

DEPARTMENT OF MATHEMATICS JNTUH COLLEGE OF ENGINEERING HYDERABAD (AUTONOMOUS)

NEWSLETTER FROM 1ST JULY, 2021 TO 30TH JUNE, 2022



SHAKUNTALA DEVI

Shakuntala devi was born in 1939. In 1980, she gave the product of two, thirteen digit numbers within 28 seconds, many countries have invited her to demonstrate her extraordinary talent. In Dallas she competed with a computer to see who gave the cube root of 188138517 faster, she won. She is known to be **Human Computer**

About the Department

The Department of Mathematics was established in the year 1965 at the time of inception of the Nagarjuna Sagar Engineering College to support the Engineering Departments having courses in Mathematics. The Department of Mathematics has become an integral part of JNTU College of Engineering, Hyderabad a constituent college of JNT University, consequent upon the formation of the University in 1972. Ever since the inception, the Department of Mathematics is actively participating in the academic development of the University by properly revising the syllabi of Mathematics Courses to cater the needs of Engineering Departments and the academic industry.

The Department of Mathematics started a 3 Year Post Graduate Course in Mathematics, namely M.Sc (Tech) titled "Systems Theory & Industrial Applications" in 1991. The course was later restructured as twoyear M.Sc course in Mathematics with the title "Systems Theory & Computer Modeling" in consonance with the present day developments in global scenario with a suitable curriculum that bridge the gap between academics and industry.

Keeping in view of the requirements of the students community the Syllabus and structure of the course is revised in 2012 and the M.Sc program is renamed as <u>APPLIED MATHEMATICS</u>. The M.Sc (Applied mathematics) course is unique in the structure by the presence of the blend of pure mathematics, applied mathematics and computer science subjects in the curriculum. The students from abroad are encouraged to do certain pre requisite courses (if necessary) to understand the concepts from the day one in the class room. Also all the students are encouraged to take up project work related to the real world problems at the final semester which is compulsory in the curriculum. The course is received extremely well in the fields of teaching, research and industry

The Vision

- To enrich the problem solving and analytical skills of the stake holders
- To promote research innovation and excellence.
- To solve Ecological, Environmental, Atmospheric and Real World problems.
- To support the Industry and Government in solving the social challenges.

◆ The Mission:

The Department of Mathematics encourages and promotes the analytical skills of the stake holders with the use of Advanced Mathematical, Computational and Informatics Techniques to solve the various Industrial and Environmental problems for the benefit of society and to make more competition in the global environment.

Programs/Courses Offered

- ➢ B.E/B. Tech
- > M. Sc in Mathematics (<u>APPLIED MATHEMATICS</u>) 2 years
- Ph.D. in Mathematics (Regular & Part Time)

• The areas in which the faculty members are actively engaged in research:

- Fluid Dynamics
- Mathematical modeling
- Topology
- Dynamical systems

◆ Facilities in the department:

Computer lab: The computer lab is equipped with well configured systems with all the latest software for doing computations and simulations at research level in addition to the regular courses for M. Sc students.

Library: The department has a well equipped library, consisting of books from all branches of mathematics. Department library with approximately 300 volumes for regular usage is made available to students

• Interactive sessions, competitive exams, career Guidance:

Quit often the department conduct interactive meetings with the people from software industry and research organizations to enlighten the students, particularly for the students of P.G course.

◆ Credentials of the Department of Mathematics:

- In the year 2008, professor of the Department Dr. B. Krishna Gandhi became the first Vice Chancellor of JNTUAnantapur.
- Professor Dr. G. Lakshminarayana was Vice chancellor of JNTU (combined) for Two terms. He was the first vice chancellor from the Department of Mathematics.

• Scholarships & Awards:

Dr. Shahnaz Bathul (Retd Professor of mathematics JNTUCEH) has instituted an award of Rs 15,000 for the B.Tech student of JNTUCEH who gets a maximum total of marks in 3 Mathematics papers put together.

A gold medal is constituted by Dr. Shahnaz Bathul, for the student who secures highest percentage of marks in P.G Course.

This medals will be presented to the student at the university convocation

• Strengths, Weaknesses, Opportunities, Challenges and Future plans of the department:

Strengths:

- The faculty of the Department are actively engaged in research, well experienced and have knowledge in diverse fields of the Mathematics.
- Well qualified faculty
- Actively participation of each faculty in various college committees.
- Mathematics Laboratory with internet facility
- Mathematics Department with internet facility

Weaknesses:

- The Department does not have all positions filled with permanent staff.
- More effort is needed to increase the number of state/central government funded projects to strengthen the department.
- Soft skills and communication skills of students need to be improved.
- Student and staff are to be encouraged for paper presentation at various National / International conferences, workshops and seminars.

Opportunities:

- The students with M.Sc Applied Mathematics degree are suitable for IT Industry related jobs.
- Wide higher education option.
- This department is known for its student friendly atmosphere. We attend to all the problems of the students at a very intimate personal level
- Mathematical softwares (useful in teaching, learning and research)

Challenges:

- The challenge is to train the students to learn the Mathematical concepts which can be applied to the real world problems.
- To increase students strength in the Department of Mathematics
- To remove phobia about subject and to create interest among the student learn fundamental concepts of Mathematics with joy.
- Manage, improve and upgrade physical facilities.
- To develop the analytical and logical thinking of the students and their skills so that they can apply Mathematical Methods to their real-life situations.
- To develop the analytical and logical thinking of the students and their skills so that they can apply Mathematical Methods to their real-life situations.

The persons headed and molded the department:

✤ Prof. G. Purushotham◆		Prof. M.M.V.Subba Rao	*	Prof. D.Narasimha Murthy
 Prof. V.Rama Mohan Rao 	*	Prof.V.S.Rao		Prof.G. Rama Krishna Rao
 Prof M.G.Ramaiah 	*	Prof. V. Sreehari Rao	*	• Prof. B.Krishna Gandhi
 Prof.A.Rama Krishna Prasad 	*	Prof. Shahnaz Bathul		
	Hea	d of the Department		
Prof. M. A. Srinivas		From: 06-05-2011		To: 04-05-2022
Prof. MN Raja Shekar		05-05-2022		To: Till date

Name of the Faculty	Designation	Qualifications			
	Regular Faculty				
Dr. M. A. Srinivas	Professor & Head	M.Sc, Ph.D, M.Tech			
Dr. MN Raja Shekar	Professor	M.Sc, Ph.D			
Dr. B. Ravindra Reddy	Professor	M.Sc., M.Phil., Ph.D			
Dr. V. Srinivasa Kumar	Assistant Professor	M.Sc., M.Phil., Ph.D			
Contract Faculty					
Dr. B. Shankar Goud	Assistant Professor (C)	M. Sc, M. Tech, B.Ed, Ph. D			
P. Megaraju	Assistant Professor (C)	M. Sc			
Dhanalakshmi Naidu	Assistant Professor (C)	M. Sc			
V. Madhu Kumar	Assistant Professor (C)	M. Sc			
M. Bhavana	Guest Faculty	M. Sc			
Non Teaching Staff					
B. Swapna	Programmer	B. Tech			
R. Neelima	Attender	10 th Class			

Faculty Profiles



Dr. M.A. Srinivas

M.Sc(A.U), M.Tech, Ph.D(A.U),

Professor & Head of the Department

Prof M. A. Srinivas is currently heading the Department of Mathematics. He is Chairperson, Board of Studies (BOS) of Mathematics, JNTUH College of Engineering, Hyderabad. He is member of BOS of Mathematics for JNTU Hyderabad and many autonomous colleges of engineering and technology of the states Telangana and Andhra Pradesh.

Research interests include Differential Equations, Mathematical Modeling. He guided 6 students for Ph.D and 3 for M.Phil. Presently he is guiding 4 students. He Published 32 research papers in peer reviewed journals of national and international standard. He has 28 years of teaching and research experience. He has done Post Doctoral Research, at ICTP, Italy.

He was member of academic senate of Andhra University during 1988-90. He acted as panel member for several universities in the process of selection/ recruitment of teaching positions. He is member of Board of studies of several Autonomous Colleges. He is life time member of various professional organizations viz; Indian Mathematical Society and I S T E. He is a Panel member for A.P Maths Forum, formed by Rajiv Vidya mission, Govt. of A.P. He was member of book selection committee of District Grandhalaya Samstha. He was a resource person to the training program conducted by NITTTR, Hyderabad.

His present current activities are:

- Contributing for the advancement of basic knowledge among students in pure and applied mathematics
- Applying mathematical concepts to biological / ecological sciences.
- He had completed a research project funded by UGC.



Dr. V. Srinivasa Kumar M.Sc (OU), M.Phil(ANU), Ph.D (ANU) Assistant Professor

His research interests include Real Analysis, Topology, Functional Analysis, Fixed Point Theory And Algebra. He has 20 years of teaching and research experience. He has Published 38 papers in various national and international reputed journals. He Qualified **CSIR-UGC NET** examination for Lectureship. He guided 2 student for Ph.D. He is presently guiding 2 Ph.D students. He did a few courses at various universities like Central University of Hyderabad and TIFR Bangalore etc. He is a Life-Time member of Andhra Pradesh Society for Mathematical Sciences and Calcutta Mathematical Society.



Dr. MN Raja Shekar M.Sc, Ph.D,

Professor & Head

Dr. MN Raja Shekar has obtained his Ph.D. degree in 2000 in the area of the Fluid dynamics. He has completed his M. Sc. (Applied Mathematics) and B. Sc. from the prestigious Osmania University. He has been working as a Professor in Department of Mathematics at JNTUH College of Engineering, Jagitial. He has 24 years of research and Engineering Teaching experience. In his long tenure of service, he worked in various administration positions viz., Head of the Department, Chairman, Board of Studies for JNTUH University, NSS Program Officer etc. His area of the research is Magneto-hydrodynamics fluid flows and Numerical Techniques. To his credit, he has two M. Phil. Degree and six Ph. D degree awardedunder his guide-ship. Presently, he is guiding 5 Ph.D. candidates. He has published several papers in reputed National and International Journals and he is also a life member of severalreputed professional bodies viz., ISTE, ISTAM, APSMS etc.

Courses offered in the Department

List of courses in the A. Y. 2021-22

Sl. No	Course Name	Offering Year & Semester
1	Matrix Algebra and Calculus	B. Tech I year I sem (for all branches)
2	Applied and Multivariable Calculus	B. Tech I year II sem (for all branches
3	Probability and Statistics	B. Tech II Year I Sem (for CIVIL Engineering)
4	Probability Distributions and Complex Variables	B. Tech II year I sem (For Mechanical, Metallurgical and Chemical Engineering Branches)
5	Applied Statistical Methods	B. Tech II year II sem (for CSE)
6	Numerical methods, Complex variable and Graphs	B. Tech II year II sem (for ECE)
7	Numerical Methods and Complex Variables	B. Tech II year II sem (for EEE)

M.Sc. (Applied Mathematics) – Full Time A. Y.2021-22

I SEMESTER

S.No.	Subject		
1	Mathematical Analysis		
2	Algebra		
3	Theory of Ordinary Differential Equations		
4	Probability and Statistics		
	Departmental Elective-I		
5	(One of the following is to be selected)		
5	i) Discrete Mathematics		
	ii) Mechanics		
6	'C'Programming Lab		
7	Seminar		

II SEMESTER

S.No	Subject			
1	Advanced Analysis			
2	Linear Algebra			
3	Complex Analysis			
4	Integral Transforms and Integral Equations			
5	Departmental Elective-II (One of the following is to be selected) i) Calculus of variations ii) Advanced Differential Equations			
6	Data Structures through 'C'			
7	Seminar			

III SEMESTER

S.No	Subject		
1	Topology		
2	Numerical Analysis		
3	Partial Differential Equations		
4	Optimization Techniques		
5	Departmental Elective-III (One of the following is to be selected) i) Discrete Time Control Systems ii) Analytic Number Theory		
6	MATLAB-I		
7	Seminar		

IV SEMESTER

S.No	Subject			
1	Functional Analysis			
2	Operation research			
3	Fluid Mechanics			
4	Differential Equations and Dynamical Systems			
5	 Departmental Elective-IV (One of the following is to be selected) i) Theory of Computation ii) Numerical Methods for Partial Differential Equations 			
6	MAT LAB-II			
7	Project			

SI. No	Name of the Faculty	No. of Journals in A. Y. 2021-22
1	Prof. M. A. Srinivas	2
2	Prof. MN Raja Shekar	3
3	Prof. B. Ravindra Reddy	6
4	Dr. V. Srinivasa Kumar	6
5	Dr. B. Shankar Goud	25
6	P. Megaraju	1
	Total:	69

Paper Publications in A. Y. 2021-2022

Prof. MN Raja Shekar

- 1. P Megaraju, SR Sheri, **MN Rajashekar**, Transient MHD flows through an exponentially accelerated isothermal vertical plate with Hall effect and chemical reaction effect: FEM Partial Differential Equations in Applied Mathematics 4, 100047, 10 2021
- 2. N Manjula, K Govardhan, **MN Rajashekar**, Effect of chemical reaction on magneto hydrodynamic Williamson nano fluid with variable thickness and variable thermal conductivity, J. Math. Comput. Sci. 11 (1), 793-808, 1 2021
- 3. DU Sarwe, B Shanker, R Mishra, RSV Kumar, **MN Rajashekar**, Simultaneous impact of magnetic and Arrhenius activation energy on the flow of Casson hybrid nanofluid over a vertically moving plate, Int. J. Thermofluid Sci. Technol 8 (2), 1-20, 11 2021
- 4. ma. info ISSN 2229–5046, 2017

Prof. M. A. Srinivas

- 1. S Hariprasad, **MAS Srinivas**, NP Kumar, K Praveenkumar, The Dynamics of an Eco- pidemiological Model of three species with Holling type-II and Type-IV functional responses, Journal of Physics: Conference Series 1850(1),012003,2021
- 2. SDPWJ **M A S Srinivas**, Nemani subhadra,Kottakkaran Sooppy NISARc,*, HEAT AND MASS TRANSFER EFFECTS OF PERISTALTIC MOTION OF A JEFFERY FLUID IN A TUBE, Thermal science 25 (2), 185-192, 2021

Prof. B. Ravindra Reddy

- 1 K. Madhusudhan Reddy, K. Lakshmi Narayan and **B. Ravindra Reddy**, Stability and Hopf Bifurcation Analysis of a Delayed SEIS Model, International Journal of Ecology & Development, ISSN 0973-7308, Volume 36, Issue No.1, 2021.
- 2 **B. Ravindra Reddy**, Dynamics of an Eco-Epidemic Model with Saturated Incidence Rate, International Journal of Ecology & Development, ISSN 0973-7308, Vol. 36, Issue No.3, 2021.

- **B. Ravindra Reddy**, Stability Analysis of Delay Induced Tumor and Immune System Interaction Model, J. Math. Comput. Sci., 11(2021), N0.4, 4552-4562.
- 4 M. Sridevi, **B. Ravindra Reddy**, Hopf Bifurcation Analysis and Stochastic Influence of Cancer Therapy Model, International Journal of Ecological Economics and Statistics, ISSN 0973-7537, Volume 42, Issue No.1, 2021.
- 5 Nalivela Nagi Reddy, Vempati Srinivasa Rao, **B. Ravindra Reddy**, Impact of Thermal Radiation and Chemical Reaction On MHD Heat and Mass Transfer Casson Nano fluid Flow Past A Stretching Sheet In Presence of Heat Source/Sink, ARPN Journal of Engineering and Applied Sciences, VOL. 16, NO. 11, JUNE 2021.
- 6 Nalivela Nagi Reddy, Vempati Srinivasa Rao, **B. Ravindra Reddy**, Chemical reaction impact on MHD natural convection flow through porous medium past an exponentially stretching sheet in presence of heat source/sink and viscous dissipation, Case Studies in Thermal Engineering, Case Studies in Thermal Engineering, 25 (2021) 100879.

Dr. V. Srinivasa Kumar

- 1. D. PurnaChandarRao, S. Thigarajan and **V. Srinivasakumar**, Significance of Quadratic thermal radiation on the bio-convective flow of Ree-Eyring fluid through an inclined plate with viscous dissipation and chemical reaction: Non-Fourier heat flux model, International Journal of Ambient Energy, 2021
- 2. D. PurnaChandarRao, S. Thigarajan and **V. Srinivasakumar**, Significance of Dufour and Soret effects on the non-Darcy flow of Cross fluid by a tilted plate with radiation and chemical reaction: A Cattaneo-Christov heat flux model, Heat Transfer, Wiley Publications, Vol.51, 1585-1600, 2021
- 3. D. PurnaChandarRao, S. Thigarajan and **V. Srinivasakumar**, Heat Transfer in Darcy-Forchheimer flow of Tangent Hyperbolic fluid over an inclined plate with Joule heating, Journal of Applied Mathematics and Computational Mechanics, Vol. 20, 3, 31-40, 2021
- 4. D. PurnaChandarRao, S. Thigarajan and **V. Srinivasakumar**, Chemically Reactive Darcy-Forchheimer flow of Cross fluid by an inclined plate with heat source, International Journal of Aquatic Science, Vol.12, 2, 1883-1894, 2021
- 5. D. PurnaChandarRao, S. Thigarajan and **V. Srinivasakumar**, Darcy-forchheimer flow of ree-Eyring fluid over an inclined plate with chemical reaction: A statical approach, Heat Transfer, Wiley Publications, Vol.50, 7120-7138, 2021
- 6. Bagathkumar S and **V. Srinivasakumar**, Quasi-continuity on product spaces, Turkish Journal of computer and mathematics Education, Vol.12, 9, 1607-1611, 2021

Dr. B. Shankar Goud

- 1. Asogwa, Kanayo K, **Goud, B. Shankar**: Impact of velocity slip and heat source on tangent hyperbolic nanofluid flow over an electromagnetic surface with Soret effect and variable suction/injection, Part E: Journal of Process Mechanical Engineering .2022. 1–13. DOI: 10.1177/09544089221106662.
- 2. Bilal Ahmad, Asif Nawaz, K. Smida, Sami Ullah Khan, M. Ijaz Khan, Tasawar Abbas, Y. Dharmendar Reddy, Kamel Guedri , M.Y. Malik, **B. Shankar Goud** , Ahmed M. Galal: Thermal diffusion of Maxwell nanoparticles with diverse flow features: Lie group simulations, <u>International Communications in Heat and Mass Transfer</u>, 136, 2022, 106164. https://doi.org/10.1016/j.icheatmasstransfer.2022.106164.
- 3. Amar, N.; Naikoti, Kishan; **Goud, B. Shankar**: MHD heat transfer flow over a moving wedge with convective boundary conditions with the influence of viscous dissipation and internal heat generation/absorption, Heat Transfer,51(6),2022, pp.5015-5029. <u>https://doi.org/10.1002/htj.22534</u>.
- 4. M. Akram, W. Jamshed, **B.Shankar Goud**, A.A. Pasha, T. Sajid, M.M. Rahman, M. Arshad, W. Weera, Irregular heat source impact on carreau nanofluid flowing via exponential expanding cylinder: A thermal case study, Case Studies in Thermal Engineering (2022), doi.org/10.1016/j.csite.2022.102171.

- 5. **B Shankar Goud,**Mahantesh M Nandeppanavar, Chemical reaction and MHD flow for magnetic field effect on heat and mass transfer of fluid flow through a porous medium onto a moving vertical plate, International Journal of Applied Mechanics and Engineering, Int. J. of Applied Mechanics and Engineering, 2022, vol.27, No.2, pp.226-244. DOI: 10.2478/ijame-2022-0030.
- 6. Shankar Goud Bejawada, Yanala Dharmendar Reddy, Wasim Jamshed, Rabia Safdar, Mohamed R. Eid : Numerical Case Study of Chemical Reaction Impacts on MHD Micropolar Fluid Flow Past over a Vertical Riga Plate. Materials 2022, 15, 4060. https://doi.org/10.3390/ma15124060.
- 7. **B. Shankar Goud,** Y. Dharmendar Reddy, and S.R.Mishra : Joule heating and thermal radiation impact on MHD boundary layer Nanofluid flow along an exponentially stretching surface with thermal stratified medium, *Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanomaterials, Nanoengineering and Nanosystems.* June 2022. doi:10.1177/23977914221100961
- 8. Y.Dharmendar Reddy, Fateh Mebarek-Oudina, **B. Shankar Goud**, A. Abidi: Radiation, Velocity and Thermal Slips Effect towards MHD boundary layer flow through heat and mass transport of Williamson nanofluid with porous medium, Arabian Journal for Science and Engineering, 2022. DOI: 10.1007/s13369-022-06825-2.
- 9. Mishra, Pankaj; Kumar, Dhirendra; Yanala, Dharmendar Reddy, **Goud, B. Shankar** :Numerical Investigation of MHD flow of Williamson Nanofluid with variable viscosity pasting a wedge within porous media: A non Darcy model approach, Heat Transfer, 2022. DOI: <u>10.1002/htj.22580</u>.
- 10. Asogwa, Kanayo K, **Goud, B. Shankar,** Yanala, Dharmendar Reddy, Non-Newtonian Electromagnetic Fluid Flow Through a Slanted Parabolic Started Riga Surface With Ramped Energy, Heat Transfer, 51(6), 2022, pp. **4833-6026**.https://doi.org/10.1002/htj.22560.
- 11. M Anil Kumar, Yanala Dharmendar Reddy, **B Shankar Goud**, V Srinivasa Rao, An Impact On Non-Newtonian Free Convective Mhd Casson Fluid Flow Past A Vertical Porous Plate In The Existence of Soret, Dufour, and Chemical Reaction, International Journal of Ambient Energy, 2022, https://doi.org/10.1080/01430750.2022.2063381.
- 12. Nalivela Nagi Reddy, Yanala Dharmendar Reddy, Vempati Srinivasa Rao, **B. Shankar Goud**, Kottakkaran Sooppy Nisar "Multiple slip effects on steady MHD flow past a non-isothermal stretching surface in presence of Soret, Dufour with suction/injection", International Communications in Heat and Mass Transfer 134 (2022) 106024, https://doi.org/10.1016/j.icheatmasstransfer.2022.106024.
- **13.** Shankar Goud Bejawada, Yanala Dharmendar Reddy, Wasim Jamshed, Mohamed R. Eid, Rabia Safdar, Kottakkaran Sooppy Nisar,Siti Suzilliana Putri Mohamed Isa, Mohammad Mahtab Alam, Shahanaz Parvin "2D mixed convection non-Darcy model with radiation effect in a nanofluid over an inclined wavy surface", Alexandria Engineering Journal (2022) 61, 9965–9976.
- 14. Shankar Goud Bejawada, Yanala Dharmendar Reddy, Wasim Jamshed, Kottakkaran Sooppy Nisar, Abdulaziz N. Alharbi, Ridha Chouikh "Radiation effect on MHD Casson fluid flow over an inclined non-linear surface with chemical reaction in a Forchheimer porous medium", Alexandria Engineering Journal (2022), https://doi.org/10.1016/j.aej.2022.01.043.
- 15. Yanala Dharmendar Reddy, **B.Shankar Goud**, M.Riaz Khan, Mohamed Abdelghany Elkotb, Ahmed M. Galal "Transport properties of a hydromagnetic radiative stagnation point flow of a nanofluid across a stretching surface", Case Studies in Thermal Engineering, 31 (2022) 101839. https://doi.org/10.1016/j.csite.2022.101839.
- **16.** Shankar Goud Bejawada, Wasim Jamshed, Rabia Safdar, Yanala Dharmendar Reddy, Meznah M. Alanazi, Heba Y. Zahran and Mohamed R. Eid "Chemical Reactive and viscous dissipative flow of magneto nanofluid via natural convection by employing Galerkin Finite Element Technique". Coatings 2022, 12, 151. https://doi.org/10.3390/coatings12020151.
- 17. Dharmendar Reddy Yanala, B. Shankar Goud, Ali J. Chamkha, Anil Kumar Mella "Influence of radiation and viscous dissipation on MHD heat transfer Casson nanofluid flow along a nonlinear stretching surface with chemical reaction", Heat Transfer. 2022, 51(4), pp: 3495-3511..doi:10.1002/htj.22460.

- **18.** Shankar Goud B, Pramod Kumar P, Malga BS. Induced magnetic field effect on MHD free convection flow in nonconducting and conducting vertical microchannel walls. Heat Transfer, <u>51(2)</u>, March 2022,pp. 2201-2218,. https://doi.org/10.1002/htj.22396.
- **19.** Shankar Goud Bejawada, Yanala Dharmendar Reddy, Kanti Sandeep Kumar, Epuri Ranjith Kumar "Numerical Solution of Natural Convection on a Vertical Stretching Surface with Suction and Blowing", International Journal of Heat and Technology 39(5), 2021, pp. 1469-1474. <u>https://doi.org/10.18280/ijht.390508</u>.
- 20. B. Shankar Goud, Dharmendar Reddy Yanala, Anil Kumar Mella, "Radiation and heat absorption effects on an unsteady MHD boundary layer flow along an accelerated infinite vertical plate with ramped plate temperature in the existence of slip condition", <u>Partial Differential Equations in Applied Mathematics</u>, Available online 9 October 2021, 100166. https://doi.org/10.1016/j.padiff.2021.100166
- 21. B. Shankar Goud, Mahantesh M. Nandeppanavar "Ohmic heating and chemical reaction effect on MHD flow of micropolar fluid past a stretching surface", Partial Differential Equations in Applied Mathematics, 4 (2021) 100104.https://doi.org/10.1016/j.padiff.2021.100104.
- 22. B.Shankar Goud and Dharmendar Reddy Yanala, "Finite element Soret Dufour effects on an unsteady MHD heat and mass transfer flow past an accelerated inclined vertical plate", Heat Transfer. 2021, 50(8), pp.8553–8578. DOI: 10.1002/htj.22290.
- 23. Dharmendar Reddy Yanala, Anil Kumar Mella, Srinivasa Rao Vempati, B.ShankarGoud: Influence of slip condition on transient laminar flow over an infinite vertical plate with ramped temperature in the presence of chemical reaction and thermal radiation, Heat Transfer, 2021,50(8),2021,pp. 7654-7671, https://doi.org/10.1002/htj. 22247.
- 24. P.Mangathai, **B.Shankar Goud**, Dharmendar Reddy Yanala: Soret and heat source effects on MHD convection flow past an infinite vertical plate embedded in porous medium in presence of viscous, Joules dissipation and chemical reaction", Turkish Journal of Computer and Mathematics Education Vol.12 No. 11 (2021), 2392-2403
- 25. Shankar Goud Bejawada, Zafar Hayat Khan, Muhammad Hamid "Heat generation/absorption on MHD flow of a micropolar fluid over a heated stretching surface in the presence of the boundary parameter", Heat Transfer.50(6) 2021; pp. 6129-6147, https://doi.org/10.1002/htj.22165.

P. Megaraju

1. Siva Reddy Sheri, Megaraju P, Rajashekar M.N., "Impact of Hall Current, Dufour and Soret on transient MHD flow past an inclined porous plate: Finite element method," Materials Today: Proceedings, Volume 59, Part 1, 2022, Pages 1009-1021, ISSN 2214-7853, https://doi.org/10.1016/j.matpr.2022.02.279.

SI. No	Name of the Faculty	No. of Conferences in A. Y. 2021-22
1	Prof. M. A. Srinivas	
2	Prof. MN Raja Shekar	
3	Prof. B. Ravindra Reddy	
4	Dr. V. Srinivasa Kumar	
5	Dr. B. Shankar Goud	1
6	P. Megaraju	2
	Total:	3

Conferences in A. Y. 2021-2022

- B. Shankar Goud et al., Heat source/sink effect on MHD heat transfer fluid flow over a stretching cylinder with porous medium, XXX Congress of APTSMS& International conference on Mathematics & Its Relevance to Science and Engineering (ICMRSE2022) organized by Department of Mathematics, Osmania University, Hyderabad-500007.
- P. Megaraju: Numerical Exploration of Transient MHD flow past an Infinite Vertical Porous plate with Hall current, Radiation, Thermal Diffusion and Diffusion Thermo. International conference on Mathematical sciences and Emerging Applications in Technology (ICMSEAT - 2022), GITAM University, 09-11,2022.
- 3) P. Megaraju: Impact of Hall current, Dufore and soret on Transient MHD flow past an inclined porous plate: Finite Element Method, Third International Conference on Recent Advances in Materials and Manufacturing (ICRAMM 2021), D Y Patil Colleg of Engineering and Technology, Kolhapur, Maharastra, 25-26 November, 2021.

Sl.no	Name of the Faculty	Nature of the Event	Title of the Event	Date(s)	Venue		
	A. Y. 2021-22						
1	Prof. B. Ravindra Reddy	FDP	Research Methodology in Humanities & Social Sciences	29 th May – 3 rd June	Lords Institute of Engineering & Technology		
2	Prof. B. Ravindra Reddy	FDP	ICT Tools for Effective Teaching Learning	8 th – 10 th June, 2021	Kamla Nehru Mahavidyalaya, Nagpur		
3	Prof. B. Ravindra Reddy	FDP	Innovative Teaching and Research in Science: Exploring the New Horizons	10 th – 15 th June, 2021	Department of Collegiate and Technical Education, Government First Grade College, Bengaluru, Karnataka		
4	Prof. B. Ravindra Reddy	FDP	Mathematics on Various Platforms	17 th – 22 nd June, 2021	Bharath Institute of Engineering and Technology		
5	Dr. V. Srinivasa Kumar	FDP	Faculty Induction Programme-8	24 th January – 28 th February, 2022	UGC HRDC, JNTU Hyderad		
6	Dr. V. Srinivasa Kumar	FDP	One-Week International Faculty Development Programme" Advanced Linear Algebra"	27 th September – 1 st October, 2021	Mahatma Hansraj Faculty Development Centre		
7	Dr. B. Shankar Goud	FDP	Role of Mathematics in latest Engineering Trends	4 th – 10 June, 2021	Lords Institute of Engineering & Technology		
8	Dr. B. Shankar Goud	Webinar	Numerical Computation Techniques for solving Boundary later Problems: HAM & Bvp4c	27 th August, 2021	Manipal University, Jaipur		

Workshops/ Seminars/ FDPs/ Conferences attended in 2021-22

S. No	Name of the Faculty	Title of the Book	Publisher	ISBN Number
1.	Prof. MN Raja Shekar	Advanced Calculus	Seven Hills International Publishers	978-93-88096-16-4

Books Published by the faculty in A. Y. 2021-22

Ph.D s awarded by the faculty in A. Y. 2021-22

SI. No	A. Y	Year of award	Supervisor Name	Student Name	Title of the Research Topic
1	2021-22	2021	Prof. B. Ravindra Reddy	M. Sridevi	Mathematical Study of Some Models in Epidemiology
2	2021-22	2021	Dr. V. Srinivasa Kumar	Repalle Panduranga Rao	A study on Rough Vough Latices, Rough vague Ideals in rings and L-Vague Normal L-Semirings of L-Semirings
3	2021-22	2022	Prof. MN Raja Shekar	N. Manjula	Heat and Mass Transfer Analysis of MHD Williamson Nanofluid over a stretching Sheet
				TOTAL	3

Board of Studies Meeting

The BOS of Mathematics met on 26th October 2021 for UG courses and on October 27, 2021 for PG courses to prepare the syllabus for various papers in B. Tech curriculum and PG curriculum to be taught by Mathematics faculty R-21 Regulations.

Members of the BoS

S. No	Name	Designation
1	Dr. M.A. Srinivas, Professor & HEAD, Department of Mathematics, JNTUHCEH	
2	Dr. N. Kishan, Professor, Department of Mathematics, OU, Hyderabad	Member
3	Dr. T. V. S. Sekhar Professor, Department of Mathematics, School of Basic Sciences, IIT hubaneswar Odisha.	
4	Dr. D. Srinivasacharya Professor, Department of Mathematics, NIT Warangal, Warangal.	
5	Dr. C. S. Sastry Professor, Department of Mathematics, IIT Hyderabad, Yeddumailaram, Hyderabad.	
6	Dr. C. Satyanarayana Associate Professor, Department of Mathematics, Ecole Centrale School of Engineering, Mahindra University, Hyderabad.	
7	Dr. K. Rajendra Prasad Professor, Department of Applied Mathematics, Andhra University, Visakhapatnam.	
8	Dr. V. Srinivasa Kumar Assistant Professor, Department of Mathematics, JNTUH College of Engineering JNTU Hyderabad.	
9	Dr. MN. Rajashekar, Professor, Department of Mathematics, JNTUHCEJ	Member

Sl.	Name of the feaulty	Name of the	Momborshin	
No	Name of the faculty	Organization	wiendersnip	
1	Prof. M. A. Srinivas	The Indian Mathematical	L ife Member	
		society		
2	Prof. M. A. Srinivas	Indian Society of		
		Theoretical and Applied	Life Member	
		Mechanics		
		The Indian Society of		
3	Prof. MN Raja Shekar	Theoretical and Applied	Life Member	
		Mechanics		
		Andhra Pradesh Society		
4	Prof. MN Raja Shekar	for Mathematical	Life Member	
		Sciences		
5	Prof. B. Ravindra Reddy	The Indian Society for	I ife Member	
		Technical Education		
6	Prof. B. Ravindra Reddy	Andhra Pradesh Society		
		for Mathematical	Life Member	
		Sciences		
7	Dr. V. Srinivasa Kumar	Andhra Pradesh Society		
		for Mathematical	Life Member	
		Sciences		

Professional Bodies / Memberships of the faculty

Patents published in A. Y. 2021-22

1. K.Sandeep **B.Shankar** Goud, M. Kumar, Nagapavani, A.Srilatha, Β. TulasilakshmiDeevi, Prasanthi Modugula, V. Nagaraju "Computation of Binary Alloy Interfaces under Fluid Dynamic Boundary Conditions", FORM - 2, THE PATENTS ACT, PATENTS RULES, 2003,COMPLETE 1970,(39 OF 1970), THE SPECIFICATION, (Section 10; rule 13).