

## MATHEMATICS DEPARTMENT

### INTRODUCTION

The Department of Mathematics has been there, right from the inception of the College (1997), offering instructions in Mathematics and Statistics. The department shares the vision of the institute ” to be among the best of the institutions for engineers and technologists with attitudes, skills and knowledge and to become an epicenter of creative solutions” through teaching and research. It always strives to succeed in this endeavor.

Currently the department offers seven courses covering various areas of Mathematics and Statistics for several UG and PG programmes. The various courses of this department are designed to nurture mathematical interests, meet the requirements of the fast growing technology and motivate research in this field. They are reviewed and updated from time to time to make them more relevant.

The department has also been training students on application softwares like MATHEMATICA and MATLAB. It also runs a forum “ADVANCED ACADEMIC CENTRE “ to support projects of both faculty and students and leading resource persons also visit the college under this forum.

The department is strengthened with a total of 16 faculties out of which 4 are Doctorates and 5 are pursuing Ph.Ds. Presently there are two professors, two associate professors and twelve assistant professors in the department working in the thrust areas: Mathematical modeling, Fluid Mechanics, Real Analysis, Queuing Theory and Cryptography. The department maintains a very vibrant academic atmosphere through various academic initiatives. The department regularly organizes workshops and department seminars to enhance the professional skills of faculty.

The faculty of the department also contributes significantly in institute administration by taking up some of the key responsibilities at the institute level and by actively participating in various institute level committees.

### Doctorates in Mathematics (Basic Science Department)

S.No	Name of the Faculty	Degree Awarded	No. of Publications(journals/conferences)
1	Dr. S. Ramamurthy	2007	13
2	Dr. B. Rama Krishna Reddy	2006	3
3	Dr. V. N. Rama Devi	2015	8
4	Dr. G. Swapna	2014	10

YEAR	No. of National Journal	No. of International Journal	No. of National Conference	No. of International Conference
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TILL JUNE 2010	2	2	6	
JULY 2010-JUNE 2011	1	2	2	
JULY 2011-JUNE 2012	1	4	3	
JULY 2012-JUNE 2013	1	5	4	
JULY 2013-JUNE 2014	1	6	2	1
JULY 2014-JUNE 2015	1	3	1	1
JULY 2015-JUNE 2016				
JULY 2016-JUNE 2017			1	1
JULY2017-APRIL 2018		4	1	

**Dr.S.Ramamurthy (ID:184)**

**Designation: Professor**

**Qualifications: M.Sc, Phd (Maths)**

**Experience: 26yrs**



**Research interest:** Approximation theory

#### **Publications in international Journals**

- 1. Parametric fitting of non function like curves by minmaxion and minaddition**  
International Journal Of scientific & Innovation Mathematical research (IJSIMR) ISSN 2347-307X, Vol 2 (2) – pp 221-232
- 2. CurvaturePreserving Piecewise Approximation of Closed Curves byMinmaxtion in**  
International Journal Of Applied Mathematics &Statistical science (IJAMSS) ISSN 2319-3972 –Vol 3 (4) – July 2014 pp 45-54
- 3. Connective Stem Determination by Minmaxion**International journal of Modern Sciences and Engineering Technology(IJMSET) International journal of Modern Sciences and Engineering Technology(IJMSET) ISSN 2349-3755 Vol-1(3) 2014- pp 29-35

#### **Publication in National Journals**

- 4. Curve fitting when the curve may not be a function**-Journal of Interdisciplinary Mathematics- Vol(9)-3-pp 551-568, 2006
- 5. Connective stem determination by Minmaxion** -Published in proceedings of “XX Congress of Andhra Pradesh society for Mathematical Sciences (APSMS) Khammam- & National Conference on Mathematical Modeling& Simulation” in the year December 2011.

6. **Piecewise fitting of non-function-like curves by minmaxion**-Published in proceedings of “National Conference on Mathematical Sciences & Engineering Applications” – Baba Institute of Technology and Sciences, Visakhapatnam in the year March 2012.
7. A Paper presented and published in proceedings of “National Conference on Recent Trends in Mathematical Computing (NCRTMC’13)” organized by VIT University – Chennai Campus in the year Aug 2013.(ISBN 978-93-82338-68-0)
  - \*\* 3 papers communicated (2 for National journals & 1 for an International journal)**

### **National Conferences**

1. On ultimately periodic sequences and some special matrix operations- APSMS-2003
2. Curve fitting when the curve may not be a function-a data guided approach- APSMS-2005
3. Minmaxion based connective stem determination- APSMS- Hyderabad-2009
4. A paper presented and published in proceedings of “XX Congress of Andhra Pradesh society for Mathematical Sciences (APSMS) Khammam- & National Conference on Mathematical Modeling& Simulation” in the year December 2011.
5. A paper presented and published in proceedings of “National Conference on Mathematical Sciences & Engineering Applications” – Baba Institute of Technology and Sciences, Visakhapatnam in the year March 2012.
6. A Paper presented and published in proceedings of “National Conference on Recent Trends in Mathematical Computing (NCRTMC’13)” organized by VIT University – Chennai Campus in the year Aug 2013.(ISBN 978-93-82338-68-0)

**Name of Faculty:Dr . BRK Reddy**  
**Designation:** Professor  
**Qualifications:M.Sc , Ph.D**  
**Experience:** 18 Years  
**Research Interest: Computational Fluid Dynamics**  
**No. of Publication/Conferences:** 5  
**Certifications:** 1



### **Journal Publications:**

1. MHD CONVECTIVE HEAT AND TRANSFER ON A NANO FLUID PAST

AN INCLINED PERMAEABLE PLATE WITH HEAT SOURCE AND RADIATION.  
International Journal of Physics and Mathematical Sciences ISSN: 2277-2111 (Online)  
An Online International Journal Available at <http://www.cibtech.org/jpms.htm> 2013 Vol.  
3 (1) January-March, pp.89-95/ **Research Article 89**

2. RADIATION AND INCLINATION EFFECTS OF CONVECTIVE HEAT AND  
MASS TRANSFER OF A MHD NANO FLUID FLOW PAST A PERMEABLE FLAT  
PLATE  
International Journal of Futuristic Science Engineering and Technology Vol 1 Issue 4  
April 2013, ISSN 2320 – 4486

3. FINITE ELEMENT ANALYSIS OF FREE CONVECTION FLOW WITH MHD  
MICROPOLAR AND VISCOUS FLUIDS IN A VERTICAL CHANNEL WITH  
DISSIPATIVE EFFECTS, **June, 2011**, DOI: 10.3329/jname.v8i1.5808

**Name of Faculty: Dr. V.N. Rama Devi**  
**Designation:** Associate Professor, HOD of  
Mathematics  
**Qualifications:** M.Sc, Ph.D; M.B.A  
**Experience:** 16 years  
**Research Interest:** Queueing Theory  
**No. of Publication/Conferences:** 7  
**Certifications:** Nil  
**No. of times invited for guest lectures: -**



### **Books Published: Nil**

### **Journal Publications:**

#### **International publications: (year wise –descending order)**

1. “Optimal control of two-phase MX/Ek/1 queueing system with server Start-up, N-Policy, unreliable server and Balking”, V.N.RamaDevi and DrK.Chandan, International Journal of Scientific and Research Publications, Volume 4, Issue 6, June 2014 ,Impact factor:2.07, ISSN 2250-3153
2. “Optimal control of two-phase M/M/1 queueing system with server Start-up, N-Policy, unreliable server and Balking”, V.N.RamaDevi and DrK.Chandan, The International Journal Of Engineering And Science (IJES) || Volume || 3 || Issue || 4 || Pages || 59-69 || 2014 , ISSN (e): 2319 – 1
3. “Optimal Control of Two-Phase MX/M/1 Queueing System with Server Start-Up, N-Policy, Unreliable Server and Balking”, V.N.RamaDevi and DrK.Chandan, The International Journal Of Science &Technoledge, Vol 2 Issue 5 May, 2014, pp 214-226, ISSN 2321 – 919X
4. “Optimal Strategy Analysis of Two-Phase, N-Policy of M/EK/1 Queueing System with System Break -Downs and Balking”, V.N.RamaDevi and DrK.Chandan, International Journal of Sciences: Basic and Applied Research ,Volume 16, No 1, pp 455-474, Impact factor:0.19, ISSN 2307-4531

5. “Cost Analysis of Two-Phase M/M/1 Queueing system in the Transient state with N-Policy and Server Breakdowns” Dr V.N.Rama Devi, K.Satish Kumar, G.Sridhar, Dr K.Chandan, *International Journal of Computational Engineering Research (IJCER)*, Volume, 07 || Issue, 9|| September – 2017 ||, ISSN (e): 2250 – 3005
6. ,”Cost Analysis of M/M/1 queueing system in Transient state with server Start-up and Time-Out N policy”, V.N.Rama Devi, K.Satish Kumar, K.Chandan(2018) No 802, *International Journal of Creative Research Thoughts*, Volume 6, Issue 1 January 2018,Page No 802, ISSN: 2320-2882
7. , “Cost Analysis of Finite Capacity M/EK/1 Vacation Queueing System with Server Timeout and N-Policy in Transient State”, V.N.Rama Devi, K.Satish Kumar, K.Chandan,(2018). *International Journal for Research in Applied Science & Engineering Technology*, Volume 6 Issue II, February 2018,page No.794, ISSN: 2321-9653
8. ”M/G/1 vacation queueing system with breakdown, repair and server timeout”,Y.Saritha, V.N.Rama Devi, K.Satish Kumar, K.Chandan (2018), *Journal of Emerging Technologies and Innovative Research*, Volume 5, Issue 2,page no 612, ISSN-2349-5162

**National publications: (year wise –descending order)**

1. “Transient Analysis of Two-Phase M/HK/1 Queueing System with Server Start-up, N-Policy, Unreliable Server and Balking”, V.N.RamaDevi and Dr K.Chandan, *ACADEMICIA: An International Multidisciplinary Research Journal* ,Vol.5, Issue-6,,Impact Factor:SJIF 2013=5.099, ISSN:2249-7137

**Conference Proceedings**

**International Conferences: (year wise –descending order)**

1. Presented a paper in International conference on STATISTICS&INFORMATION TECHNOLOGY FOR A GROWING NATION from 22 Nov-2 Dec,2014, Sri Venkateswara University,Tirupati,Andhra.Pradesh.

**National Conferences: (year wise –descending order)**

1. Presented a paper in National conference on “Mathematical And Applications-2011”,Dhule, Maharashtra,India.
2. Rama Devi V.N, Sateesh Kumar.K and Chandan.K. Transient Analysis of a Finite Capacity Queueing System with Two-Phase, N-Policy, Server Startup and Second Optional Batch Service, National seminar on SQC, Reliability, Design of experiments and OR in Acharya Nagarjuna University, Guntur from 22-24 February,2017.

**Dr. G. Swapna (ID:1338)**

**Designation: Associate Professor**

**Qualifications : Ph.D**

**Experience: 10 years**

**Research Interest: Cryptography, Elliptic Curve  
Cryptography**



### **Journal Publications/Conference Proceedings: 10**

#### **International**

1. **“An Efficient Identity based Multi–Signcryption Scheme with Public verifiability”**, G.Swapna, P. Vasudeva Reddy, **Journal of Discrete Mathematical sciences and Cryptography**, Vol. 17, No. 2, pages 181-190, 2014, ISSN: 0972-0529.
2. **“An Efficient ID–based Public Verifiable Signcryption Scheme”**, Swapna. G, P.V. Reddy, **International Journal of Cryptography and Security**, Vol 3, issue 1, pages 41-46, Jan, 2013. ISBN: 2249-7013 & E-ISSN: 2249-7021.
3. **“An Efficient ID–based Proxy Signcryption Scheme”**, G. Swapna, P.V.S.S.N. Gopal, T. Gowri, P. Vasudeva Reddy, **International Journal of Network security**, Vol 1, issue 3, pages 200-206, Aug, 2012, ISSN: 2089-3299.
4. **“An Application of Directed signatures schemes from bilinear pairings”**, B. Umapasrad, G. Swapna, P. VasudevaReddy, **International Journal of Emerging Technologies and Applications in Engineering, Technology, and Sciences**, Vol 3, Issue 2, pages 255-258, July, 2010. ISSN: 0974-3588. Impact Factor-2.1708.

#### **National publications: (year wise –descending order)**

1. **“Directed Proxy Signature Scheme”**, K.A. Ajmath, P. Vasudeva Reddy, G. Swapna, T. Gowri **Journal of Information assurance and Security Letters**, Vol-2, pages 19-24, 2011, ISSN: 2150-7996.
2. **“AnElGamal Type Digital Signature Scheme in Multiplicative Groups of Quotient Rings of Polynomials over Finite Fields”**, P. Vasudeva Reddy, G. Swapna, B. UmaPrasada Rao **Journal of Advanced Computations**, volume 3, No 3, pp: 080-084, 2009.

### **Conference Proceedings**

#### **International Conferences: (year wise –descending order)**

1. **“Efficient Identity based Multi-Proxy Multi-Signcryption Scheme Using Bilinear Pairings over Elliptic Curves”**, G. Swapna, **“International Conference on Advances in Computing, Communications, and Informatics (ICACCI-2013)”**, Mysore, Aug 2013.

#### **National Conferences: (year wise –descending order)**

1. **“Efficient ID-based Multi-Signcryption Scheme with Public Verifiability”**, G.

Swapna, **National Seminar on Emerging Trends in Applied Mathematics**, Visakhapatnam, April 2014, held at Andhra University.

2. **“Efficient ID-based Signcryption Scheme”**, G. Swapna, **National Seminar on Recent Trends in Mathematics**, Sri Venkateswara University, Tirupathi, Dec 2012.
3. **“An Efficient ID-based Signature Scheme with Batch Verifications”**, G.Swapna, **A two-Day National Conference on Computer Science, Engineering and Applications**, Sri PadmavatiMahila University, Tirupathi, during 9<sup>nd</sup>-10<sup>th</sup> Nov 2012.
4. Participated in the in the National seminar on Modern Trends in Applied Mathematics (NSMTAM) held at Andhra University during 9<sup>th</sup> -10<sup>th</sup> October 2010.
5. Participated in the National Conference on Applications of Mathematics in Engineering Sciences (NCAMES-2011) held at Andhra University during 29<sup>th</sup> -30<sup>th</sup> June 2011.

#### **Workshops Attended**

1. Participated in “Faculty Development Program on Guide to a Passionate Teacher” during 29, June-4 July 2015, held at Gokaraju Rangaraju Institute of Engineering and technology, Hyderabad.
2. Participated in an online course “ET601Tx: Educational Technology for Engineering Teachers” during 07 Jan-07 March 2016 conducted by IIT BombayX.
3. Participated in “Teachers orientation program on Universal Human Values Professional Ethics” during 29 June-1 July 2017, held at JNTU Hyderabad.

**MrM. V. Sreekanth Reddy** (E-Id: 662)

Designation: AssistantProfessor

Qualifications: (Ph. D, registered in 2009, Rayalaseema University).M.Sc(Tech)

Area of Specialization: Fluid Dynamics

Teaching Experience: 18 Years



**No. of Journal Publications/Conference Proceedings: 6**

#### **Journal publications International**

1. M.V.Sreekantha Reddy "**Effects of chemical reaction, radiation and thermo-diffusion on convective heat and mass transfer flow of a viscous dissipated fluid in a vertical channel with constant heat flux** “in *Advances in Applied science Research*, Pelagia Research Library, 2012, 3(5), pp :3032-3044, ISSN:0976-8610.

2. M.V.Sreekantha Reddy "**Effect of Hall Currents on The Convective Heat and Mass Transfer of a Viscous Electrically Conducting Fluid through a Porous Medium Confined in a Rotating Horizontal Channel in the Presence of Heat Sources**" in International Journal of Emerging trends in Engineering and Development, Issue 2, Vol.6, September 2012, pp :691-706, ISSN:2249-6149.
3. M.V.Sreekantha Reddy "**Effect of Chemical Reaction and Thermo-Diffusion on Non-Darcy Convective Heat and Mass Transfer Flow in A Vertical Channel With Heat Sources**" in International Journal of Mathematical Archive-3(9), 2012, pp:3380-3392, ISSN:2229-5046.

### **Conference Proceedings**

#### **National**

1. M.V.Sreekantha Reddy, "**XVII congress of Andhra Pradesh Society For Mathematical Sciences and National Conference on Mathematical Modelling in Emerging Technologies** held from 13<sup>th</sup> – 15<sup>th</sup> Feb 2009 at Malla Reddy Engineering College, Secunderabad
2. M.V.Sreekantha Reddy, "**XVIII congress of Andhra Pradesh Society For Mathematical Sciences and National Conference on Mathematical Solutions Using Soft Computing for Problems in Science and Technology** held from 11<sup>th</sup> – 13<sup>th</sup> December 2009 at Mrs.A.V.N College, Visakhapatnam.
3. M.V.Sreekantha Reddy, one week national workshop on "**Mathematical Modelling for Performance Oriented Heuristic Techniques and its Applications To Industry**" held at M.S.Ramaiah Institute of Technology, Bangalore from 7<sup>th</sup>-11<sup>th</sup> December 2009.

**Mr. Siva Rama Krishna Reddy. V (ID :1380)**

**Designation: Assistant Professor**

**Qualifications: M.Sc, (Mathematics), B.Ed.,**

**Experience: 11 yrs**

**Research Interest: Mathematical Modelling**

**Journal Publications/Conference Proceedings: 6**

**Journal Publications**





### **International**

1. Paper titled “**Parametric Fitting of Non function like curves by Minmaxion and Minaddition**” published in “**International journal of scientific and innovative mathematical research (IJSIMR)**” Volume 2, Issue 2, pp. 221-232. ISSN 2347-307X (print) & ISSN 2347-3142 (online).
2. Paper titled “**On the curvature preserving piecewise approximation of closed planar curves by minmaxion**” published in “**International Journal of Applied Mathematics & Statistical Sciences (IJAMSS)**” Volume 3, Issue 4, pp. 45-53. ISSN(P): 2319-3972; ISSN(E): 2319-3980.
3. Paper titled “**Connective Stem Determination by Minmaxion**” published in “**International Journal of Modern Sciences and Engineering Technology (IJMSET)**” Volume 1, Issue 3, pp. 29-35. ISSN 2349-3755.

### **National Conference Proceedings:**

1. A paper presented and published in proceedings of “**XX Congress of Andhra Pradesh society for Mathematical Sciences (APSMS) & National Conference on Mathematical Modeling & Simulation**” in the year December 2011.
2. A paper presented and published in proceedings of “**National Conference on Mathematical Sciences & Engineering Applications**” – Baba Institute of Technology and Sciences, Visakhapatnam in the year March 2012.
3. A Paper presented and published in proceedings of “**National Conference on Recent Trends in Mathematical Computing (NCRTMC'13)**” organized by VIT University – Chennai Campus in the year Aug 2013.(ISBN 978-93-82338-68-0)

**Bhagathkumar Soma**

**Designation :** Assistant Professor

**Qualifications :** Ph.D(Reg. in 2016)

**Experience:** 11 years

**Research Interest:** Analysis, Topology, Functional analysis.

**Journal Publications/Conference Proceedings: 1**

**International/National Journal: NIL**

**Conference Proceedings**

**International**

- 1) Presented a paper entitled “On various types of Quasi continuous functions”, in A five-Day international Conference on Analysis and its Applications during 28<sup>th</sup> Nov-2<sup>nd</sup> Dec 2016, held at IIT ROORKE Uttaranchal..

**Workshops Attended**

1. Participated in “Faculty Development Program on pedagogy and andragogy” during 10-15, September 2012, held at B.V.Raju Institute of Engineering and technology, Narsapur.
2. Participated in 2 weeks program Instructional schools for teachers on “differential equations and analysis”, held at Tata Institute of fundamental research Bangalore collaboration with IIT Bombay