

Name :Dr. S. Eswaramoorthi
Designation :Professor
Department :Mathematics
Qualification :M.Sc., M.Phil., Ph.D.,
Experience :Teaching: 15 Years Industry: Nil Research: -12
Area of Specialization(s) :Fluid Dynamics
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Academic Qualifications

Degree	Branch	Institution / University Name	Year of Graduation
Ph.D.	Mathematics	Erode Arts and Science College, Erode	2016
M.Phil.	Mathematics	Bharathiar University, Coimbatore	2007
M.Sc.	Mathematics	Erode Arts College, Erode	2006
B.Sc.	Mathematics	Gobi Arts and Science College, Gobi	2003

Additional Qualifications

Diploma / Vocational / Certification	Area of Specialization	Institution / University / Agency Name	Year
SET	Nil	Nil	Nil
Online Certificate	Nil	Nil	Nil

Grants Received

Event Title	Agency	Amount	Date
National Level Workshop on Computational methods in Fluid Dynamics	CSIR, New Delhi	Rs. 15,000	31-July-17

Projects

Completed

Project Title	Agency	Amount	Duration
Nil	Nil	Nil	Nil

On-going

Project Title	Agency	Amount	Duration
Nil	Nil	Nil	Nil

Research Guidance

Programme	No. of Scholars	
	Completed	Pursuing
Ph. D.	-	4
M. Phil.	-	-

Research Publications (Indexed)

Research Publications in SCIE/WoS Indexed Journals:

1. Karuppusamy Loganathan, **S. Eswaramoorthi**, P. Chinnasamy, Reema Jain, Ramkumar Sivasakthivel, Rifaqat Ali, N. Nithya Devi, Heat and mass transport in Casson nanofluid flow over a 3-D Riga plate with Cattaneo-Christov double flux: A computational modeling through analytical method, *Symmetry*, 2023, 15(3), 15 pages.
2. S. Divya, S. Eswaramoorthi, Karuppusamy Loganathan, numerical computation of Ag/AL₂O₃ nanofluid over a Riga plate with heat sink/source and non-Fourier heat flux model, *Mathematical and Computational Applications*, 2023, 28(1), 21 pages.
3. Nazek Alessa, R. Sindhu, S. Divya, **S. Eswaramoorthi**, K. Loganathan and Kashi Sai Prasad, Computational analysis of Darcy-Forchheimer flow of Cu-Al/Al₂O₃ hybrid nanofluid in water over a heated stretchable plate with non-linear radiation, *Micromachines*, 2023, 14(2), 15 pages.
4. Safak Kayikci, **S. Eswaramoorthi**, Seda Postalcioglu, K. Loganathan, Thermal analysis of radiative water-and glycerin-based carbon nanotubes past a Riga plate with stratification and non-Fourier heat flux theory, *Journal of Thermal Analysis and Calorimetry*, 2023, 148(2), 533-549.
5. R. Sindhu, Nazek Alessa, **S. Eswaramoorthi**, K. Loganathan, Comparative analysis of Darcy–Forchheimer radiative flow of a water-based Al₂O₃-Ag/TiO₂ hybrid nanofluid over a Riga plate with heat sink/source, *Symmetry*, 2023, 15(1), 16 pages.
6. K. Rajupillai, Nazek Alessa, **S. Eswaramoorthi**, K. Loganathan, Thermal behavior of the time-dependent radiative flow of water-based CNTs/Au nanoparticles past a Riga plate with entropy optimization and multiple slip conditions, *Entropy*, 2023, 25(1), 20 pages.
7. **S. Eswaramoorthi**, K. Loganathan, Muhammad Faisal, Thongchai Botmart and Nehad Ali Shah, Analytical and numerical investigation of Darcy-Forchheimer flow of a nonlinear-radiative non-Newtonian fluid over a Riga plate with entropy optimization, *Ain Shams Engineering Journal*, 14(3), 2023, 15 pages.
8. S. Divya, Nazek Alessa, **S. Eswaramoorthi**, Karuppusamy Loganathan, Thermally radiative Darcy–Forchheimer flow of Cu/Ag nanoliquid in water past a heated stretchy sheet with magnetic

and viscous dissipation impacts, *Symmetry*, 2023, 17 pages.

9. R. Prabakaran, **S. Eswaramoorthi**, K. Loganathan and Sonam Gyeltshen, Thermal radiation and viscous dissipation impacts of water and kerosene based carbon nanotubes over a heated Riga sheet, *Journal of Nanomaterials*, 2022, 17 pages, 2022.
10. **S. Eswaramoorthi** and S. Sivasankaran, Entropy optimization of MHD Casson-Williamson fluid flow over a convectively heated stretchy sheet with Cattaneo-Christov dual flux, *Scientia Iranica*, 29(5), 2317-2331, 2022.
11. R. Prabakaran, **S. Eswaramoorthi**, Karuppusamy Loganathan and Ioannis E Sarris, Investigation on thermally radiative mixed convective flow of carbon nanotubes/ Al_2O_3 nanofluid in water past a stretching plate with Joule heating and viscous dissipation, *Micromachines*, 13,19 pages 2022.
12. **S. Eswaramoorthi**, S. Thamaraiselvi and Karuppusamy Loganathan, Exploration of Darcy–Forchheimer flows of non-Newtonian Casson and Williamson conveying tiny particles experiencing binary chemical reaction and thermal radiation: comparative analysis, *Mathematical and Computational Applications*, 27 (3), 52, 17 pages, 2022.
13. F. Ali, K. Loganathan, **S. Eswaramoorthi**, K. Prabu, A. Zaib and Dinesh Kumar Chaudhary, Heat transfer analysis of cross fluid by incorporating Carboxymethyl Cellulose (CMC) water-based Al_2O_3, Ti_2O_2, Cu hybrid nanofluid with entropy generation, *Journal of Nanomaterials*, 2022, 11 pages, 2022.
14. F.O.M. Mallawi, **S. Eswaramoorthi**, S. Sivasankaran and M. Bhuvaneswari, Impact of stratifications and chemical reaction on convection of a non-Newtonian fluid in a Riga plate with thermal radiation and Cattaneo-Christov flux, *Journal of Thermal Analysis and Calorimetry*, 147 (11), 6519-6535, 2021.
15. F. Ali, K. Loganathan, E. Prabu, **S. Eswaramoorthi**, M. Faizan, A. Zaib and Dinesh kumar Chaudhary, Entropy minimization on Sutterby nanofluid past a stretching surface with swimming of gyrotactic microorganisms and nanoparticles, *Mathematical Problems in Engineering*, 2022, 17 pages, 2022.
16. **S. Eswaramoorthi**, K. Loganathan, Reema Jain and Sonam Gyeltshen, Darcy-Forchheimer 3-D flow of Glycerin based carbon nanotubes on a Riga plate with nonlinear thermal radiation and Cattaneo-Christov heat flux, *Journal of Nanomaterials*, 2022, 20 pages, 2022.
17. Ali Hassan, Azad Hussain, Mubashar Arshad, Soumaya Gouadria, Jan Awrejcewicz, Ahmed M. Galal, Fahad M Alharbi, **S. Eswaramoorthi**, Insight into the significance of viscous dissipation and heat generation/absorption in magneto-hydrodynamic radiative Casson fluid flow with first-order chemical reaction, *Frontiers in Physics*, 10, 16 pages, 2022.
18. **S. Eswaramoorthi**, S. Divya, Muhammad Faisal and Ngawang Namgye, Entropy and heat transfer analysis for MHD flow of Cu/Ag-water based nanofluid on a heated 3D plate with nonlinear radiation, *Mathematical Problems in Engineering*, 2022, 14 pages, 2022.
19. **S. Eswaramoorthi**, Nazek Alessa, M. Sangeethavaanee, Safak Kayikci and Ngawang Namgyel, Mixed convection and thermally radiative flow of MHD Williamson nanofluid with Arrhenius

activation energy and Cattaneo–Christov heat-mass flux, *Journal of Mathematics*, 2021,16 pages, 2021.

20. **S. Eswaramoorthi**, Nazek Alessa, M. Sangeethavaanee and Ngawang Namgyel, Numerical and analytical investigation for Darcy-Forchheimer flow of a Williamson fluid over a Riga plate with double stratification and Cattaneo-Christov dual flux, *Advances in Mathematical Physics*, 2021, 15 pages, 2021.
21. **S. Eswaramoorthi**, M. Bhuvaneshwari, S. Sivasankaran and H. Niranjana, Thermally radiative flow of a viscoelastic nanofluid with Newtonian heating, *International Journal of Nanotechnology*, 18(5- 8), 705-718, 2021.
22. F.O.M Mallawi, **S. Eswaramoorthi**, M. Bhuvaneshwari and S. Sivasankaran, Impact of double-diffusion and slip of order 2 on convection of chemically reacting Oldroyd-B liquid with Cattaneo-Christov dual flux, *Thermal Science*, 25 (5B), 3729-3740, 2021.
23. F.O.M. Mallawi, M. Bhuvaneshwari, S. Sivasankaran and **S. Eswaramoorthi**, Impact of double stratification on convective flow of a non-Newtonian liquid in a Riga plate with CattaneoChristov double-flux and thermal radiation, *Ain Shams Engineering Journal*, 12(1), 969–981, 2021.
24. M. Bhuvaneshwari, **S. Eswaramoorthi**, S. Sivasankaran, S. Rajan and Ali Saleh Alshomrani, Effect of viscous dissipation and convective heating on convection flow of a second grade fluid over a stretching surface: Analytical and numerical study, *Scientia Iranica Transaction B, Mechanical Engineering*, 26(3), pp. 1350-1357, 2019.
25. **S. Eswaramoorthi**, M. Bhuvaneshwari, S. Sivasankaran and S. Rajan, Soret and Dufour effects on viscoelastic boundary layer flow, heat and mass transfer in a stretching surface with convective boundary condition in the presence of radiation and chemical reaction, *Scientia Iranica Transaction B, Mechanical Engineering*, 23(6), pp. 2575-2586, 2016.

Research Publications in Scopus indexed Journals:

1. F. Ali, K. Loganathan, S. Eswaramoorthi, M. Faizan, E. Prabu and A. Zaib, Bioconvective applications of unsteady slip flow over a tangent hyperbolic nanoliquid with surface heating: improving energy system performance, *International Journal of Applied and Computational Mathematics* volume 8, Article number: 276 (2022).
2. S. Eswaramoorthi, M. Bhuvaneshwari, S. Sivasankaran and O.D. Makinde, Analytical and numerical study on cross diffusion effects on magneto-convection of a chemically reacting fluid with suction/injection and convective boundary condition, *Defect and Diffusion Forum*, 401, pp 63-78, 2020.
3. **S. Eswaramoorthi** and M. Bhuvaneshwari, Passive and active control on 3D viscoelastic nanofluid fluid flow including heat generation and convective heating, *Frontiers in Mechanical Engineering*,5(36), pp. 1-7, 2019.
4. M. Bhuvaneshwari, **S. Eswaramoorthi**, S. Sivasankaran and Ahmed Kadhim Hussein, Cross-diffusion effects on MHD mixed convection over a stretching surface in a porous medium with

chemical reaction and convective condition, *Engineering Transactions*, 67(1): 3–19, (2019).

5. **S. Eswaramoorthi**, M. Bhuvaneshwari, S. Sivasankaran, O.D. Makinde, Heterogeneous and homogeneous reaction analysis on MHD Oldroyd-B fluid with Cattaneo-Christov heat flux model and convective heating, *Defect and Diffusion Forum*, 387, pp 194-206, 2018

Research Publications in Conference Proceedings/Book Chapter(Scopus Indexed):

1. **S. Eswaramoorthi** and S. Sivasankaran, Mixed convective flow of a radiative Maxwell liquid past a porous Riga plate with heat consumption and dual stratifications, *Recent Advances in Applied Mathematics and Applications to the Dynamics of Fluid Flows*, Springer, 39-47, 2023.
2. S. Divya, **S. Eswaramoorthi** and K Loganathan, Darcy-Forchheimer flow of Cu/TiO₂ nanoliquid past a stretching sheet with heat generation/consumption, *Journal of Physics: Conference Series*, 2371, 2022, 12 pages.
3. **S. Eswaramoorthi**, K. Jagan and S. Sivasankaran, MHD bioconvective flow of a thermally radiative nanoliquid in a stratified medium considering gyrotactic microorganisms, *Journal of Physics: Conference Series*, 1597, 1-10, 2020.
4. M. Bhuvaneshwari, S. Sivasankaran, H. Niranjana and **S. Eswaramoorthi**, Cross diffusion effects on MHD convection of Casson-Williamson fluid over a stretching surface with radiation and chemical reaction, *Trends in Mathematics*, 139-146, 2019.
5. **S. Eswaramoorthi**, S. Sivasankaran and Ali Saleh Alshomrani, Effect of thermal radiation and heat absorption of MHD Casson nanofluid over a stretching surface in a porous medium with convective heat and mass conditions, *IOP Conf. Series: Journal of Physics: Conf. Series*, 1139 (2018) 012017.
6. **S. Eswaramoorthi**, S. Sivasankaran, M. Bhuvaneshwari and S. Rajan, Effects of multiple slip on MHD combined convective flow of viscoelastic nanofluid over a stretchy sheet with heat absorption, *IOP Conf. Series: Materials Science and Engineering*, 390, 2018, 012096
7. **S. Eswaramoorthi**, S. Sivasankaran and Ali Saleh Alshomrani, Effect of chemical reaction and heat generation on 3D double diffusive convection over a stretching plate: Numerical and analytical study, *IOP Conf. Series: Journal of Physics: Conf. Series*, 1139 (2018) 012001.
8. M. Bhuvaneshwari, **S. Eswaramoorthi** and S. Sivasankaran, Thermal radiation and cross diffusion effects on 3D convective flow of a viscoelastic fluid over a stretchy paper with chemical reaction, *IOP Conf. Series: Journal of Physics: Conf. Series*, 1139 (2018) 012029.
9. M. Sankar, S. Kemparaju, B.M.R. Prasanna and **S. Eswaramoorthi**, Buoyant convection in porous annulus with discrete sources-sink pairs and internal heat generation, *IOP Conf. Series: Journal of Physics: Conf. Series*, 1139 (2018) 012026.
10. **S. Eswaramoorthi**, M. Bhuvaneshwari, S. Sivasankaran, H. Niranjana and S. Rajan, Effect of partial slip and chemical reaction on convection of a viscoelastic fluid over a stretching surface with Cattaneo-Christov heat flux model, *IOP Conf. Series: Materials Science and Engineering*, 263, pp. 1-8, 2017.

11. **S. Eswaramoorthi**, M. Bhuvaneshwari, S. Sivasankaran and S. Rajan, Effect of radiation on MHD convective flow and heat transfer of a viscoelastic fluid over a stretching surface, *Procedia Engineering*, 127, pp. 916-923, 2015.

Research Publications in International Journals:

1. **S. Eswaramoorthi**, K. Loganathan, S. Sivasankaran, M. Bhuvaneshwari, S. Rajan, MHD flow of Carreau liquid with partial slip and Newtonian heating, *International Journal of Engineering & Technology*, 7(410), 637-640, 2018.
2. **S. Eswaramoorthi**, M. Bhuvaneshwari, S. Sivasankaran, S. Rajan, Hydrodynamic slip effect on MHD combined convection of a Williamson nanofluid, *International Journal of Pure and Applied Mathematics*, 117,(11), 327-333, 2017.

Conference / Seminar / Workshop Organized

1. Organizing Secretary, International Conference on “Applied and Computational Mathematics” on 10/08/2018.
2. Convener, Three day National Level Workshop on “Computational methods in Fluid Dynamics” on 23/01/2017 to 25/11/2018 sponsored by CSIR, India.
3. Organizing Secretary, two day National Level Conference on Recent Advances in Theoretical and Computational Method for Partial Differential Equations on 06/01/2017 to 07/01/2017 sponsored by SERB, India.
4. Organizing Secretary, Two day National Level Conference on Emerging Trends in Pure and Applied Mathematics on 14/09/2015 to 15/09/2015.
5. Organizing Secretary, Two day International Level Conference on Mathematical Science and its Computational Applications on 11/08/2014 to 12/08/2014.
6. Convener, National Level Conference on Optimization Techniques and Decision Making Analysis on 25/09/13.
7. Convener, National Level Conference on Mathematical Sciences and its Computational Aspects on 07/02/13.
8. Convener, International Level Conference on Mathematical Modelling, Analysis and Computational Applications on 23/02/2011.

Member in BoS

- Board of Mathematics, Erode Arts and Science College, Erode, since 2018.
- Board of Mathematics, Sri Ramakrishna College of Arts and Science, Coimbatore, since 2019.
- Board of Mathematics, Gobi Arts and Science, Gobi, since 2019.

Editorial / Review Board Member

- Academic Editor of Mathematical Problems in Engineering (Scopus)
- Editorial Board Member of American Journal of Mathematical and Computer Modelling.
- Guest Editor, IOP:Journal of Physics: Conference Series, Volume No. 1139, 2018 (Scopus).
- Guest Editor, IOP:Journal of Physics: Conference Series, Volume No. 1597, 2020 (Scopus).

Reviewer:

- PLOS ONE
- Scientific Reports
- Energy
- IOP Conference Series: Journal of Physics: Conference Series
- Frontiers in Physics
- Thermal Analysis and Calorimetry
- Asian Journal of Fisheries and Aquatic Research
- Physical Science International Journal
- Journal of Applied Physical Science International
- Journal of Energy Research and Reviews
- Asian Research Journal of Mathematics