Dr. M.SIDDALINGA PRASAD

Affiliation (Associate Professor, Dept of Mathematics, SIT)
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OrcID: 0000-0001-8176-1685
Faculty ID: SITF0108

Education

	Degree	Year	Institute	Specialization
1	B.Sc.,	1998	Kalpatharu Science College, Tiptur (Bangalore University)	Physics, Mathematics, Computer Science
2	M.Sc.,	2000	PG Center, Tumkur (Bangalore University)	Mathematics
3	Ph.D.,	2008	Bangalore University	Fluid Mechanics

Professional Experience

	Date (from-to)	Designation	Organization
1	24-12-2011 to till date	Associate Professor	SIT, Tumakuru
2	24-12-2008 to 23-12-2011	Assistant Professor	SIT, Tumakuru
3	10-10-2007 to 23-12-2008	Senior Lecturer	SIT, Tumakuru
4	10-10-2001 to 09-10-2007	Lecturer	SIT, Tumakuru

(Please fill in reverse order. Current designation should be at the top)

Positions held

(Please give details of any administrative posts, co Ordinator roles/ responsibilities held)

- **Controller of Examinations** – 04 June 2017 to 31 July 2025.
- Incharge Controller of Examinations – 09 Jan 2017 to 03 June 2017.
- Assistant Controller of Examinations - 13 May 2010 to 08 Jan 2017.

Affiliations of Professional organizations

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Awards and Honors

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Courses Taught

Undergraduate Courses

- Engineering Mathematics – I to IV
- Advanced Mathematics – I and II
- Computational methods
- Combinatorics
- Numerical Methods and Programming
- Mathematical concepts for information technology
- Discrete Mathematical Structures
- Mathematical modelling
- Statistics and Probability
- Engineering Mathematics – I and II for CSE, EEE streams

Postgraduate Courses

- Numerical Methods
- Computational Fluid flow and heat transfer
- Applied Mathematics

Research Guidance

Sl. no	Name of the Scholar	Title	Year of completion
1	**C M Suresha**, Dept. of Mathematics, RNSIT, Bangalore – 98.	Mathematical modeling of primary and secondary pollutants of area source over the city region.	2014
2	**Sudheer Pai K L,** Dept. of Mathematics,	Mathematical modelling of air pollution in an urban area with chemical reaction.	2014

	RNSIT, Bangalore – 98.		
3	**Nagaraju K R,** Dept. of Mathematics, Government Engg. College, Hassan - 753202.	Mathematical modelling of Newtonian/non-Newtonian fluid flow due to stretching/shrinking sheet with heat transfer	2022

Research Areas

- Interface Stability
- Atmospheric pollution
- Stretching sheet
- Heat transfer through channels and fins

Sponsored Projects

Ongoing Projects: Nil

1. Title:
   Funding Agency:
   Amount:
   Duration:
   Role:
2. Title:
   Funding Agency:
   Amount:
   Duration:
   Role:

Completed Projects: Nil

1. Title:
   Funding Agency:
   Amount:
   Duration:
   Role:

2. Title:
   Funding Agency:
   Amount:
   Duration:

Role:

Publications

Journals

- “Effects of Slip over Nanostructured Silicon Substrate and Nonuniform Electric Field on Rayliegh-Taylor Instability in a Poorly Conducting Liquid” in the ***Proc. of the workshop on ‘Modelling of Nano and Smart Materials’, Published by BP Publications, Bangalore, pp. 362-375, 2003*** (with N. Rudraiah and M.Venkatachalappa).
- “Rayleigh-Taylor instability in Electrohydrodynamic bounded by a rough surface in the presence of an electric field”, ***International Journal of Applied Mechanics and Engineering, Vol.12, No.1, 2007*** (with N. Rudraiah and M.Venkatachalappa).
- “Rayleigh-Taylor Instability of couple stress fluid through porous media in a fluid layer of finite thickness”, ***International Journal of Mathematics and Computer applications Research, Vol.1, No.2, pp.1-17, 2011***.
- ”Advection-Diffusion Numerical model of an air pollutant emitted from an area source of primary pollutant with wet deposition”, ***International Journal of Engineering Science and Technology, Vol.4, No.1, pp. 135-142, 2012*** **(with C.M.Suresha, K.Lakshminarayanachari and Pandurangappa C).**
- .“Advection - Diffusion Numerical model of an air pollutant emitted from an area source of primary pollutant with chemical reaction and dry deposition” ***International Journal of Engineering Science and Technology, Vol.4, No.1, pp. 126-134, 2012*** **(with SudheerPai K L, K.Lakshminarayanachari and Pandurangappa C).**
- ”A two dimensional numerical model of primary pollutant emitted from an urban area source with wet deposition and mesoscale wind”, ***International Journal of Science, Environment and Technology, Vol.2, No.1, pp. 60-79, 2013*****(with C.M.Suresha,K.Lakshminarayanachari & Pandurangappa C).**
- .“Numerical model of air pollutant emitted from an area source of primary and secondary pollutants with chemical reaction and dry deposition” ***International Journal of Science, Environment and Technology, Vol.2, No.1, pp. 1-14, 2013*** **(with SudheerPai K L, K.Lakshminarayanachari and Pandurangappa C).**
- ”Numerical model of air pollutant emitted from an area source of primary and secondary pollutants with chemical reaction and gravitational setting with point source on the boundary”, ***International Journal of research in Environmental science and Technology, Vol.3, No.1, pp. 9-18, 2013*****(with C.M.Suresha,K.Lakshminarayanachari & Pandurangappa C).**
- ”A two dimensional numerical model of primary pollutant emitted from an urban area source with mesoscale wind, dry deposition and chemical

reaction", ***Atmospheric Pollution Research, Vol.4, No.1, pp. 106-116, 2013*****(with SudheerPai KL,K.Lakshminarayanachari & Pandurangappa C)*****.**

- "Numerical model of air pollutant emitted from an area source ofprimary pollutant with chemical reaction", ***International Journal of Application or Innovation in Engineering and Management, Vol.2, No.3, pp.132-144, 2013*****(with C.M.Suresha,K.Lakshminarayanachari & Pandurangappa C)*****.**
- "Effect of meso scale wind on primary and secondary pollutants emitted from an area source with dry deposition and chemical reaction", ***International Journal of applied research and studies, Vol.2, No.1, pp. 1-21, 2013*****(with SudheerPai KL,K.Lakshminarayanachari & Pandurangappa C)*****.**
- "Advection – Diffusion numerical model of air pollutants emitted from an area source with removal mechanisms by considering point source on the boundary", ***International Journal of Application or Innovation in Engineering and Management, Vol.2, No.2, pp.251-268, 2013*** **(with SudheerPai KL,K.Lakshminarayanachari & Pandurangappa C)*****.***
- "Effect of mesoscale wind on primary and secondary pollutant emitted from an area source with chemical reaction and gravitational settling", ***International Journal of Environmental Sciences, Vol.5, No.1, pp.35-50, 2014.*** **(with C.M.Suresha,K.Lakshminarayanachari & Pandurangappa C)*****.***
- " Effects of laser radiation, transverse electric field and roughness of the boundary on Rayleigh-Taylor instability in a thin poorly conducting viscous fluid"***, Advances in Applied Science Research,6(10): 149-158, 2015.***
- " Free convective flow of a couple stress fluid through a vertical porous channel in the presence of a transverse magnetic field"***, Kathmandu University Journal of Science, Engineering and Technology ,Vol. 12,No.1, 49-62, June 2016.*** **(with Shashikala B S).**
- " Magnetohydrodynamic and radiation effects on the heat transfer of a continuously stretching/shrinking sheet with mass transpiration of the horizontal boundary", **Chinese Journal of Physics, 72 (June 2021) 700–715. (with L.T. Benos, K.R. Nagaraju, U.S. Mahabaleshwar, I.E. Sarris, G. Lorenzini).**
- " Diffusion of chemical reactive species in non-newtonian liquid due to a porous stretching/shrinking sheet: brinkmann model, Journal of Porous Media, 25(8):71–87 (2022), **(with K.R. Nagaraju, U.S. ahabaleshwar,** ***Yahya Sheikhnejad).***
- " Impacts of slip and mass transpiration on Newtonian liquid flow over a porous stretching sheet", Heat Transfer. 2022;1–14., **(with Koratagere Revanna Nagaraju, Ulavathi Shettar Mahabaleshwar, Basma Souayeh).**
- "Thermal Performance of a Moving Fully Wet Porous Longitudinal Inclined Fin of Inverted Exponential Profile with Convective-Radiative Heat Transfer", Numerical Heat Transfer – Part A, (2024 - accepted) **(with B. J. Gireesha).**

- "An exploration of thermal characteristics of an exponential temperature induced thermal conductivity of a permeable stretching/shrinking fully wet moving inverted exponential magnetized inclined fin", Journal of the Nigerian Society of Physical Sciences, (2025 - accepted)

Conference Proceedings

- “MHD Oberbeck Convection in a Casson Fluid Over a Porous Bed with Radiative Boundary”, Lecture Notes in Mechanical Engineering, **Year** 2023, **Pages** 137-142, (with B. S. Shashikala ., U. S. Mahabaleshwar).
- “Effects of Free Convective Flow in Couple Stress Fluid with Isothermal Boundaries in the presence of an Applied Electric Field”, ECS Transactions, **Volume** 107, **Year** 2022, **Pages** 8181-8196, (with B. S. Shashikala)

Book Chapters

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Books

- Engineering Mathematics – II, Subhas Publishing House, Bangalore, 2015
- Engineering Mathematics – I, Subhas Publishing House, Bangalore, 2016

Editorial

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Reviewer of Journals

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(Please give details in IEEE format)

Editor/ Reviewer of Journal

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Patents

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Invited Lectures, talks and workshops

- “Matlab programming and Numerical Methods” in the faculty development program organized by the department of Electronics and Communications, SIT, Tumkur during 20-27 Jan 2011.
- “Numerical Methods using Matlab” in the faculty development program organized by the department of Mechanical Engineering, SIT, Tumkur during 24-29 June 2013.
- “Mathematical modeling of physical systems using difference equations” in the national conference on **“Mathematical Modeling with Engineering Applications”** organized by the department of Mathematics, Government S.K.S.J. Technological Institute, Bangalore on 26th Oct 2013.