference on "Recent Trends in Fuzzy Mathematics and its Applications"(NCRTFMA-2018) on 26.10.2018 & 27.10.2018 at SRMIST- Ramapuram
- Conference attended 3rd National Conference on "Progress in Mathematics towards Industrial Applications" (NCPMTIA- 2019) on 27.09.2019 & 28.09.2019 at SRMIST- Ramapuram
- Workshop attended "Workshop on Fluid Dynamics and its Applications" on 12.04.2018 at SRMIST- Ramapuram
- Workshop on Linear Algebra Organized by SSN college of Engg from 1.6.20 - 2.6.20
- Workshop on Mathematical Analysis Organized by Loyola College from 8.6.20-13.6.20
- Three Days Online FDP on innovative strategies in English Language Teaching Organized by Jeepiar Engineering College from 10.06.2020 to 12.06.2020
- Mathematical Modelling of Infectious Diseases Organized by Mizoram University on 11.06.2020
- Webinar on Mathematical Modelling in Covid 19 Organized by Jeepiar Engineering College on 13.06.20
- One week FDP on Advance Materials Research Organized by Bharat Institute of Engineering And Technology from 15.06.2020 - 19.06.2020
- Modern Epidemiology Of Infectious Disease Using Predatory Prey Dynamics Organized by SRMIST- Ramapuram on 16.06.20
- Two days online International FDP on Fuzzy Modelling Organized by St Joseph College of Engineering from 16.06.20 and 17.06.20
- International FDP on Fuzzy Mathematical Modelling Organized by St Joseph`s College of Engineering from 16.06.2020 & 17.06.2020
- SIRD Model to Predict COVID-19 Outbreak in Tamilnadu-India Organized by SRMIST-Ramapuram on 25.06.20

Achievements and Awards:

- Distinction in Post Graduate Degree, 1998.

- Certificate of Excellence in Reviewing Journal of Advance in Mathematics and Computer Science& Asian Research journal of Mathematics.
- Mentor Certificate for the Certificate online NPTEL Course in Jan-April 2022

Academic / Professional Membership:

- Member of Journal of Advance in Mathematics and Computer Science.
- Member of Indian Science Congress Association (ISCA), 2008.

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