



DEPARTMENT OF MATHEMATICS
JNTU COLLEGE OF ENGINEERING HYDERABAD
(AUTONOMOUS)

NEWSLETTER FROM 1ST JULY, 2017 TO 30TH JUNE, 2018



Srinivasa Iyengar Ramanujan

Srinivasa Ramanujan was a great mathematician of India. He had born on 22 December 1887 in Madras during the British Government. Initially, he was not interested in traditional education. Before attaining the age of 15, he had mastered in various sections of Mathematics. He received the K. Ranganatha Rao prize for mathematics in 1904. He married to Janakiammal on 14 July 1909. During his days in Cambridge, he became close to the great mathematician Hardy. He wrote many books comprising his theories and formulas. On 26 April 1920, he died at the age of 32. He had introduced the Hardy-Ramanujan Number 1729.

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:**

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 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.

◆ **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
Adhoc Faculty		
B. Shankar Goud	Lecturer	M. Sc, M. Tech, B.Ed.
P. Megaraju	Lecturer	M. Sc
Dhanalakshmi Naidu	Lecturer	M. Sc
G. Vinaya	Lecturer	M. Sc
K. Dhanalakshmi	Lecturer	M. Sc
V. Madhu Kumar	Lecturer	M. Sc
M. Bhavana	Guest Faculty	M. Sc
D. Shekhar	Guest Faculty	M. Sc
N. Varalakshmi	Guest Faculty	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 4 students for Ph.D and 3 for M.Phil. Presently he is guiding 4 students. He Published 30 research papers in peer reviewed journals of national and international standard. He has 26 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 NIT 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)

Assistant Professor

His research interests include Real Analysis, Topology, Functional Analysis, Fixed Point Theory And Algebra. He has 17 years of teaching and research experience. He has Published 32 papers in various national and international reputed journals. He Qualified **CSIR-UGC NET** examination for Lectureship. He is presently guiding 3 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. 2017-18

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

Paper Publications in A. Y. 2017-2018

Sl. No	Name of the Faculty	No. of Journals in A. Y. 2017-18
1	Prof. M. A. Srinivas	7
2	Dr. B. Ravindra Reddy	7
3	Dr. V. Srinivasa Kumar	2
4	B. Shankar Goud	5
	Total:	21

Prof. M. A. Srinivas

1. BS Lakshmi, SS Phulsagar, **MAS Srinivas**, QUALITATIVE STUDY OF A GENERALISED BRUSSELATOR TYPE EQUATION, Italian Journal of Pure and Applied Mathematics, 145, 2017
2. BSN Murthy, **MAS Srinivas**, Y Narasimhulu, A Three Species Prey-Predator Holling Type-II Non-Autonomous Discrete Model, Indian Journal of Science and Technology 10 (22), 14, 2017
3. KM Prasad, N Subadra, **MAS Srinivas**, Thermal Effects of Two Immiscible Fluids in a Circular Tube with Nano Particles, Journal of Nanofluids 6 (1), 105-119, 4 2017
4. BSLANDSSP **MAS Srinivas**, A detailed analysis of the Fitzhugh Nagumo Equations with Periodic External Stimulus International Journal of Applied Mathematics and applications 9 (1), 107-118, 2017
5. NSAND **M A S Srinivas** K.MARUTHI PRASAD, Peristaltic Transport of a Micropolar Fluid with Nanoparticles in an Inclined Tube with Permeable Walls, American journal of computational and applied mathematics 4 (10), 1-10, 2017
6. KM Prasad, N Subadra, **MAS Srinivas**, Heat and Mass Transfer Effects of Peristaltic Transport of a Nano Fluid in Peripheral layer, Applications and Applied Mathematics: An International Journal (AAM) 12 (2), 21, 4 2017
7. **MAS Srinivas**, BSN Murthy, A Prashathi, Effect of delay in predation of a two species allelopathic system having imprecise growth rates, Global Journal of Pure and Applied Mathematics 13 (2), 663-681, 2 2017

Dr. B. Ravindra Reddy

- 1 G. Ranjith Kumar, K. Lakshmi Narayan and **B. Ravindra Reddy**, Dynamics of Sirs Epidemic Model under Treatment with Saturated Incidence Rate, International **Journal of Ecological Economics & Statistics** (IJEES), Volume.38, Issue No.2; 2017.
- 2 G. Ranjith Kumar, K. Lakshmi Narayan and **B. Ravindra Reddy**, “Dynamics of an SIS Epidemic Model With A Saturated Incidence Rate Under Time Delay and Stochastic Influence”, International Journal of Pure and Applied Mathematics (IJPAM), volume 112, No. 4, 2017, 695-708
- 3 Karuna BNR, K. Lakshmi Narayan and **B. Ravindra Reddy**, Stability Analysis of a Viral Model with Intercellular Delay, Research Journal of Science and Technology, Vol.09, Issue-03, July-September 2017, pp 435440, ISSN 2349-2988.
- 4 Karuna BNR, K. Lakshmi Narayan and **B. Ravindra Reddy**, Deterministic and Stochastic Dynamics of an Eco-epidemiological Model, International Journal of Mathematics and its Applications, Volume 5, Issue 4-E (2017), 801-808, ISSN: 2347-1557.
- 5 K. Madhusudhan Reddy, K. Lakshmi Narayan and **B. Ravindra Reddy**, Stability Analysis of an SIRS Model with Saturated Incidence Rate and Treatment, Research J. Pharm. and Tech. 10(10): October, 2017.
- 6 V. Vidyasagar, Madhu Latha K, **B. Ravindra Reddy**, Solving Singularity Perturbed Differential – Difference Equations using Special Finite Difference Method, International Journal of Emerging Technology and Advanced Engineering, ISSN: 2250-2459, Volume 7, Issue 9, September, 2017.
- 7 V. Vidyasagar, Madhu Latha K, **B. Ravindra Reddy**, Non-Symmetric Special Second Order Fitted Method for Singularity Perturbed Differential – Difference Equations, Journal of Advanced Research in Dynamical and Control Systems, Vol.9, Issue 1, Oct. 2017.

Dr. V. Srinivasa Kumar

- 1 K. Sujatha **V. Srinivasakumar**, Fixed point theorems through pseudo contractive Mappings, International Journal of Mathematical Analysis Vol., 12, issue: 5, 227- 234, 2017
- 2 **V. Srinivasakumar** K.Kumaraswamy and T.V.L. Narayana, An Extension to Khan's Fixed Point Theorem, Italian Journal of Pure and Applied Mathematics, Vol.38, 92-97, 2017

B. Shankar Goud

1. **B. Shankar Goud.** and M.N. Raja Shekar. “Finite element solution of viscous dissipative effects on unsteady MHD flow past a parabolic started vertical plate with mass diffusion and variable temperature”, *I-manager's Journal on Mathematics*, 7(1), pp.20-27, 2018.
2. **B. Shankar Goud.,** M.N. Raja Shekar. “Finite element study of Soret and radiation effects on mass transfer flow through a highly porous medium with heat generation and chemical reaction”, *International Journal of Computational and Applied Mathematics*, 12(1), pp. 53-64, 2017.
3. **B. Shankar Goud.,** Dr.M.N.Rajashekar, Dr.S. Karunakar Reddy “Effect of radiations on unsteady heat and mass transfer of a chemically reactive fluid past a semi-infinite vertical plate with viscous dissipation-Finite element solution”, *Global scientific journal*, 5(5),pp.1-7, 2017.
4. **B. Shankar Goud** “MHD flow past a vertical oscillating plate with radiation and chemical reaction in porous medium- finite difference method”, *International Journal of Emerging Technologies in Engineering Research (IJETER)*, 5(11), pp.32-35, 2017.
5. **B. Shankar Goud.,** M.N.Rajashekar “Finite element solution on effects of viscous dissipation & diffusion thermo on unsteady MHD flow past an impulsively started inclined oscillating plate with mass diffusion & variable temperature”, *Int. Research Journal of Engineering and Technology*, 4(2), pp.471-477, 2017.

Ph.D's awarded by the faculty in A. Y. 2017-18

Sl. No	A. Y	Year of award	Supervisor Name	Student Name	Title of the Research Topic
1	2017-18	2017	Dr. B. Ravindra Reddy	V. Anand	Some Mathematical Models in Medical and Ecological Sciences
2	2017-18	2018	Dr. B. Ravindra Reddy	G. Ranjith Kumar	Mathematical Study of Epidemic Models
TOTAL					4

Faculty Achievements:

Mr. P. Megaraju qualified **TS – SET – 2017** for Assistant Professor / Lecturer held on 11th June, 2017 in the subject Mathematical Sciences.

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