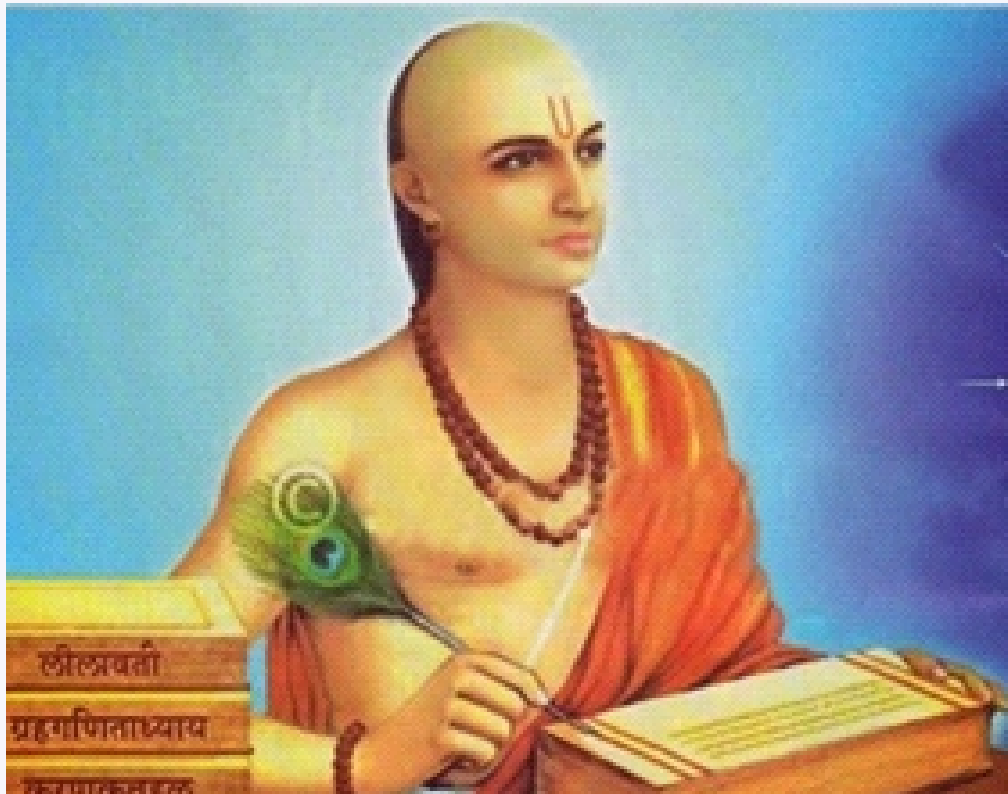




DEPARTMENT OF MATHEMATICS JNTU COLLEGE OF ENGINEERING HYDERABAD (AUTONOMOUS)

NEWSLETTER FROM 1ST JULY, 2019 TO 30TH JUNE, 2020



BHASKARACHARYA

Bhaskaracharya was born in a village of Mysore district. He was the first to give that any number divided by 0 gives infinity. He has written a lot about zero, surds, permutation and combination. He wrote, “The hundredth part of the circumference of a circle seems to be straight. Our earth is a big sphere and that's why it appears to be flat.”

He gave the formulae like $\sin(A \pm B) = \sin A \cdot \cos B \pm \cos A \cdot \sin B$

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 two-year 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 **APPLIED MATHEMATICS**. 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
- 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:**

Quite 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 JNTU Anantapur.
- 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:

- 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.SubbaRao	❖ Prof. D.Narasimha Murthy
❖ Prof. V.RamaMohanRao	❖ Prof.V.S.Rao	❖ Prof.G.RamaKrishnaRao
❖ Prof M.G.Ramaiah	❖ Prof. V. SreehariRao	❖ Prof. B.KrishnaGandhi
❖ Prof.A.RamaKrishnaPrasad	❖ Prof. ShahnazBathul	
Head of the Department		
	Prof. M. A. Srinivas	From: 06-05-2011
		To: till date

Faculty Profiles

Name of the Faculty	Designation	Qualifications
Regular Faculty		
Dr. M. A. Srinivas	Professor	M.Sc, Ph.D, M.Tech
Dr. B. Ravindra Reddy	Associate 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
Non Teaching Staff		
B. Swapna	Programmer	B. Tech
R. Neelima	Attender	10 th Class



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 N I T T T R ,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 U G C.



Dr. V. Srinivasa Kumar

M.Sc (OU), M.Phil(ANU), Ph.D (ANU)
Assistor Professor

His research interests include Real Analysis, Topology, Functional Analysis, Fixed Point Theory And Algebra. He has 18 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 1 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.

Courses offered in the Department

List of courses in the A. Y. 2019-20

Sl. No	Course Name	Offering Year & semester
1	Mathematics – I	B. Tech I year I sem (for all branches except Chemical Engineering)
2	Engineering Mathematics	B. Tech I year I sem (for Chemical Engineering)
3	Mathematics- II	B. Tech I year II sem (for all branches except Chemical Engineering)
4	Applied Mathematics	B. Tech I year II sem (for Chemical Engineering)
5	Probability and Statistics	B. Tech II Year I Sem (for CIVIL Engineering)
6	Engineering Mathematics – III	B. Tech II year I sem (For Mechanical, Metallurgical and Chemical Engineering Branches)
7	Mathematics - III	B. Tech II year I sem (for EEE)
8	Computer Oriented Ststistical methods	B. Tech II year II sem (for CSE)
9	Mathematics - III	B. Tech II year II sem (for ECE)

Paper Publications A. Y. 2019-2020

Sl. No	Name of the Faculty	No. of Journals in A. Y. 2018-19
1	Prof. M. A. Srinivas	1
2	Dr. B. Ravindra Reddy	6
3	Dr. V. Srinivasa Kumar	2
4	Dr. B. Shankar Goud	9
5	P. Megaraju	1
	Total:	19

Prof. M. A. Srinivas

1. **M A S Srinivas**, N. PHANIKUMAR S.HARIPRASAD, Mathematical Study of Plant-Herbivore-Carnivore System with Holing Type- II Functional Responses, Journal of advanced research in Dynamical and Control systems 11 (4), 2517-2536, 3 2019

Dr. B. Ravindra Reddy

- 1 G. Ranjith Kumar, Kalyan Das, K. Lakshminarayan, **B. Ravindra Reddy**, Crowding effects and depletion mechanisms for population regulation in prey-predator intraspecific competition model, Computational Ecology and Software, 2019, 9(1): 19-36.
- 2 K. Madhusudhan Reddy, K. Lakshmi Narayan and **B. Ravindra Reddy**, Dynamics of an SEIR Epidemic Model with Time Delay, Journal of Adv Research in Dynamical & Control Systems, ISSN 1943-023X, Vol. 11, No. 1, 2019.
- 3 M. Sridevi, **B. Ravindra Reddy**, Stability Analysis of an Epidemic Model with Infected Immigrants and Optimal Vaccination, International Journal of Recent Technology and Engineering (IJRTE), ISSN: 2277-3878, Volume-8 Issue-2, July 2019, pp 3071-3077.
- 4 V. Vidyasagar, Madhu Latha K, **B. Ravindra Reddy**, Solution to SPDDE using Exponentially Fitted Spline Method, International Journal of Advanced Science and Technology, ISSN: 2005-4238, Vol. 28, No. 15 (2019), pp.452-468.
- 5 V. Vidyasagar, Madhu Latha K, **B. Ravindra Reddy**, Solving Singularly Perturbed Differential-Difference Equations with Dual Layer Using Fourth Order Numerical Method, International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-9 Issue-2, December 2019.
- 6 M. Sridevi, **B. Ravindra Reddy**, Dynamics of an SI model with Time Delay and Diffusion, International Journal of Scientific & Technology Research, ISSN 2277-8616, Vol. 8, Issue 11, November 2019.

Dr. V. Srinivasa Kumar

1. R.Pandurangarao, **V. Srinivasa Kumar** and A. Prabhukumar, Rough Vague Lattice, Journal of Xi'an university of Architecture & Technology, Vol. 11, 12, 115-124, 2019
2. R.Pandurangarao, **V. Srinivasa Kumar** and A. Prabhukumar, L-Vague cut set on L-Vague Semirings of L-Semiring, International journal of Applied Engineering Research, Vol: 14, 11, 2602-2607, 2019

Dr. B. Shankar Goud

1. E. Ranjit Kumar, **B. Shankar Goud**, B. Suresh Babu , G.Srinivas “Diffusion-thermo effect on a free combined MHD flow with mass diffusion and temperature variation past an inclined oscillating plate”, International Journal of Recent Technology and Engineering, 8(4), November 2019, pp.9430-9435.
2. **B. Shankar Goud**, B. Suresh Babu, MN Raja Shekar, G.Srinivas, “Mass transfer effects on MHD flow through porous medium past an exponentially accelerated inclined plate with variable temperature and thermal radiation”, International Journal of Thermo fluid Science And Technology(former American Journal of Heat and Mass Transfer), Vol. 6, No. 4, Paper No. 19060402, 2019.

3. **B. Shankar Goud**, G. Narender, E. Ranjit Kumar “Stagnation point flow through a porous medium towards stretching surface in the presence of heat generation”, International Journal of Engineering and Advanced Technology (IJEAT) 9(1), pp-2646-2649, 2019.
4. **B. Shankar Goud**, J. Venkata Madhu, MN Raja Shekar “MHD viscous dissipative fluid flows in a channel with a stretching and porous plate with radiation effect”, International Journal of Innovative Technology and Exploring Engineering, 8(11), pp-1877-1882, 2019.
5. **B. Shankar Goud**, Pudhari Srilatha, MN Raja Shekar “Effects of Mass Suction on MHD Boundary Layer Flow and Heat Transfer over a Porous Shrinking Sheet with Heat Source/Sink”, International Journal of Innovative Technology and Exploring Engineering, 8(10), pp-263-266, 2019.
6. **B. Shankar Goud.**, K. Shivakumar “A power-law velocity application on hydromagnetic flow over a stretching surface”, Global Journal of Engineering Science and Researches, 6(5), pp.472-476, 2019.
7. G. Bal Reddy., **B. Shankar Goud.**, and MN. Raja Shekar “Numerical solution of MHD mixed convective boundary layer flow of a nanofluid through a porous medium due to an exponentially stretching sheet with magnetic field effect” International Journal of Applied Engineering Research, 14(9), pp. 2074-2083, 2019.
8. **B. Shankar Goud**, RatnaKumariJilugu, Ravi Gugulothu, K. Shivakumar “Effects of the thermal radiation on the boundary layer flow over an exponentially stretching sheet in the presence of viscous dissipation”, International Journal of Modern Engineering and Research Technology, 6(1), 2019, pp: 240-245.
9. **B. Shankar Goud** “Effects of Hall current, Dufour, Radiation, Ohmic heating, transverse magnetic field, and heat source on heat and mass transfer past an infinite vertical porous plate in the presence of chemical reaction”, Journal of Emerging Technologies and Innovative Research, 6(3), 2019, pp: 998-1003.

P. Megaraju

1. Siva Reddy Sheri, P. Megaraju, Anjan Kumar Suram, “Effect of Hall current and Viscous Dissipation on MHD Flow over an Exponentially Accelerated Plate with Ramped Temperature,” *AIP Conference Proceedings* 2246, 020100 (2020); <https://doi.org/10.1063/5.0015573>

Conferences in A. Y. 2019-2020

Sl. No	Name of the Faculty	No. of Conferences in A. Y. 2018-19
2	Prof. M. A. Srinivas	--
3	Dr. B. Ravindra Reddy	1
4	Dr. V. Srinivasa Kumar	--
5	Dr. B. Shankar Goud	2
	Total:	3

- 1) Prof. B. Ravindra Reddy: **International Conference on Mathematical Sciences and applications(ICMSA -2019)**, Organized by Department of Mathematics, GITAM University, 9-11, 2019.
- 2) B.Shankar Goud , D. Mahender :**Effects of Thermal Radiation on MHD Free Convection Flow Past a Vertical Porous Plate in the Presence of Chemical Reaction- FEM** International Conference on Computational & Experimental Methods for Advancing Engineering Systems Applications (ICCEAESA - 2019) **August 23, 2019, organized by Department of Mathematics, B.V. RAJU INSTITUTE OF TECHNOLOGY Vishnupur, Narsapur, Medak -502313 Telangana, India.**
- 3) B.Shankar Goud , D. Mahender, MN Raja Shekar: Thermal radiation Influence o MHD Free Convection flow across a porous medium in a vertical surface with temperature. **International Conference on Mathematical Sciences and Applications, August 9-11, 2019, organized by Department of Mathematics, School of Technology GITAM (Deemed to be University), Hyderabad, Telangana, India.**

Workshops/ Seminars/ FDPs/ Conferences attended from 2017-18 to 2021-22

Sl.no	Name of the Faculty	Nature of the Event	Title of the Event	Date(s)	Venue
A. Y. 2019-20					
1	Dr. M.A. Srinivas	FDP	Online tools & software for remote teaching - learning	24 TH and 25 TH April 2020	J N T U Hyderabad
2	Dr. B. Ravindra Reddy	International Conference	International Conference on Mathematical sciences and Applications	9 th – 11 th August, 2019-20	GITAM University, Hyderabad
3	Dr. B. Shankar Goud	FDP	SCILAB –An open source substitute for MATLAB	25 th -30 th May2020	JNTUH College of Engineering Sultanpur
4	Dr. B. Shankar Goud	FDP	International Webinar on Fluid Dynamics and its Applications	28 th – 29 th May, 2020	Government First Grade College, Bengaluru, Karnataka

Books Published by the faculty in A. Y. 2019-20

S. No	Name of the Faculty	Title of the Book	Publisher
1	Prof. M. A. Srinivas	B.Sc 1st year Semester- II - Statistics Laboratory Manual and Record	Dr. B. R. Ambedkar open University, Hyderabad
2	Prof. M. A. Srinivas	B.Sc 1st year Semester- II - Statistics	Dr. B. R. Ambedkar open University, Hyderabad

Ph.D s awarded by the faculty in A. Y. 2019-20

Sl. No	A. Y	Year of award	Supervisor Name	Student Name	Title of the Research Topic
1	2019-20	2020	Dr. B. Ravindra Reddy	Madhusudhan Reddy Kotla	Stability Analysis of Some Epidemic Models
2	2019-20	2020	Dr. V. Srinivasa Kumar	Sujatha Kurakula	On Generalizations of some fixed point theorems in 2 metric spaces
TOTAL					2

Research Projects in A. Y. 2019-20

S. No	Name of the Principal Investigator(s)	Title of the Project	Duration of the Project	Year	Sanctioned Agency	Amount
1	Prof. M. A. Srinivas Co - PI	Computational fluid dynamics studies of blood flow in human coronary artery of diabetic patient	1 year	2019	TEQIP III – CRS Collaboration with Dr. Vivek srivathsav, Mothihari College of Engineering, BIHAR	14,43,000/-

Professional Bodies / Memberships of the faculty

Sl. No	Name of the faculty	Name of the Organization	Membership
1	Prof. M. A. Srinivas	The Indian Mathematical society	Life Member
2	Prof. M. A. Srinivas	Indian Society of Theoretical and Applied Mechanics	Life Member
3	Dr. B. Ravindra Reddy	The Indian Society for Technical Education	Life Member
4	Dr. B. Ravindra Reddy	Andhra Pradesh Society for Mathematical Sciences	Life Member
5	Dr. V. Srinivasa Kumar	Andhra Pradesh Society for Mathematical Sciences	Life Member



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