

## Dr. Sanjib Sengupta

Professor

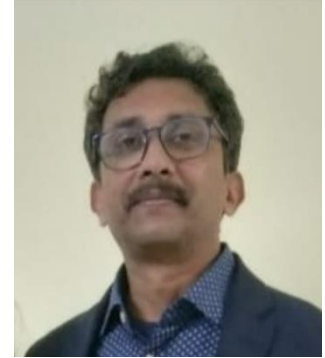
Department of Mathematics

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### Education:

Degree	Year	Institution
Ph.D.	2013	Gauhati University
M.Phil.	1998	Dibrugarh University
M.Sc.	1995	Gauhati University
B.Sc. (Hons.)	1993	Dibrugarh University

### Teaching Experience:

Name of The Institution	Position Held	Period
S.S College, Hailakandi	Lecturer	02/12/2004 - 18/06/2005
Assam University, Silchar	Lecturer	20/06/2005 - 31/12/2005
Assam University, Silchar	Assistant Professor	01/01/2006 - 08/04/2015
Assam University, Silchar	Associate Professor	09/04/2015 - 25/04/2018
Assam University, Silchar	Professor	26/04/2018 - Till Date

### Field of specialization:

Fluid Dynamics, MHD, Transport phenomena, Computational methods.

### **Courses Taught/ Teaching:**

Ordinary and Partial Differential Equations, MATLAB (Theory and Practical), Computer Oriented Numerical Methods, Mechanics, Relativity, Fluid Mechanics.

### **Research Area:**

CURRENT RESEARCH AREA:

Non-Newtonian Fluids, Bio-fluids, Epidemic Models, .Fractional Calculus, Fractional Order PDE,

### **Experience:**

Research:

1997-1999: Completed M.Phil. in Non-Newtonian Fluids from Dibrugarh University.

2009-2013: Done Ph.D. in Newtonian Fluids from Gauhati University.

### **Conference Paper Published:**

<b>Title of the Paper</b>	<b>Conference</b>	<b>Year</b>	<b>Volume</b>
Couette flow model of MHD $Al_2O_3$ -Water nanofluid with convective boundary conditions	AIP Conference Proceedings	2019	2115

### **List of Indexed Journal Publications:**

<b>Sl. No.</b>	<b>Title of the Paper</b>	<b>Journal of Publication</b>	<b>Year</b>	<b>Volume, Page No.</b>
1	Gravitation modulation impact on MHD free convection flow of	Journal of Naval Architecture and Marine Engineering	2020	17(2), 199-218

	micropolar fluid			
2	Dusty time fractional MHD flow of a Newtonian fluid through cylindrical tube	International Journal of Emerging Technologies	2020	11(2),610-617
3	Dusty time fractional MHD flow of a Newtonian fluid through a cylindrical tube with a non-Darcian porous medium	Journal of Applied Mathematics and Computational Mechanics	2020	19 (4), 101-114
4	Dual DTM-padé approximations on free convection MHD mass transfer flow of nanofluid through a stretching sheet in presence of Soret and dufour phenomena	WSEAS Transactions on Fluid Mechanics	2020	15, 23-40
5	MHD dissipative fluid past a stretching sheet in the presence of Soret effect with Newtonian convective heat and mass conditions	Heat Transfer - Asian Research (WILEY)	2019	48(2),684-712
6	MHD free convection mass transfer flow of radiative micropolar fluid with soret effect and uniform heat and mass fluxes	American Journal of Heat and Mass Transfer	2018	5(1), 49-75
7	Induced magnetic field interaction	Frontiers in Heat and Mass	2018	10-19

	in free convective heat and mass transfer flow of a chemically reactive heat generating fluid with thermo-diffusion and diffusion-thermo effects	Transfer (FHMT)			
8	Heat and Mass transfer analysis on MHD mixed convection flow of radiative chemically heat generating fluid with viscous dissipation and thermo-diffusion effect	Frontiers in Heat and Mass Transfer	2018	11-30	
9	On three Dimensional Oscillating Flow of Magneto-micropolar Fluid Past an Inclined Plate with Radiation Absorption, Chemical Reaction and Heat Generation	International Journal of Applied Engineering Research	2018	13 (18), 13919-13931	
10	MHD free convective mass transfer flow of radiative uniform heat generation (absorption) fluid through a wavy permeable channel in the presence of Soret and Dufour effects	Canadian Journal of Physics	2016	95(1),44-58	
11	Free Convective Chemically Absorption Fluid Past an	Applications and Applied Mathematics	2015	10(1) 328-348	

	Impulsively Accelerated Plate with Thermal Radiation Variable Wall Temperature and Concentrations.			
12	An Analysis on Unsteady Heat and Mass Transfer Flow of Radiative Chemically Reactive Fluid past an Oscillating Plate Embedded In Porous Media in Presence of Soret Effect	International Journal of Recent Technology and Engineering	2015	3(6),10-14
13	Influences of Soret effect and Thermal Radiation on MHD Mixed Convective Mass Transfer Flow with Chemical Reaction and Heat Generation/Absorption	Communications on applied electronics	2015	1(7), 14-19
14	Free convective flow of chemically absorbing fluid past an oscillating plate embedded in Porous media with heat sink uniform heat flux and fluctuating wall concentration	International Journal of Engineering Science and Technology	2014	6(5), 57-77
15	Free convective heat and mass transfer flow past an oscillating plate with heat generation, thermal radiation and thermo-diffusion effects	JP Journal of Heat and Mass Transfer	2013	8(2),187-210
16	An Exact Analysis for MHD free convection mass transfer flow past	Chemical Engineering Communications	2013	200(4),494-513

	an oscillating plate embedded in a porous medium with Soret effect	(Taylor and Francis Group)		
17	Thermo-diffusion and diffusion-thermo effects on a three-dimensional MHD mixed convection flow past an infinite vertical porous plate with thermal radiation	Journal of Magnetohydrodynamics	2011	47, 41-60

### Book Published:

Title of the Book	Publisher	Year	ISBN
Heat and Mass Transfer Phenomena in MHD Flow: Modelling with Applications	Scientific Research Publishing, Inc	2014	978-1-61896-006-5

**Award and Fellowship:** Awarded National Scholarship for the year 1992-1993.

### Ph.D Thesis Guidance:

Name of the Scholar	Title of the Thesis	Year	Status
Reshmi Deb	A study on Heat and Mass Transfer Effects on Micropolar fluid flow	2014	Completed
Amrit Karmakar	Studies of some MHD flows, Heat and	2014	Completed

	Mass Transfer problems.		
Dikes Shadap	A Study on Magneto Heat and Mass Transfer Flows in Newtonian and Non-Newtonian fluids	2015	Ongoing
Dibyendu Saha	A Study on Heat and Mass Transfer Phenomena in Nano-fluid flow	2017	Ongoing

### **M.Phil. Thesis Guidance:**

<b>Name of the Scholar</b>	<b>Title of the Thesis</b>	<b>Year</b>	<b>Status</b>
Bishnu Ram Das	A Study on fluid motion in incompressible Newtonian fluid	2014	Completed
H. Imo Mani Singha	A Study on Dusty Fractional Order magneto Navier-Stokes Equation in Cylindrical Domain	2017	Completed

### **Project Work:**

<b>Project Title</b>	<b>Funding Agency</b>	<b>Amount</b>	<b>Duration</b>	<b>Period</b>	<b>Status</b>
Exact analysis of some studies on heat and mass transfer problems related to two-dimensional laminar flow of an incompressible Newtonian constant viscous fluid	UGC	1.58 Lakhs	2 years	01/07/2012-30/06/2014	Completed

### **Membership of Professional/Learned/Scientific Societies:**

1. Life Member of the “Indian Society of Theoretical and Applied Mechanics” (ISTAM).
2. Member of the International Association of Engineers (IAENG).
3. Life Member of the “Assam Academy of Mathematics” (AAM).
4. External Member of Departmental Board of Studies, Department of Mathematics, School of Fundamental and Applied Sciences, Assam Don Bosco University (06/07/2021-06/07/2024)

### **Seminar/Workshop/Conference/ Paper Presentation/ Invited Talk:**

<b>Program Name</b>	<b>Sponsoring Agency</b>	<b>Venue</b>	<b>Year</b>	<b>Type of Participation</b>
First National Workshop on Techniques in Applied Mathematics	DST	Dept. of Applied Mathematics, Calcutta University	2005	Attended
Second National Workshop on Techniques in Applied Mathematics	DST	Dept. of Applied Mathematics, Calcutta University	2006	Attended
STTP on Applied Numerical Methods for Scientists and Engineers	AICTE	Dept. of Maths, VNIIT.	2009	Attended
National Seminar on Mathematics And applications (NSMA-	The University of Burdwan, WB	The University of Burdwan, WB.	2011	Paper presentation



2011)				
The 5th International Conf. on “Mathematical Sciences for Advancement of Science and Technology” MAST 2011.	DBT, DRDO & DIT	ISI, West Bengal	2011	Paper presentation
9th Micro-Seminar on Non-linear Phenomena (National Level)	Dibrugarh University	Mathematics Dept., Dibrugarh University	2012	Invited Talk
One week FDP on Effective Teaching	TEQUIP-II	NIT Silchar	2012	Attended
Three Day Workshop on Applications of Mathematics in Science and Engineering	TEQUIP-II	NIT Silchar	2012	Attended
One Day workshop on Outcome Based Curriculum Framework as per NBA requirement.	TEQUIP-II	NIT Silchar	2013	Attended
58th Congress of the Indian Society of Theoretical and Applied Mechanics (International).	IIT, Khragpur	Bengal Engg. and Science University, Shibpur, WB, India	2013	Paper presentation
Two week main workshop on Fluid Mechanics at IIT	National Mission on	NIT Silchar	2014	Attended

Kharagpur (On line)	Education through ICT, Govt. of India			
National Centre for Mathematics ATM School in Numerical Analysis	TIFR and IIT Bombay	Panjab University	2014	Attended
The UG New Syllabus in Mathematics	UGC and Dibrugarh University	Mathematics Dept., Dibrugarh University	2019	Resource Person, Invited Talk