



DEPARTMENT OF MATHEMATICS

**SRI CHANDRASEKHARENDRA SARASWATHI VISWA
MAHAVIDYALAYA (SCSVMV)**

(Deemed to be University u/s 3 of UGC Act 1956) (Accredited with "A" Grade
by NAAC)

Enathur, Kanchipuram-631561.

Patron:

His Holiness Sankara Vijayendra Saraswathi
Swamigal

Chairman:

Prof. Dr. S. Jayarama Reddy, Chancellor,
SCSVMV

President:

Prof. Dr. S. V. Ragavan, Vice - Chancellor,
SCSVMV

Advisory Board:

Prof. Dr. G. Srinivasu, Registrar, SCSVMV
Prof. Dr. S. Balaji, Dean, Faculty of Science,
SCSVMV

Chief Editor:

Prof. Dr. K. Srinivasa Rao

Head, Dept. of Mathematics

Issue Editor:

Dr. E. Geetha

Editorial Board :

Dr. N. Saradha

Dr. P. Nagarajan

Dr. P. Balaji

Dr. D. Vijayalakshmi

Dr. R. Mageswari

Dr. K. Pramila

Dr. A. Gayathri

Dr. J. Sengamalaselvi

Dr. V. K. Radhakrishnan

Dr. A. Dhanalakshmi

Dr. K. Bharathi

Dr. T. N. Kavitha

GANITH VAARTHA

Issue-XIII

July–December 2022

ABOUT THE DEPARTMENT

The Department of Mathematics, established in the year 1994, aims to impart state of the art knowledge, practical skills in the latest advancements in the respective domain to achieve excellence in both academic and research perspectives. The department fosters excellence in B.Sc., M.Sc., and Ph.D (Regular and Part time) and acts as a supporting department to all Engineering courses, B.Sc.(CS), B.C.A, M.C.A and M.B.A. The department has qualified and goal-oriented 14 faculty members who are actively involved in research in diverse areas such as Algebra, Graph Theory, Queuing Theory and Operations Research. Interdisciplinary research is also encouraged. The department is strengthened by faculty team of 14 doctorates. So far 34 Ph.D degrees have been awarded and five scholars are pursuing research under the department. The focus on research promotes the publications and 300 research papers were published in the last ten years.

GREETINGS FROM DEPARTMENT CHAIR

It is a great pleasure to extend my heartfelt greetings to the readers of the Thirteenth edition of Ganith vaartha, Department newsletter. I sincerely hope that you will enjoy reading about the accomplishments of our faculty. The newsletter is published twice in a year. This issue contains the activities about our department from July to December, 2021. The Department is regularly organizing workshops, seminars, quality enrichment programs, research colloquiums etc., to be familiar in the latest trends in mathematics and career guidance programs and skill development courses are introduced for our students to face the competitive world. Also, our students are encouraged to actively participate in various competitions organized by other departments and to present papers in conferences and seminars.



Dr.K.Srinivasa Rao

FACULTY TEAM

S.No.	Name	Designation	Area of Specialization
1.	Prof. Dr. K. Srinivasa Rao	Professor & Head	Algebra
2.	Dr. N. Saradha	Assistant Professor	Graph Theory
3.	Dr. P. Nagarajan	Assistant Professor	Queuing Theory
4.	Dr. P. Balaji	Assistant Professor	Petri Nets
5.	Dr. D. Vijayalakshmi	Assistant Professor	Graph Theory
6.	Dr. E. Geetha	Assistant Professor	Fluid Dynamics
7.	Dr. R. Mageswari	Assistant Professor	Graph Theory
8.	Dr. K. Pramila	Assistant Professor	Fuzzy Set Theory
9.	Dr. A. Gayathri	Assistant Professor	Mathematical Physics
10.	Dr. J. Sengamalaselvi	Assistant Professor	Applied Mathematics using ICT
11.	Dr. V. K. Radhakrishnan	Assistant Professor	Operations Research
12.	Dr. A. Dhanalakshmi	Assistant Professor	Graph Theory
13.	Dr. K. Bharathi	Assistant Professor	Operations Research
14.	Dr. T. N. Kavitha	Assistant Professor	Algebra

OUTREACH PROGRAMMES:

Dr .K. Srinivasa Rao

- *Dr .K. Srinivasa Rao*, acted as a resource person in the **National Webinar on Basics of MATLAB**, organized by the Department of Mathematics, S.V.K.P & Dr K.S.Raju Arts & Science College(A), Penugonda, West Godavari District, Andhra Pradesh on 14.05.2022.
- *Dr .K. Srinivasa Rao*, acted as a Resource Person in **Certificate Course on MATLAB**, organized by the Department of Mathematics, Little Flower Degree & PG College, Uppal, Hyderabad from 4.8.2022 to 6.8.2022
- *Dr .K. Srinivasa Rao*, acted as a Resource Person in the Faculty Development Program on Mathematical & Computational Fluid Dynamics Using MATLAB, organized by the Department of Mathematics, Aurora's Degree & PG College, Hyderabad, Telangana, in collaboration with Andhra Pradesh & Telangana Society for Mathematical Sciences from 9.11.2022 to 10.11.2022
- *Dr .K. Srinivasa Rao*, acted as one of the Resource Persons in the **Five-Day National Level Online Faculty Development Programme on Effective Pedagogy for Science**, (26th November to 3rd December 2022) jointly organized by the Department of Physics and Mathematics, J.M.J College for Women(A), Tenali, Andhra Pradesh on 3.12.2022.
- *Dr .K. Srinivasa Rao*, acted as a resource person in **National Workshop on Introduction to MATLAB** organized by the Department of Mathematics, Government Degree College, Avanigadda, Krishna District, Andhra Pradesh on 13.12.2022.

Dr.D.Vijayalakshmi

- *Dr. D. Vijayalakshmi*, has delivered an invited talk in **Webinar Series on “Vedic Mathematics”** organized by Department of Mathematics, Shree Chandraprabhu Jain College during 16.08.2022 to 23.08.2022.

Dr. R.Mageswari

- *Dr. R.Mageswari*, acted as Resource Person inaugurated the Mathematics Association at Sri Sankara Bhagavathi Arts and Science College, Kommadikottai, Thuthukudi District and delivered a lecture in the topic “**Modular Arithmetic**” on 10.08.2022.

Dr. J.Sengamalaselvi

- *Dr. J. Sengamalaselvi* has delivered an invited talk in **Webinar series on Vedic Mathematics** organized by the Department of Mathematics, Sri Chandraprabu Jain College Minjur on 16.08.2022 to 23.08.2022.
- *Dr. J. Sengamalaselvi* has chaired at a Technical session at **International Conference Recent developments on Mathematics (ICRDM-2022)** organized by the Faculty of Engineering, Applied Science and Technology, Canadian University Dubai, in conjunction with the Department of Mathematical Science, United Arab Emirates University, Al Ain, UAE held at Canadian University, Dubai, UAE from 24.08.2022 to 26.08.2022.
- *Dr. J. Sengamalaselvi* has delivered a noteworthy Lecture as Resource person of **Faculty development program on Recent Trends in Mathematical and Statistical tool - 2022** organized by the Department of Mathematics and Statistics, CSH, SRM Institute of Science Technology, Kattankulathur , Chennai from 24.11.2022 to 30.11.2022.

Dr. A. Dhanalakshmi

- *Dr. A. Dhanalakshmi* has chaired a Technical session at the **International Conference on Recent Developments in Mathematics (ICRDM 2022)**, organized by the Faculty of Engineering, Applied Science and Technology, Canadian University Dubai, in conjunction with the Department of Mathematical Science, United Arab Emirates University, Al Ain, UAE held at Canadian University, Dubai, UAE from 24.08.2022 to 26.08.2022.
- *Dr. A. Dhanalakshmi*, delivered a noteworthy lecture as Resource Person in **Faculty Development Programme on Recent Trends in Mathematical and Statistical Tools – 2022** Organized by Department of Mathematics and Statistics CSH, SRM Institute of Science and Technology, Kattankulathur Campus, Chennai from 24.11.2022 to 30.11.2022.

Dr. K. Bharathi

- *Dr. K. Bharathi*, acted as Session Chair in **International Conference on Recent Developments in Mathematics (ICRDM 2022)**, organized by the Faculty of Engineering, Applied Science and Technology, Canadian University Dubai, in conjunction with the Department of Mathematical Science, United Arab Emirates University, Al Ain, UAE held at Canadian University, Dubai, UAE from 24.08.2022 to 26.08.2022.

- **Dr. K. Bharathi**, acted as Resource Person in ‘**Webinar Series on Vedic Mathematics-Square and Square root of numbers**’ organized by Department of Mathematics Shree Chandrababhu Jain College from 16.08.2022 to 23.08.2022

Dr. T N Kavitha

- **Dr. T N Kavitha** has delivered an invited talk in **Webinar Series on Vedic Mathematics** organized by Department of Mathematics, Shree Chandrababhu Jain College during 16.08.2022 to 23.08.2022.
- **Dr. T N Kavitha** has chaired in an **International Conference on Recent Developments in Mathematics (ICRDM 2022)**, organized by the Faculty of Engineering, Applied Science and Technology, Canadian University Dubai, in conjunction with the Department of Mathematical Science, United Arab Emirates University, Al Ain, UAE held at Canadian University, Dubai, UAE from 24.08.2022 to 26.08.2022.

JOURNAL PUBLICATION

- **Dr. K. Srinivasa Rao, N. Meenakshi**, Degree Based Topological Indices of Triangulane, Naveen Anveshan- *A Journal of the Multidisciplinary Subjects*, Volume 04, No.1, August 2022, pp. no.112 - 1
- **Dr. E. Geetha, S.Sarala, M.Nirmala**, Numerical Investigation of heat transfer & hall effects on mhd nanofluid flow past over an oscillating plate with radiation, *Journal of Thermal Engineering*, Vol. 8, No. 6, November 2022, pp.no. 1 – 15.
- **Dr. T N Kavitha**, A Comparison With Green’s Relation And Our More Special Relations, *Research and Reflections on Education*, ISSN 0974-648X, Vol. 20, No. 3A, October 2022, pp.no. 94 - 98.

PAPER PRESENTED BY FACULTIES

- **Dr. K. Srinivasa Rao**, presented a paper entitled **Degree Based Topological Indices of Triangulane** at the **33rd All India Congress of Zoology (AICZ)** and National Seminar on Emerging Trends in Biological Sciences in the Light Environmental Degradation and Life Sustainability, organized by the Department of Zoology, Pandit S.N. Shukla University, Shahadol, M.P in collaboration with the Zoological Society of India from 10.8.2022 to 12.8.2022.
- **Dr. D. Vijayalakshmi**, presented **Path kernel and Protein similarity/ dissimilarity study** in **SXC Centenary year- International Conference on Recent developments in Pure and**

Applied Mathematics organised by PG and Research Department of Mathematics, St.Xavier's College, Palayamkottai held from 19.07.2022 to 21.07.2022.

- **Dr. D. Vijayalakshmi**, presented a paper titled **Similarity / Dissimilarity of Proteins using Stable protein graphs** in *International Conference of the Arts and Sciences with the theme: "Strengthening the Innovative Culture of the Arts and Science"* held on 21.9.2022 – 22.9.2022 at the Cebu Normal University Osmeña Blvd. Cebu City, 6000 Philippines via Zoom.
- **Dr. D. Vijayalakshmi**, presented a paper titled **Spectral Radius, Canberra Distance and Similarity / Dissimilarity of Proteins** at the *International virtual Conference on "Progress in Mathematics towards Industrial Applications (PMTIA-2022)"* organised by the Department of Mathematics, SRMIST, Ramapuram, Chennai - 600089 from 28.10.2022 to 29.10.2022.
- **Dr.E.Geetha**, presented a paper entitled **Effect of MHD Heat and Mass transfer flow of an nanofluid over an impulsively started vertical plate with Chemical reaction** in the *3rd e- International Conference on Interdisciplinary approaches in Science, Engineering and Humanities (ICIASEH – 2022)*, organized by Department of Applied Science, Sagar Institute of Research and Technology – Excellence - Bhopal from 29.7.2022 – 30.7.2022.
- **Dr.E.Geetha**, presented a paper entitled **Outcomes of Thermal Radiation and Hall current on Oscillating Plate with MHD nanofluid flow in enhanced temperature** in the *3rd e- International Conference on "Interdisciplinary approaches in Science, Engineering and Humanities (ICIASEH – 2022)*, organized by Department of Applied Science, Sagar Institute of Research and Technology – Excellence - Bhopal from 29.7.2022 – 30.7.2022.
- **Dr. J. Sengamalaselvi**, presented a paper entitled **An Prosecution of Fuzzy Soft Matrices in accountability based on Real Life Problem** in the *International E - Conference on Scientific Research in Multidisciplinary Approach* organized by Department of Mathematics, SRM Arts and Science College, Chennai, from 13.07.2022 to 14.07.2022.
- **Dr. J. Sengamalaselvi**, presented a paper entitled **Entreaty of Intuitionistic Fuzzy soft Matrices** in the *International Conference on Recent Development of Pure and Applied Mathematics* organized by PG & Research Department of Mathematics, St. Xavier's College Palayamkottai, from 19.07.2022 to 21.07.2022.
- **Dr. J. Sengamalaselvi**, presented a paper entitled **An Ponder on Intuitionistic Fuzzy soft Matrices in Restorative Diagnosis** in the *Fourth International Conference on Arts and Science on Strengthening the Innovative culture of Arts and Science* organized by Cebu Normal University, Osmana Blvd, Cebu University Phillipines from 21.09.2022 to 22.09.2022.

- **Dr. J. Sengamalaselvi**, presented a paper entitled **An interpretation of Intuitionistic Fuzzy soft matrices in Prognosis** in the *International Virtual conference on Progress in Mathematics towards industrial Applications (PMTIA-2022)* organized by Department of Mathematics, SRM Institute of Technology, Ramapuram, Chennai from 28.10.2022 to 29.10.2022.
- **Dr. A. Dhanalakshmi**, presented a paper titled **Zagreb Indices of a tree with radius 2** in the *International Conference on Recent Developments in Pure and Applied Mathematics* organized by PG & Research Department of Mathematics, St. Xavier's College (Autonomous), Palayamkottai from 19.7.2022 to 21.7.2022.
- **Dr. A. Dhanalakshmi**, presented a paper titled **Characterization of King's graph** at the *4th International 3. Conference of the Arts and Sciences with the theme: "Strengthening the Innovative Culture of the Arts and Sciences"* organized at the Cebu Normal University, Osmena Blvd. Cebu City, Philippines held from 21.9.2022 to 22.9.2022.
- **Dr. A. Dhanalakshmi**, presented a paper titled **ISI Index of Some Special Graphs** at the *International virtual Conference on "Progress in Mathematics towards Industrial Applications (PMTIA-2022)"* organized by the Department of Mathematics, SRMIST, Ramapuram, Chennai - 600089 from 28.10.2022 to 29.10.2022.
- **Dr. K. Bharathi**, presented a paper titled **Graph Colouring Methodology and Its Applications** *4th International 3. Conference of the Arts and Sciences with the theme: "Strengthening the Innovative Culture of the Arts and Sciences"* organized at the Cebu Normal University, Osmena Blvd. Cebu City, Philippines held from 21.9.2022 to 22.9.2022.
- **Dr. K. Bharathi**, presented a paper titled **Linear Programming Model of Maximum Network Flow and its Solution** at the *International virtual Conference on "Progress in Mathematics towards Industrial Applications (PMTIA-2022)"* organized by the Department of Mathematics, SRMIST, Ramapuram, Chennai - 600089 from 28.10.2022 to 29.10.2022.
- **Dr T N Kavitha**, presented a paper entitled **Application of permutation hypothesis testing for the feed of rabbits in the Farm** in the *International e-conference on Scientific Research in Multidisciplinary Approach(ICSRMA)* held from 13.7.2022 to 14.7.2022.
- **Dr T N Kavitha**, presented a paper entitled **A Comparison with Greens Relation and our more special relations** in the *SXC Centenary Year -International conference on 'Recent Developments in pure and Applied Mathematics* organized by PG & Research Department of Mathematics, St. Xaviers College, Palayamkottai, held from 19.7.2022 to 20.7.2022.

- **Dr T N Kavitha**, presented a paper entitled **A Left (Right) Singularity of near Idempotent Semigroup** at the **4th International 3. Conference of the Arts and Sciences with the theme: “Strengthening the Innovative Culture of the Arts and Sciences”** organized at the Cebu Normal University, Osmena Blvd. Cebu City, Philippines held from 21.9.2022 to 22.9.2022.
- **Dr T N Kavitha**, has presented a paper titled **Two Sided Near – Idempotent Semigroups** at the **International virtual Conference on “Progress in Mathematics towards Industrial Applications (PMTIA-2022)”** organized by the Department of Mathematics, SRMIST, Ramapuram, Chennai - 600089 from 28.10.2022 to 29.10.2022.

BOOK ARTICLES PUBLISHED BY THE FACULTY MEMBERS

- **Dr.D.Vijayalakshmi**, “Mathematical Study of Protein using Physico Chemical properties of Amino acids” a chapter in book ‘Mathematical Sciences’, Published by ESN Publications, Aruppukottai Taluk, Virudhunagar District, Tamilnadu, India, ISBN: 978-9390781-54-6, Vol (1) pp. 33-38.
- **Dr. D. Vijayalakshmi**, “Perron – Frobenius Theorem & Complete Graphs” a chapter in book ‘Mathematical Sciences’, Published by ESN Publications, Aruppukottai Taluk, Virudhunagar District, Tamilnadu, India, ISBN: 978-93-90781-62-1, Vol (2) pp. 13-27.
- **Dr. P. Nagarajan**, “ A Study on the History and Mathematics behind the tower of Hanoi” a chapter in book ‘Mathematical Sciences’, Published by ESN Publications, Aruppukottai Taluk, Virudhunagar District, Tamilnadu, India, ISBN: 978-9390781-54-6, Vol (1) pp. 115-121.
- **Dr. E. Geetha**, “Effects of Chemical reaction on MHD flow past a linearly accelerated isothermal vertical plate with Radiation” a chapter in book ‘Mathematical Sciences’, Published by ESN Publications, Aruppukottai Taluk, Virudhunagar District, Tamilnadu, India, ISBN: 978-9390781-54-6, Vol (1) pp. 13-21.
- **Dr. E. Geetha**, “Effects of Thermal Radiation on Convective nanofluid flow over a vertical plate” a chapter in book ‘Mathematical Sciences’, Published by ESN Publications, Aruppukottai Taluk, Virudhunagar District, Tamilnadu, India, ISBN: 978-93-90781-62-1, Vol (2) pp. 1-11.
- **Dr. R. Mageswari**, “Finding Contact map of the protein 2RM2 and its graph from its three dimensional structure” a chapter in book ‘Mathematical Sciences’, Published by ESN Publications, Aruppukottai Taluk, Virudhunagar District, Tamilnadu, India, ISBN: 978-9390781-54-6, Vol (1) pp. 133-138.

- **Dr. R. Mageswari**, “Finding Similar / Dissimilar structures between proteins using Randic molecular connectivity index” a chapter in book ‘Mathematical Sciences’, Published by ESN Publications, Aruppukottai Taluk, Virudhunagar District, Tamilnadu, India, ISBN: 978-93-90781-62-1, Vol (2) pp. 147-154.
- **Dr. K. Pramila**, “Study on Domination number and Total Domination number of Stacked Prism graphs” a chapter in book ‘Mathematical Sciences’, Published by ESN Publications, Aruppukottai Taluk, Virudhunagar District, Tamilnadu, India, ISBN: 978-9390781-54-6, Vol (1) pp. 49-56.
- **Dr. K. Pramila**, “Bondage number and Total Bondage number of Stacked Prism graphs” a chapter in book ‘Mathematical Sciences’, Published by ESN Publications, Aruppukottai Taluk, Virudhunagar District, Tamilnadu, India, ISBN: 978-93-90781-62-1, Vol (2) pp. 169-179.
- **Dr. J. Sengamalaselvi**, “Implementations of Fuzzy Soft Matrix in Medical Diagnosis” a chapter in book ‘Mathematical Sciences’ Published by ESN Publications Aruppukottai Taluk, Virudhunagar District, Tamilnadu, India , ISBN: 978-9390781-54-6, Vol (1) pp.39-47.
- **Dr. J. Sengamalaselvi**, “Entreaty of Intuitionistic Fuzzy Soft Matrix Theory in Decision making based on Real Life Problem” a chapter in book ‘Mathematical Sciences’ Published by ESN Publications, Aruppukottai Taluk, Virudhunagar District, Tamilnadu, India , ISBN: 978-93-90781-62-1, Vol (2) pp.115-124.
- **Dr. A. Dhanalakshmi**, “History of Wiener index and Its Applications”, a chapter in book ‘Mathematical Sciences’ Published by ESN Publications, Aruppukottai Taluk, Virudhunagar District, Tamilnadu, India , ISBN: 978-9390781-54-6, Vol (1) pp.29 - 32.
- **Dr. T. N. Kavitha**, “A Review about Latin Square Circulant matrix”, a chapter in book ‘Mathematical Sciences’ Published by ESN Publications, Aruppukottai Taluk, Virudhunagar District, Tamilnadu, India , ISBN: 978-9390781-54-6, Vol (1) pp.139-144.
- **Dr. T. N. Kavitha**, “Left (Right) Regular near Idempotent Semigroup”, a chapter in book ‘Mathematical Sciences’ Published by ESN Publications, Aruppukottai Taluk, Virudhunagar District, Tamilnadu, India , ISBN: 978-93-90781-62-1, Vol (2) pp.189-192.

AWARDS RECEIVED BY THE FACULTY MEMBER

- ❖ **Dr. J. Sengamalaselvi**, has received **TIP Peace Ambassadors Awards 2022** in the event of World peace day on 21.09.2022.

- ❖ *Dr. J. Sengamalaselvi*, has received *Indian women of courage 2022* in the event of Women lead 2030 on 27.09.2022.

QUALITY ENRICHMENT ACTIVITY BY THE FACULTY MEMBERS

- ❖ *Dr. E. Geetha*, Completed Online certificate course in *“Introduction To Fuzzy Set Theory, Arithmetic And Logic”* during the period july to October 2022 and scored 62% with a grade “ELITE”.
- ❖ *Dr. K. Pramila*, Completed Online certificate course in *“Introduction To Fuzzy Set Theory, Arithmetic And Logic”* during the period july to October 2022 and scored 60% with a grade “ELITE”.

SUMMARY OF ACADEMIC ACHIEVEMENTS DURING JULY 2022 - DECEMBER 2022

Number of Publications	No. of paper presented in national / international conferences	No. of seminars / workshops etc., attended	No. of outreach activities	Awards received	Online certificate course
3	19	95	16	2	2