

**Name** : Dr.R. Sindhu  
**Designation** : Assistant professor

**Department** : Mathematics

**Qualification:** M. Phil., Ph.D.

**Experience** : Teaching– 2.9Years | Research– 3 Years.

**Specialization:** Fluid Dynamics

**Email (Official)** : sindhu.r@drngpasc.ac.in



### Academic Qualifications

Degree	Branch	Institution / University Name	Year
Ph.D.	Mathematics	Dr. N.G.P. Arts and Science College	2024
M. Phil.	Mathematics	Hindustan college of arts and science	2016
M. Sc	Mathematics	Dr. N.G.P. Arts and Science College	2015
B. Sc	Mathematics	Dr. N.G.P. Arts and Science College	2009

### Research Publications

1. R. Sindhu<sup>1</sup>, Nazek Alessa<sup>2</sup>, S. Eswaramoorthi<sup>1</sup>, and Karuppusamy Loganathan<sup>3</sup>, **Comparative Analysis of Darcy-Forchheimer Radiative Flow of a Water-Based Al<sub>2</sub>O<sub>3</sub>-Ag/TiO<sub>2</sub> Hybrid Nanofluid over a Riga Plate with Heat Sink/Source**, Symmetry, 2023, Vol. 199, No.15.( SCOPUS), Doi: <https://doi.org/10.3390/sym15010199>.
2. Nazek Alessa<sup>1</sup>, R. Sindhu<sup>2</sup>, S. Divya<sup>2</sup>, S. Eswaramoorthi<sup>1</sup>, and Karuppusamy Loganathan<sup>3</sup>, **Computational Analysis of Darcy-Forchheimer Flow of Cu/Al- Al<sub>2</sub>O<sub>3</sub> Hybrid Nanofluid in Water over a Heated Stretchable Plate with Nonlinear Radiation**. Micromachines, 2023, Vol. 338, No. 14. (SCOPUS). Doi: <https://doi.org/10.3390/mi14020338>.
3. R. Sindhu<sup>a</sup>, S. Eswaramoorthi<sup>a,b</sup>, K. Loganathan<sup>c,\*</sup>, Reema Jain<sup>c</sup>, **Comparative approach of Darcy-Forchheimer flow on water based hybrid nanofluid (Cu- Al<sub>2</sub>O<sub>3</sub>) and mono nanofluid over a stretched surface with injection/suction**. Partial Differential Equations in Applied Mathematics, p.100786 (SCI), Doi: <https://doi.org/10.1016/j.padiff.2024.100786>.

## Presentations in Conference/ Seminar

1. **Unsteady MHD convective flow past an impulsively started semi-infinite vertical plate presence in chemical reaction**, National Conference on Recent Trends in Pure, Applied Mathematics, Rathinam college of Arts and Science, Coimbatore, 04- Sep -2015.
2. **Numerical investigation of Darcy-Forchheimer flow of Hybrid nanofluid (Cu-Al<sub>2</sub>O<sub>3</sub>/water) and Nanofluid (Cu/water) over an exponentially stretched surface with suction**. International conference on mathematical modelling (ICMM-2023), Bharathiyar university, Coimbatore, 27-Jan-2023 and 28- January- 2023.
3. **An unsteady MHD flow of a visco-elastic fluid past an infinite vertical plate with radiation, chemical reaction and solet effect**, International virtual conference on dynamical system and soft computing, Gobi Arts and Science College, Gobichettipalayam, 5-March-2021 and 6-March- 2021.
4. **Distinguish between the study of Hybrid Nanofluid (Cu-Al<sub>2</sub>O<sub>3</sub>/water) and Nanofluid (Cu/water) comprising microbes with the Role of thermal radiation**, National conference, Recent Advancement in Pure and Applied Mathematics, 20- March -2024.
5. **Effect of suction on radiative hybrid nanofluid flow past a rotating permeable stretching/shrinking sheet**, National conference on “Emerging trend in engineering science 2022”, Karpagam Academy of Higher Education, Coimbatore-641021, 27- May- 2022.
6. **Effect of thermal radiation on Hybrid Cu-TiO<sub>2</sub>/ H<sub>2</sub>O nanofluid flow over a nonlinear stretching sheet**, Mount Carmel College, 21-April-2022 and 22- April- 2022.
7. **Distinguish between the study of Cu-Al<sub>2</sub>O<sub>3</sub> /H<sub>2</sub>O hybrid nanofluid and Cu/ H<sub>2</sub>O nanofluid comprising Microbes with the role of thermal radiation and Cattaneo-Christov heat flux over a extending sheet**, International conference on “Applied Mathematics Modelling”, KPR institute of Engineering and Technology, Coimbatore, 20&21-February-2025.

## Participation in Conference/Seminar

1. **Numerical computation Techniques for solving Boundary layer Problem: HAM & Bvp4c**, Manipal University Jaipur, Rajasthan, 27-Aug-2021.
2. **Numerical solution of partial differential equation by finite volume method**, Sardar vallabhai Patal Institute of Technology, Vasad, 17-Sep-2021.
3. **International virtual conference on Mathematics and computational Models- ICMCM'21**, Bannari Amman Institute of Technology sathyamangalam, Tamilnadu, India, 29 **Advances in Applied Mathematics and Computational Methods**, VIT-AP University, Andhra Pradesh, India, 7- Jan-2022 to 9- Jan-2022.
4. **A view on differential equations**, Michael job of arts and science for women, Irugur, sultur, 13-Nov-2022.
5. **National Conference on Emerging trends in Physical Sciences and Mathematics (ETPSM'2023)**, Dr.N.G.P. Arts and Science College, Kallapatti, Coimbatore, 12-April-2023.
6. **National conference on Algebra and Analysis**, PSGR Krishnammal College for Women, Coimbatore, 23-August-2013 and 24-August- 2013.
7. **DBT Star College sponsored National Conference on Mathematical and computational Biology**, Hindustan College of Arts and Science, Nava India, Coimbatore, 07-March -2019.- Oct- 2021 to 30-Oct -2021.
8. **Advances in Applied Mathematics and Computational Methods**, VIT-AP University, Andhra Pradesh, India, 7- Jan-2022 to 9- Jan-2022.
9. **A view on differential equations**, Michael job of arts and science for women, Irugur, sultur, 13-Nov-2022.
10. **National Conference on Emerging trends in Physical Sciences and Mathematics (ETPSM'2023)**, Dr.N.G.P. Arts and Science College, Kallapatti, Coimbatore, 12-April-2023.
11. **Advances in Applied Mathematics and Computational Methods**, VIT-AP University, Andhra Pradesh, India, 7- Jan-2022 to 9- Jan-2022.
12. **A view on differential equations**, Michael job of arts and science for women, Irugur, sultur, 13-Nov-2022.

13. **Advances in Applied Mathematics and Computational Methods**, VIT-AP University, Andhra Pradesh, India, 7- Jan-2022 to 9- Jan-2022.
14. **A view on differential equations**, Michael job of arts and science for women, Irugur, sultur, 13-Nov-2022.
15. **National Conference on Emerging trends in Physical Sciences and Mathematics (ETPSM'2023)**, Dr.N.G.P. Arts and Science College, Kallapatti, Coimbatore, 12-April-2023.
16. **National conference on Algebra and Analysis**, PSGR Krishnammal College for Women, Coimbatore, 23-August-2013 and 24 August- 2013.
17. **DBT Star College sponsored National Conference on Mathematical and computational Biology**, Hindustan College of Arts and Science, Nava India, Coimbatore, 07-March -2019.

#### **Participation in Orientation Programme / Short Term Courses**

1. **Dot Net**, Dr.N.G.P .Arts and Science College, Kallapatti, Coimbatore, 70 Hrs, 12-July-2012.

#### **Participation in Faculty Development Programme**

1. **Mathematics and its Applications in Research**, Sri Krishna College of engineering and technology, Kunimuthur, Coimbatore, 24 -September -2022.
2. **IIT Bombay-ST Software Courses Training Program**, Hindustan College of Arts and Science, Nava India, Coimbatore, 20- Nov -2018.
3. **Centre of Excellence for Faculty Development Programme (COExFD)**, Hindustan College of Arts and Science, Nava India, Coimbatore, 2-Jan-2018 to 5-Jan-2020.
4. **One day Faculty Development programme on Mathematics and its applications in research**, Sri Krishna College of Engineering and Technology, Coimbatore, 24-Sep-2022.

#### **Participation in Workshop**

1. **Mathematical Techniques in Fluid Dynamics**, SRMIST, Chennai, 28-March-2022 to 30-March-2022.

2. **Differential Equations and their Applications in Mathematics Modelling**, Jansons Institution of Technology, Coimbatore, 27-Oct-2022 and 28-Oct-2022.
3. **State level workshop on Fuzzy mathematics and its utilities**, Nirmala College for women, Coimbatore, 14-August-2013.
4. **Science Academies Lecture Workshop on “Mathematical Biology”**, Hindusthan College of Arts and Science, Coimbatore, 7-Jan-2019 and 8-Jan-2019.
5. **State level Workshop on Latex, Matlab and Research Methology**, Hindusthan College of Arts and Science, Coimbatore, 17-Dec-2018.
6. **Mathematical Computational software Matlab**, Pioneer College of Arts and Science, Coimbatore, 18-Feb-2019.