



# SRM

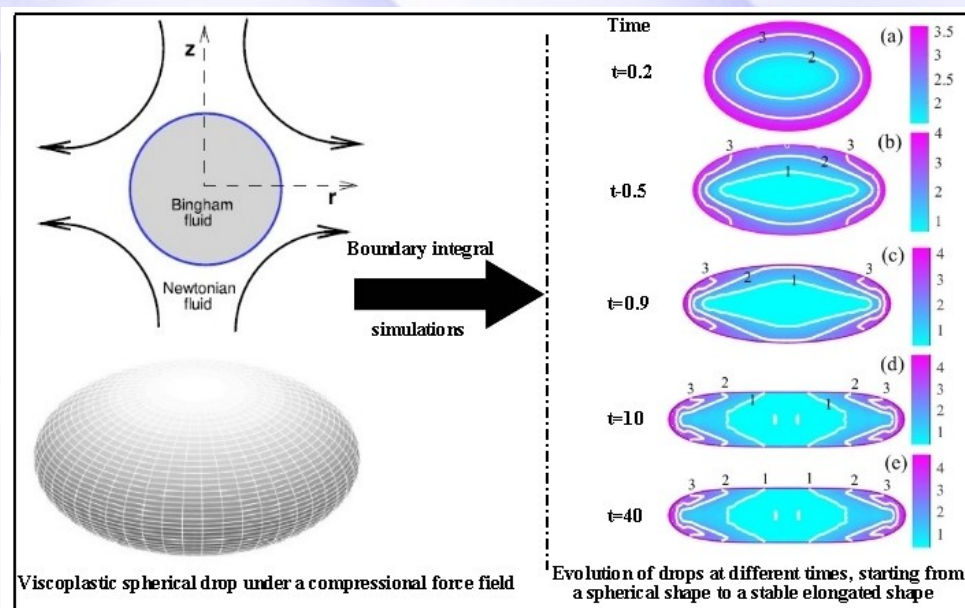
INSTITUTE OF SCIENCE & TECHNOLOGY  
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## Horizon

### Quarterly Newsletter

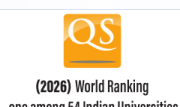
Volume 5, Issue 1

(January to March 2026)



School of Basic Sciences

College of Engineering and Technology  
SRM Institute of Science and Technology  
Kattankulathur - 603 203, Chengalpattu District  
Tamil Nadu, India



## Message from the Chairperson



**Dr. M. Arthanareeswari**

**Professor & Chairperson**  
**School of Basic Sciences**  
**College of Engineering and Technology**  
**SRM Institute of Science and Technology**  
**Kattankulathur 603 203**

Dear Colleagues and Students,

The world of higher education is growing faster than ever, with over 269 million students now enrolled globally. To meet this moment, UNESCO has released a new roadmap: Transforming higher education: Global collaboration on visioning and action. This guide moves us away from small, slow changes toward a bold new vision. To stay ahead, we are focusing on seven key goals:

**Fairness:** Making sure everyone has the resources they need to succeed.

**Freedom:** Protecting the right to teach, learn, and research together across borders.

**Creativity:** Teaching students how to think critically and solve real-world problems.

**Smart Tech:** Using AI and digital tools to help people, not replace them.

**Teamwork:** Choosing collaboration and solidarity over competition.

**The Planet:** Taking responsibility for a sustainable and healthy future.

**Real Quality:** Redefining excellence so our education stays relevant to today's world.

By working together and following these principles, we can ensure our School remains a place of progress and opportunity for everyone.

### Cover page theme:

Discovering the stability of a viscoplastic drop immersed in a Newtonian fluid under compressional flow, this study uses advanced boundary integral simulations to reveal its dynamic evolution. Striking visuals capture the transformation from a spherical shape to a stable elongated form, showcasing the delicate balance of forces in fluid motion. These insights extend beyond theory, informing applications in paint formulation, food processing, and cosmetic emulsions where stable drop shapes are crucial.

  
(Dr. M. Arthanareeswari)

## Message from the HoD, Chemistry



**Dr. Prakash Muthuramalingam**

Research Professor and Head  
Department of Chemistry  
College of Engineering and Technology  
SRM Institute of Science and Technology  
Kattankulathur 603 203

It is my privilege to present an overview of the Department of Chemistry's progress and accomplishments for the first quarter of 2026 (January - March). The period has been characterized by consistent academic momentum with inclusion of **Energy Systems, AI, ML and Data Sciences in new UG curricula** impactful research outcomes and meaningful expansion of national and international collaborative initiatives. In addition, we also conducted International Conference on "Green Hydrogen and Energy Technology (ICGHET-2026)" where we hosted several participants and dignitaries from the worldwide in energy and environment domain.

One of the defining developments this quarter has been the formalization of strategic partnerships through Memoranda of Understanding (MoUs) with leading CSIR laboratories, including **CSIR-Indian Institute of Chemical Technology (Hyderabad) and CSIR-Central Leather Research Institute (Chennai)**, in addition to an industry-linked collaboration with the UPASI Tea Research Foundation, Coimbatore, Tamil Nadu. These engagements are expected to accelerate interdisciplinary research, facilitate access to advanced infrastructure and create avenues for joint supervision, innovation and technology translation.

The department has also demonstrated strong performance in securing competitive research funding. Notably, **Prof. V. Kumaran, and Dr. V. G. Anju**, have been awarded ANRF-IRG grants for their research in emerging areas of chemical science and energy technologies, reflecting our growing research capabilities and national-level recognition. Faculty achievements have brought further distinction to the department. **Dr. M. Ganesh Pandian** received the Young Scientist Award in Chemical Sciences from the Academy of Sciences, Chennai. We welcomed a new faculty member, **Dr. Balakumar Emayavaramban** (PhD, IIT-Kanpur) to the department as Research Assistant Professor who works in the field of catalysis. This quarter was exceptionally vibrant, marked by intensive scholarly activities and global engagement. Our UG and PG students have successfully qualified GATE and CSIR examinations, reflecting their strong academic foundation. We are also proud to share that the department's QS ranking has improved significantly from 351–400 to 251–300, a result of the dedicated efforts and hard work of our faculty members and students.

The quarter also witnessed strong research output in terms of publications, patents, funded projects and doctoral completions, alongside active participation of faculty in invited lectures, outreach initiatives and industry engagement programs. These efforts collectively reinforce our commitment to advancing both fundamental and applied aspects of chemical sciences. As we continue to build on this progress, I extend my sincere appreciation to all faculty members, researchers, students and collaborators for their dedication and contributions. The department remains steadfast in its pursuit of excellence, innovation and societal impact.

# Message from the HoD, Mathematics



**Dr. Ritesh Kumar Dubey**

**Research Professor and Head  
Department of Mathematics**

**College of Engineering and Technology  
SRM Institute of Science and Technology  
Kattankulathur 603 203**

It gives me immense joy and pride to connect with you through this edition of our newsletter, HORIZON. The first quarter of 2026 has been truly extraordinary for our department — and it is only right that we pause to celebrate, reflect, and express genuine gratitude for what this family of faculty, students, and staff has achieved together.

I am deeply honored to announce that the Department of Mathematics, SRMIST has been ranked 401–450 globally in the QS World Rankings by Subject, placing us at the 13th position (joint) among Indian universities. Moving up from the 451–500 band is not merely a numerical shift — it is a powerful testament to the sustained, collective commitment of every member of this department. Rankings are achieved through classroom teaching, research contributions, and sustained academic effort, and I wish to emphasize that this recognition belongs to each one of you. On the research front, the numbers speak with confidence. We published 40 journal articles this quarter, with an average impact factor of 2.0 and a highest impact factor of 6.4 — a benchmark that places our work firmly in the global academic conversation.

Academically, the quarter has been vibrant and energetic. The 5-day Advanced Workshop on Scientific Machine Learning (AWSiML-2026) drew over 60 participants; the International Conference ICDETMC 2026 hosted distinguished speakers from IISc, IITs, Stanford, and University College London; and the Engineering Mathematics Festival (EMF 2026) brought together 103 students from across institutions. Each of these events reinforced the belief that mathematics is alive, relevant, and truly inspiring.

Our faculty have carried the department's name far beyond our campus — delivering invited talks at national conferences, engaging with research groups in Taiwan, and mentoring at institutions across Tamil Nadu. I am deeply appreciative of this spirit of generosity that our colleagues bring to every academic engagement.

Our students, too, have made us proud. From Mr. S. Mukil and the Autocreed Racing team securing All India Rank 1 in multiple categories at FKRC Season-6, to our B.Sc. students extending compassion and care to special children at Prem Illam, every act — big and small — reflects the holistic character we strive to nurture here.

We also warmly welcome our newly joined faculty - Dr. Sumi Kar, Dr. S. Ramasamy, Dr. Shankar Veerabathiran, Dr. Punit Kumar Yadav, and Dr. Divya—each bringing exceptional academic credentials and renewed research energy. The department grows stronger with every new voice that joins us.

As I reflect on all that we have accomplished in just three months, I feel a deep sense of gratitude. None of this happens in isolation. It is the result of trust — the trust you place in this institution, in each other, and in the transformative power of mathematics. Let us carry that trust forward with even greater ambition. The journey beyond 401–450 does not wait — and neither do we.

## Message from the HoD, Physics & Nanotechnology



**Dr. E. Senthil kumar**

**Research Professor and Head  
Department of Physics  
and Nanotechnology**

**College of Engineering and Technology  
SRM Institute of Science and Technology**

It gives me great pleasure to connect with you all again through Volume 5 Issue 1 of our newsletter "HORIZON". I am delighted to share some of our department's recent achievements and ongoing initiatives. Significant progress in both academic and research spheres has marked this period, reflecting the hard work and dedication of our students and faculty.

We are excited to share with you the updates from SciNanoArt-2026, the Quantum Crossroads Workshop, the Capacity Building Workshop, and other outreach activities like the Eye Awareness Programme—"Vision for Tomorrow" and the UHV - Talent Expo. Our appreciation goes to Dr. Malar, Dr. Behera, Dr. Mallick, Dr. Dey and Dr. Sinha for delivering invited talks at national/international events. Congratulations to the students for their achievements, such as conference oral/poster presentation awards, clearing GATE 2026, and more.

Our faculty members continue to push the boundaries of knowledge through cutting-edge research, with 90 papers published in prestigious journals (average impact factor of ~5), including two publications with impact factors greater than 10. The count includes 5 Nature-indexed journals.

Also, it is truly heartening to witness the active involvement of our alumni, particularly through guest lectures delivered as part of alumni activities. I would like to express my gratitude to our dedicated faculty, hardworking students, and support staff for their continued contributions to the department. Their efforts are what make the department thrive.

# **Editorial Team**

**Prof. M. Arthanareeswari**

Professor & Chairperson  
School of Basic Sciences

**Prof. M. Prakash**

Head,  
Department of Chemistry

**Prof. Ritesh Kumar Dubey**

Head,  
Department of Mathematics

**Prof. E. Senthil Kumar**

Head,  
Department of Physics  
and Nanotechnology

**Dr. J. Arockia Selvi**

Professor  
Department of Chemistry

**Dr. Ananya Mishra**

Research Assistant Professor  
Department of Chemistry

**Dr. Ajay Jayaprakash**

Research Assistant Professor  
Department of Chemistry

**Dr. E. Suresh**

Associate Professor  
Department of Mathematics

**Dr. B. Kaviarasan**

Research Assistant Professor  
Department of Mathematics

**Dr. K. Periyadurai**

Assistant Professor  
Department of Mathematics

**Dr. Akash Singh**

Assistant Professor  
Department of Mathematics

**Dr. S. Venkataprasad Bhat**

Research Professor  
Department of Physics  
and Nanotechnology

**Dr. Mohit Saraf**

Research Assistant Professor  
Department of Physics  
and Nanotechnology

**Dr. Rudra Banarjee**

Assistant Professor  
Department of Physics  
and Nanotechnology

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## From the Editors Desk

Dear Readers,

Greetings!

We take pleasure in announcing the release of the Volume 5, Issue 1 of HORIZON, the quarterly newsletter of school of Basic Sciences that showcases the activities and achievements of our students and faculty members in the last three months (January 2026 – March 2026).

The issue spotlights the breadth and depth of the contribution of students and faculty members towards teaching, research and consultancy which makes the school of basic sciences special. The issue also highlights the numerous accomplishments by the members of the school in research article publication, acquiring grants and fellowship, patenting and alumni activities.

We invite all the readers' inputs for the betterment of the newsletter. Please write to us at [chair.sobs.ktr.et@srmist.edu.in](mailto:chair.sobs.ktr.et@srmist.edu.in)

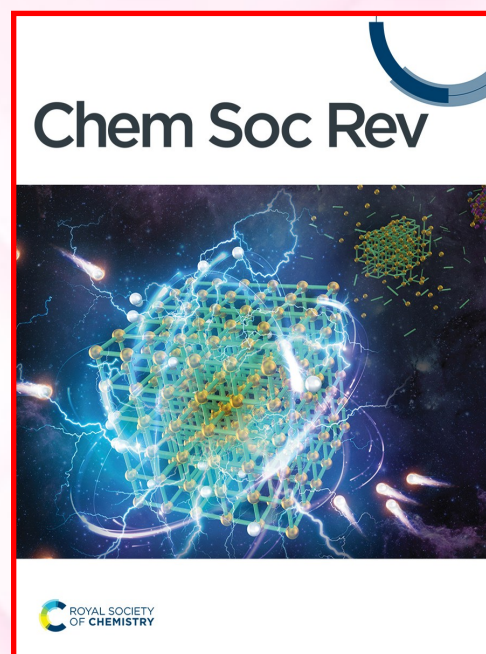
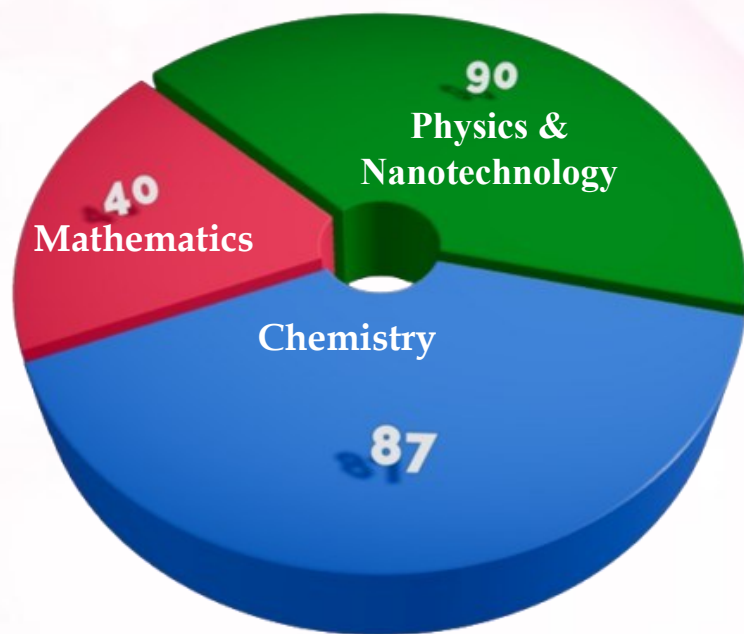
Please enjoy reading our newsletter !!

# Highlights

## School of Basic Sciences

| Key Metrics                               | October to December 2025 | January to March 2026 |
|-------------------------------------------|--------------------------|-----------------------|
| Total No. of publications (SCI/Scopus)    | 244                      | 217                   |
| Highest impact factor journal publication | 20.2                     | 39.3                  |
| No. of projects sanctioned                | 9                        | 13                    |
| Total grant outlay in lakhs               | 709.17                   | 147.64                |
| No. of patents filed / granted            | 6                        | 14                    |
| No. of book chapters                      | 8                        | 19                    |
| MoUs (International / National)           | -                        | 3                     |
| Number of Ph.D's completed                | 48                       | 29                    |

Total number of research publications:



(Impact factor : 39.3)

# Academics - Chemistry

QS world ranking **251-300** by subject.

**8<sup>th</sup>** position (joint) among Indian universities.

## Awards Received by Students:



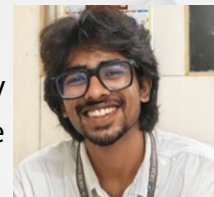
**Ms. Mullaimalar A** (RA2233003011008), working under the guidance of Prof. R. Jeyalakshmi, received **Best Presentation Award** with cash prize of Rs. 10,000 in the National Conference on Advanced Materials for Energy, Environment and Health (NC-AMEEH 2026) held on 7<sup>th</sup> January 2026 at The New College, Chennai.

**Mr. Shyamvarnan Baskar** (RA2233003011017), Ph. D. research scholar under the guidance of Dr. Goutam Kumar Kole, Assoc. Prof., was awarded the **RSC Best Poster Presentation Award** in the DAE-BRNS 4<sup>th</sup> Symposium on “Current Trends in Analytical Chemistry (CTAC-2026)”, organized by the Analytical Chemistry Division, Bhabha Atomic Research Centre (BARC), Mumbai, India, held during 21<sup>st</sup> - 24<sup>th</sup> January 2026.



**Mr. Rajini M** (RA2333003011041), Ph. D. research scholar working in the group of Prof. M. Arthanareeswari, Chairperson, School of Basic Sciences, received the **Best Oral Presentation Award** in the 11<sup>th</sup> International Conference on Composite Materials and Material Engineering (ICCMME2026), held between 28<sup>th</sup> - 30<sup>th</sup> of January 2026 in the Tokyo University of Science, Tokyo, Japan.

**Mr. Yogeshwaran Arumainathan** (RA2533003011022), Research Scholar, has successfully cleared the Graduate Aptitude Test in Engineering (GATE 2026), a highly competitive National-level examination conducted in February 2026.



**Mr. Darkin Richard A**, Research Scholar under the guidance of Dr. Kumaran V, Res. Prof, has successfully qualified in the Council of Scientific and Industrial Research (CSIR) National Eligibility Test (CSIR-NET) in Chemical Sciences, securing an All India Rank (AIR) of 70. He has been awarded the Junior Research Fellowship (JRF) and is also eligible for the position of Assistant Professor.

**Ms. Veni S** (RC2533003011005) working in the group of Dr. S. Anandhakumar, Res. Asst. Prof. has been selected for the **Taiwan Experience Education Program (TEEP)** directed by Prof. Chih-Yu Kuo, Department of Chemical Engineering and Biotechnology, National Taipei University of Technology, and guided by Prof. Mani Govindasamy as the advisor and project professor, Ming Chi University of Technology (MCUT), New Taipei



Mr. N. Raghu (RA2333003011001), research scholar under the guidance of Dr. Priyadip Das, Res. Assoc. Prof., was awarded Best Oral Presenter and received a certificate from the Royal Society of Chemistry, along with a cash prize of ₹3,000, a one-year RSC membership, and a travel grant of £500 at GCRC II 2026 held at GITAM University, Visakhapatnam, from February 12th - 14th, 2026.

**Ms. S. Rakshantha, Mrs. Jayashree Venkatesh, Ms. Prathaban G**, working with Dr. Susnata Pramanik, Asst. Prof., and **Ms. Noora Hiyum** working under the guidance of Dr. Srinivasarao Kancharla, Assoc. Prof., received the **Best Poster Award** for their poster presentations at the International Conference on Advances in Chemistry for Diverse Applications (ICACDA): Bridging Basic, Translational Research and Health Sciences for a Sustainable Future, organized by the Department of Chemistry, Guru Nanak Dev University, Amritsar, Punjab, from February 24<sup>th</sup> - 26<sup>th</sup>, 2026.

**Mr. Rohith Suresh Kumar**, and **Mr. R. Barath** (PG students) MSc Project under the Guidance of **Dr. S. Vadivel**, Res. Assoc. Prof. have received the Chancellor's Award for Excellence in Postgraduate Research - 2026 during the National Science Day celebration held on 28<sup>th</sup> February 2026 at SRMIST, Kattankulathur.



In addition, **thirty research scholars** from the Department of Chemistry, SRM Institute of Science and Technology (SRMIST), received the **Dr. APJ Abdul Kalam Research Award 2026** during the **National Science Day** celebration held on 28<sup>th</sup> February 2026 at SRMIST, Kattankulathur.

| S. No | Name of the PhD Scholar       | Guide Names                                  |
|-------|-------------------------------|----------------------------------------------|
| 1     | Dr. Amarendhar Manda          | Dr. M. Arthanareeswari, Chairperson          |
| 2     | Ms. Keerthika P               | Dr. M. Arthanareeswari, Chairperson          |
| 3     | Mr. Jenson Samraj J           | Dr. B. Neppolian, Prof., & Dean (Research)   |
| 4     | Ms. Nasrin Banu G             | Dr. B. Neppolian, Prof., & Dean (Research)   |
| 5     | Dr. Esther Rubavathy S M      | Dr. Prakash Muthuramalingam, Res. Prof. Head |
| 6     | Ms. Mullaimalar               | Dr. R. Jeyalakshmi, Prof.                    |
| 7     | Mr. Bharathi Kannan Raja      | Dr. J. Arockia Selvi, Prof.                  |
| 8     | Mr. Muthukumar Govindaraj     | Dr. J. Arockia Selvi, Prof.                  |
| 9     | Dr. Magesh Kumar Muthukumaran | Dr. J. Arockia Selvi, Prof.                  |
| 10    | Dr. Jeyakiruba P              | Dr. Helen Annal Therese, Prof.               |
| 11    | Dr. Premkumar J               | Dr. Helen Annal Therese, Prof.               |
| 12    | Mr. Pasupathi M               | Dr. B. Natarajan, Assoc. Prof.               |
| 13    | Dr. Subash M                  | Dr. B. Natarajan, Assoc. Prof.               |

|    |                               |                                            |
|----|-------------------------------|--------------------------------------------|
| 14 | Dr. Saravanan K               | Dr. B. Natarajan, Assoc. Prof.             |
| 15 | Dr. Sajith Babu M K           | Dr. Srinivasarao Kancharla, Assoc. Prof.   |
| 16 | Mr. Shyamvarnan Baskar        | Dr. Goutam Kumar Kole, Assoc. Prof.        |
| 17 | Dr. Mohamed Yusuf Baig K      | Dr. Goutam Kumar Kole, Assoc.Prof.         |
| 18 | Mr. Bharani Dharan S          | Dr. M. Sivakami, Assoc.Prof.               |
| 19 | Mr. Anubhab Das               | Dr. Samarendra Maji, Res. Assoc.Prof.      |
| 20 | Mr. Sayak Nag                 | Dr. Soumyajit Ghosh, Res. Assoc.Prof.      |
| 21 | Mr. Thiagaraj P               | Dr. Soumyajit Ghosh, Res. Assoc.Prof.      |
| 22 | Dr. Marimuthu S               | Dr. G. Maduraiveeran, Res. Assoc.Prof.     |
| 23 | Dr. Aneesh Anand N            | Dr. Prasant Kumar Nayak, Res. Assoc. Prof. |
| 24 | Dr. Dhatshanamoorthy B        | Dr. Prasant Kumar Nayak, Res. Assoc. Prof. |
| 25 | Ms. Divya Arulraj             | Dr. Tapan Kumar Mistri, Asst. Prof.        |
| 26 | Mr. Mariyappan Shanmugam      | Dr. Karthikeyan, Res. Asst. Prof.          |
| 27 | Ms. Prince Jemima Jebaselvi S | Dr. Karthikeyan, Res. Asst. Prof.          |
| 28 | Dr. Abigail Jennifer G        | Dr. E. Varathan, Res. Asst. Prof.          |
| 29 | Ms. Sujita P                  | Dr. S. Vadivel, Res. Asst. Prof.           |
| 30 | Mr. John David A              | Dr. Anjan Das, Res. Asst. Prof.            |



**Mr. Rohith Suresh Kumar** (RA2533003011006) and **Mr. Sabarikaaruthapandi Ramar** (RC2333003011021), research scholars working under the guidance of Prof. J. Arockia Selvi, received the **First and Second Prizes, respectively, in Poster Awards** at the "National Conference on Advancements and Recent Trends in Materials Development and Coating Technology- NCAMC-2026", Loyola College, Chennai held on March 6<sup>th</sup> 2026.



**Mr. R. Sridhar** (RC2533003011010) working under the guidance of Dr. D. Paradesi, Assoc. Prof. won the **Best Oral Presentation Award** from the National Conference on "Innovative Materials Technology for Sustainable Future" (IMTS-2026), organized by the Department of Physics, Valliammai Engineering College, in association with IIC, ISTE, and Physical Sciences Club, held on 11<sup>th</sup> March 2026.

**Mr. Sandeep Kumar V** (RA2334009010015), a 2<sup>nd</sup> year M.Sc. Chemistry student of SRM Institute of Science and Technology, Kattankulathur, has received Gold Medal in International Ball Badminton Test Series between India and Thailand from March 11<sup>th</sup> - 15<sup>th</sup> 2026.



**Dr. Karuppusamy Masiyappan**, Post-doctoral fellow in the Department of Chemistry was awarded the **Best Thesis Award** at the 2<sup>nd</sup> International Conference on Advanced Functional Materials and Devices (AFMD-2026) organized by the Nanotechnology Research Centre (NRC), at SRM Institute of Science and Technology, Kattankulathur, held from March 19<sup>th</sup> - 24<sup>th</sup>, 2026.

**Ms. Swarnamayee Behera** (RA2133003011023), research scholar, under the guidance of Prof. K. K. R. Datta, received **first prize for the outstanding research work** at the World Water Conclave 2026 & EEWASH-26 Conference, organized by the Centre for Research in Environment, Sustainability Advocacy and Climate Change (REACH), SRM Institute of Science and Technology, Kattankulathur held during March 25<sup>th</sup> - 27<sup>th</sup>, 2026.



**Mr. Vikraman Ganesh Moorthi**, (RC2433003011001), research scholar under the Guidance of Dr. Gopal Chandru Senadi, Res. Assoc. Prof., secured **first place in the oral presentation** competition under the Medicinal Chemistry Group at the "International Conference on Frontier Chemistry and Life Sciences (ICFCLS-2026)" from 25<sup>th</sup> - 26<sup>th</sup> March 2026,

College of Life Sciences, Kaohsiung Medical University, Kaohsiung, Taiwan.

**Ms. Prince Jemima Jebaselvi** (RA2233003011007), working under the guidance of Dr. S. Karthikeyan, Res. Asst. Prof. received the **RSC Best Poster Presentation Second Prize** and was awarded a cash prize of Rs. 2,000.

**Ms. Lekshmi Priya S L** (RA2433003011039), under the guidance of Dr. S. Karthikeyan, Res. Asst. Prof. won the **Best Poster Presentation Award** at the Second International Conference on Next Generation Sustainable Materials for Water and Energy Solutions (SuWatE+26) held at VIT-AP University, from 26<sup>th</sup> - 28<sup>th</sup> March 2026.

### Awards Received by Faculty Members:



**Prof. Prakash Muthuramalingam**, Res. Prof. & Head, Department of Chemistry, was elected as a **Fellow of the Academy of Sciences, Chennai (FASCh.)** on 27<sup>th</sup> February 2026. This prestigious recognition acknowledges his significant contributions to chemical sciences through theoretical and computational studies on green energy and environmental chemistry.

The award ceremony was conducted at University of Madras, Guindy Campus, Chennai and the award were presented by Prof. S. Sriman Narayanan, President, The Academy of Sciences, Chennai with other council members.

**Dr. M. Ganesh Pandian**, Assoc. Prof., received **Young Scientist Award – 2025 in Chemical Sciences from The Academy of Sciences, Chennai** on 18th March 2026. The award was presented by Prof. V. Kamakoti, IIT Madras, and Prof. S. Sriman Narayanan, President, The Academy of Sciences, Chennai, with other Council members.



### Outreach Activities in the Department of Chemistry:



**Dr. Goutam Kumar Kole**, Assoc. Prof., delivered an **invited talk** entitled 'Structure, Reactivity and Multifunctional Properties of Novel Organic and Metal-Organic Materials' at a conference named "Current Trends in Analytical Chemistry (CTAC-2026)", organized by the Analytical Chemistry Division, Bhabha Atomic Research Centre (BARC), Mumbai, India, during 21<sup>st</sup> - 24<sup>th</sup> January 2026.

**Dr. Santi Prasad Rath**, Res. Asst. Prof. delivered an **invited lecture** at the International Conference on Advanced Materials, Green Energy & Sustainability (ICAMGES) held at the University of Kerala on 7<sup>th</sup> February 2026. The conference provided an excellent platform for knowledge exchange on emerging trends in advanced materials and sustainable energy research.





**Prof. K. K. R. Datta**, Res. Prof. has delivered an **invited lecture**, at the "International Conference on Membranes for Decarbonization and Sustainability (MDCS) & 2<sup>nd</sup> Conference on Applied Membrane Technology and Translational Research (AMTTR-2)", organized between 12<sup>th</sup> - 14<sup>th</sup> February 2026, by Indian Membrane Society (IMS).

**Dr. Gopal Chandru Senadi**, Res. Assoc. Prof., attended and gave a **talk** at the National Conference on Natural Products in Drug Discovery Bridging Traditional and Modern Medicine for Innovation (NDDTMM)-2026 held on 12<sup>th</sup> - 13<sup>th</sup> February 2026, organized by Entomology Research Institute, Organized by Loyola College (Autonomous), Chennai, Orbiton Life Sciences PVT. LTD.



**Dr. Anju V. G.**, Res. Asst. Prof. delivered an **invited lecture** titled "Electrochemical Synthesis of Ammonia and Amino Acid: A Sustainable Route" as part of the International Conference on Contemporary Catalysis and Applications (ICCCA 2026), held at Mahatma Gandhi University, Kottayam, Kerala, from February 19<sup>th</sup> -21<sup>st</sup>, 2026.

**Dr. Ananya Mishra**, Res. Asst. Prof. attended and gave an **invited talk** on "Programmable Synthetic Cells to Functional Cytomimetic Materials" at the 24<sup>th</sup> Prof. K. V. Thomas Endowment Seminar & 5<sup>th</sup> International Conference on "New Trends in Applied Chemistry-2026" NTAC 2026, organized at Sacred Heart College, Kochi, Kerala, held between February 20<sup>th</sup> - 21<sup>st</sup>, 2026.



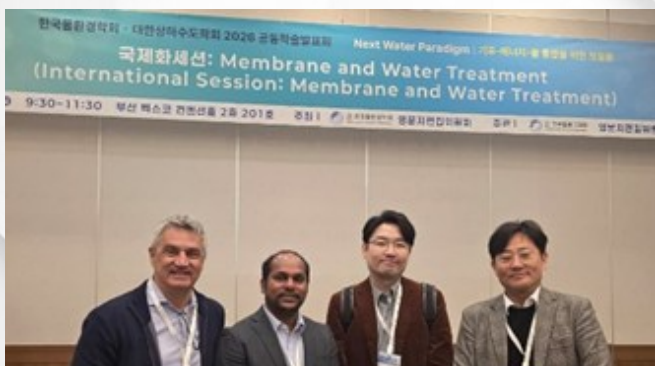
**Dr. M. Ganesh Pandian**, Assoc. Prof. delivered an **invited lecture** at the Two Days International Conference on Recent Advances in Chemical Sciences, Mother Teresa Women's University, Kodaikanal, on 27<sup>th</sup> February 2026.

**Prof. J. Arockia Selvi**, was felicitated as one of the **Top Scorers of the AI for All program** (Batch 1) in the SWAYAM Plus 2<sup>nd</sup> Year Celebration Event held at IITM, Chennai, on 17<sup>th</sup> March 2026.





**Prof. J. Arockia Selvi**, delivered an **invited talk** on “Development of Corrosion Inhibitors for Diverse Corrosion Processes: From Fundamentals to Advanced Applications” at the International Conference on Advancements and Recent Trends in Materials Development and Coating Technology (ICAMC-26), Loyola College, Chennai, held on 6<sup>th</sup> March 2026. She also participated in “Bhārati - Nārī to Nārāyaṇī” National Convention of Women Thought Leaders held at Vigyan Bhavan, New Delhi, during 7<sup>th</sup> - 8<sup>th</sup> March 2026, celebrating International Women's Day. The event was graced by the Honourable President of India, Smt. Droupadi Murmu.



**Dr. S Karthikeyan**, Res. Asst. Prof. presented his research work as an **invited talk** on “Solar-Activated Copper-Based Materials for the Depollution of Trace Organics” at Water Korea 2026, held in Busan (BEXCO), South Korea, between March 19<sup>th</sup> - 20<sup>th</sup> 2026.



**Prof. J. Arockia Selvi**, served as an External Examiner for the PhD Viva Voce examination of Mr. Sachin at AcSIR/CSIR-IIP Dehradun on March 25<sup>th</sup> 2026.

A total of 24 faculty members participated in an outreach initiative aimed at promoting admissions to the new **B.Sc. (Honours) Chemistry** specialization programs. Ten school-cluster regions in and around Chennai and Chengalpattu were identified, and a consolidated list of nearly 200 schools was prepared. The faculty members were organized into 10 outreach teams, each assigned to visit the identified schools. During their visits, the teams coordinated through appropriate administrative channels and shared posters and brochures highlighting the career prospects, industry relevance, and higher education opportunities associated with the new programs. They also provided detailed information on the specializations offered, the Department's infrastructure and research opportunities.



M.Sc. Chemistry and M.Sc. Organic Chemistry students participated in an industrial visit to Solara Active Pharma Science Limited, Cuddalore, conducted in two batches on 6<sup>th</sup> February and 20<sup>th</sup> February 2026. During the visit, students toured the production unit, where they observed reactor-based processes and gained an understanding of large-scale chemical manufacturing. They were also given a comprehensive briefing on Good Manufacturing Practices (GMP), providing valuable exposure to industry standards and protocols. The visit offered students practical insights into pharmaceutical industry operations, significantly enhancing their learning beyond the classroom. It helped them better understand industry expectations and motivated them to consider careers in the pharmaceutical sector. The visit was organized by the faculty members Dr. N. Abirami, Assoc. Prof., Dr. R. Arulmohzi, Assoc. Prof., and Dr. E. Sundaravadivel, Assoc. Prof.

# Academics - Mathematics

QS world ranking **401-450** by subject.  
**13<sup>th</sup>** position (joint) among Indian universities.

## 5-day Advanced Workshop on Scientific Machine Learning (AWSciML-2026)



The 5-day Advanced Workshop on Scientific Machine Learning (AWSciML-2026) was organized by the Department of Mathematics, SRM Institute of Science and Technology, from 20th to 24th January 2026 with over 60 participants. The workshop was coordinated by **Dr. Bibekananda Bira** and **Dr. Sahadeb Kuila**. It covered advanced topics such as Physics-Informed Neural Networks (PINNs), Graph Neural Networks, hyperbolic PDEs, and machine learning applications in scientific computing. The sessions combined theoretical concepts with hands-on training. The programme effectively enhanced participants' understanding of modern scientific machine learning techniques.

## International Conference on Differential Equations: Theory, Modelling & Computing (ICDETCM 2026)



The **International Conference on Differential Equations: Theory, Modelling & Computing (ICDETCM 2026)** was organized by the Department of Mathematics, SRM Institute of Science and Technology, from 27th to 29th January 2026. The conference was convened by **Prof. Ritesh Kumar Dubey**, **Dr. Bibekananda Bira**, and **Dr. Sahadeb Kuila**. It featured invited talks and technical sessions by eminent speakers from leading institutions such as IISc, IITs, IISERs, TIFR, Stanford University, and University College London.



Key topics included numerical methods, fractional differential equations, multiscale modelling, fluid dynamics, and stochastic systems. The event successfully promoted research collaboration and academic exchange in differential equations and computational mathematics.



The **Engineering Mathematics Festival (EMF 2026)** was organized by the Sri Ramanujan Mathematics Club, Department of Mathematics, SRM Institute of Science and Technology, on 23rd January 2026. The event was convened by **Dr. E. Suresh** and **Dr. V. Muthukumar**. It featured three competitions—Math-O-Mania, Math Quiz, and Integration Bee—with participation from 103 students across various colleges. The festival provided an engaging platform to enhance analytical thinking, speed, and conceptual understanding in mathematics.



The **Workshop on Effective and Innovative Tools to Enhance Learning (WEITEL 2026)** was organized by the Department of Mathematics, SRM Institute of Science and Technology, on 11–12 February 2026. The workshop was convened by **Dr. L. Shobana** and co-convened by **Dr. S. Athithan**. It focused on advanced AI tools, computational methods, and innovative digital learning techniques for B.Tech. Mathematics and Computing students. Expert sessions covered AI, machine learning, cryptography, and modern computational practices. The workshop successfully enhanced participants' understanding of interdisciplinary and industry-oriented applications.



The **B.Sc. Mathematics students (I, II, and III years)** actively contributed to community service through the NSS programme organized by SRM Institute of Science and Technology (SRMIST). As part of this initiative, they visited a home for special children, **Prem Illam**, located in Madhurandhagam, Chengalpattu, on 12 March 2026.



The students engaged meaningfully with the children, fostering a sense of care and inclusion, and participated in environmental activities such as campus cleaning and tree plantation, reflecting their commitment to social responsibility and sustainability.



The students were guided and mentored by **Dr. A. Anuradha, Dr. Uma Maheswari, Dr. B. Sudha, Dr. Sabarinathan, and Dr. Bikash Koli Dey.**



As part of the Industry–Academia Connect initiative, an industrial visit to Brakes India Private Limited was organized on 13 March 2026 for faculty members. The visit was led by **Dr. Ritesh Kumar Dubey**, along with **Dr. L. Shobana** and **Dr. Meena Parvathy Sankar**. Participants gained practical exposure to automotive manufacturing processes, including machining, assembly, and quality control in braking systems. The visit offered valuable insights into real-world applications of mathematical and scientific concepts, strengthening experiential learning and industry–academia collaboration.



A two-day lecture series on “Complex Analysis: Theory and Applications” was conducted on 12–13 March 2026. The programme was convened by **Dr. Ritesh Kumar Dubey**, **Dr. Vennila B.**, **Dr. Selvakumar A.**, and **Dr. Ayush Udeep**. The sessions were delivered by Prof. Saminathan Ponnusamy, covering topics such as analytic functions, Cauchy–Riemann equations, conformal mappings, and singularities. The event witnessed active participation from students, research scholars, and faculty members, and significantly enhanced participants’ understanding and research perspective in complex analysis.



A Workshop on Outcome-Based Curriculum Design was conducted on 18 March 2026 for mathematics faculty members. The session was delivered by Dr. Radhakrishnan M., focusing on Outcome-Based Education (OBE), curriculum alignment, and assessment design. Participants were trained in CLO writing, Bloom’s Taxonomy, the CDIO framework, and the use of AI tools in teaching. The workshop was organized under the leadership of **Dr. Ritesh Kumar Dubey**, along with **Dr. N. Parvathi**, **Dr. L. Shobana**, and **Dr. E. Suresh**. The programme enhanced faculty readiness for designing outcome-driven and accreditation-oriented curricula.



Research Colloquium on “Conservation Laws and Constitutive Equations” was held on 2 March 2026. The session was delivered by **Prof. J. V. Ramana Murthy**, NIT Warangal, with active participation from faculty members and research scholars. The colloquium was organized by **Dr. Ritesh Kumar Dubey** and **Dr. Swarup Barik**. The lecture covered key aspects of fluid mechanics, including conservation laws and the Navier–Stokes equations, offering valuable insights into advanced modelling approaches and applications in fluid dynamics.

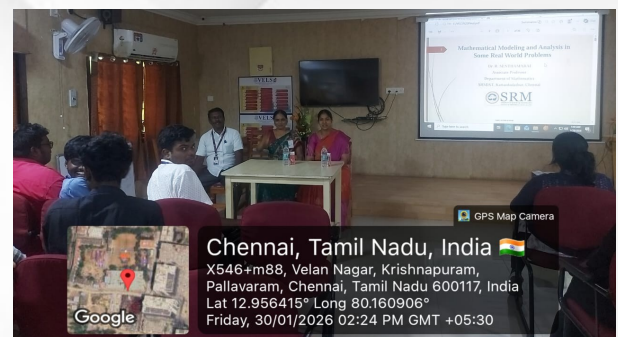


An invited lecture on “Physics-Informed Neural Networks: A New Frontier in Option Pricing and Financial Decision-Making” was conducted on 6 March 2026. The programme was coordinated by **Dr. V. Subburayan**. The session was delivered by **Prof. Natesan Srinivasan**, IIT Guwahati, with active participation from faculty members, research scholars, and students. The lecture highlighted the application of PINNs in solving Black–Scholes PDEs and provided valuable insights into the intersection of numerical methods, finance, and machine learning.

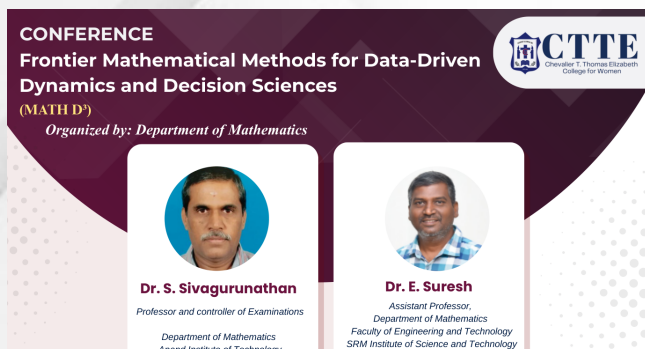
### Faculty Outreach Activities



**Dr. E. P. Siva** from the Department of Mathematics, SRM Institute of Science and Technology, was invited as a speaker at RAAMC-2026, held at Manipal Institute of Technology, Bengaluru (7–9 January 2026). The conference was organized in association with IIT Guwahati and NIT Uttarakhand. He delivered a talk on “Analysis of Hydrodynamic and Thermal Behavior in Human Tear Films”



**Dr. R. Senthamarai** delivered a guest lecture on “Mathematical Modeling and Analysis in Some Real World Problems” on 30th January 2026 organized by the School of Basic Sciences, Department of Mathematics, VELS Institute of Science, Technology & Advanced Studies, Chennai.



**Dr. E. Suresh** delivered an Invited Talk on "Applications of Graph Theory in Modern Science and Technology" on 5 February 2026 at the Conference on Frontier Mathematical Methods for Data-Driven Dynamics and Decision Sciences (MATH D<sup>3</sup>) organized by the Department of Mathematics, CTTE College for Women, Chennai.



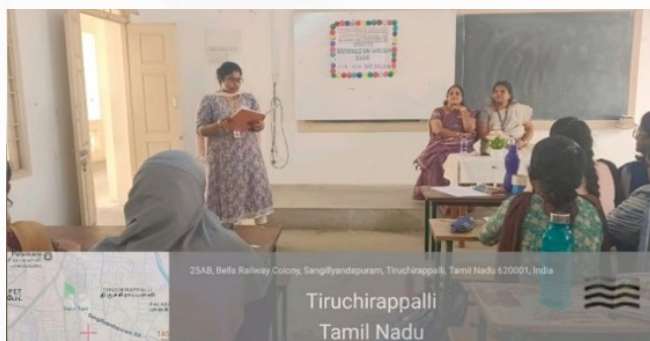
**Dr. Manotosh Kumbhakar** completed a 10-day research visit sponsored by the National Science and Technology Council (NSTC), Taiwan, in Prof. Christina W. Tsai's research group at National Taiwan University from 19 February to 1 March 2026.



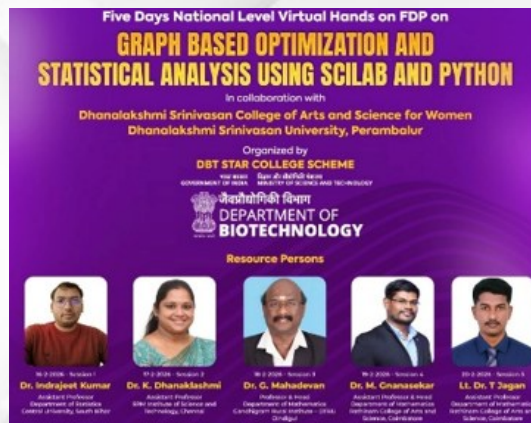
**Dr. R. Senthamarai** actively participated in the second Board of Studies meeting of the Faculty of Science and Humanities held on 9 February 2026 at Mohamed Sathak Engineering College, Keelakarai.



**Dr. K. Dhanalakshmi** delivered a guest lecture on "Graph Theoretical Applications in Chemical Structure Analysis" as part of the Prof. Surya Narayanan Iyer Endowment Lecture, organized by St. Joseph's College, on 10th February 2026.



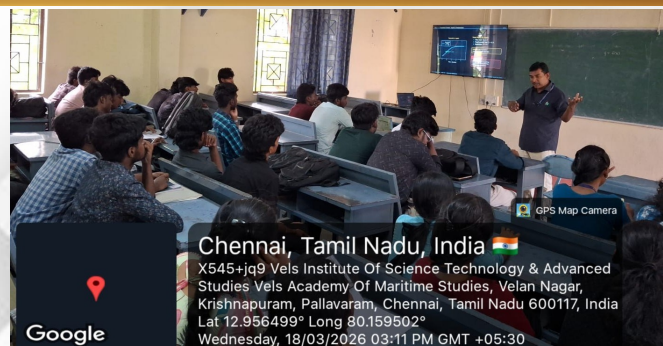
**Dr. K. Dhanalakshmi** delivered a lecture at the Training Program on "Cracking NET/SET Questions in Real Analysis", organized by the Ramanujan Wisdom Club, Department of Mathematics, Holy Cross College, on 10 February 2026.



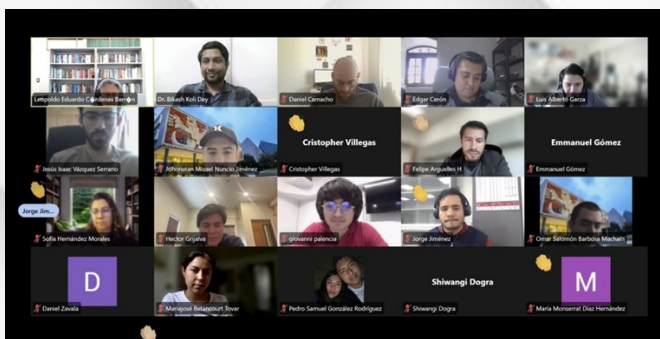
**Dr. K. Dhanalakshmi** delivered a talk in a five-day National Level Faculty Development Programme on "Graph-Based Optimization and Statistical Analysis using SCILAB and Python," organized by the Department of Mathematics, Rathinam College of Arts and Science, Coimbatore on 17 February 2026.



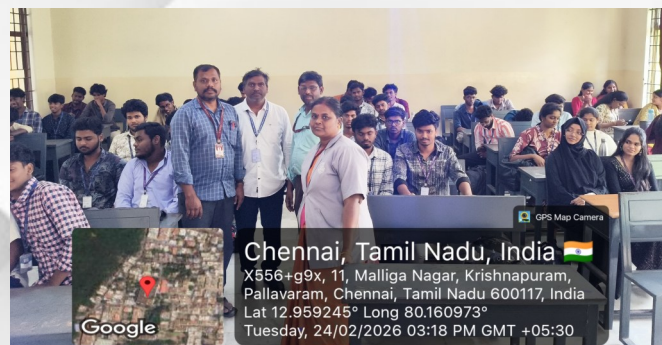
**Dr. E. P. Siva** was invited as a speaker at ICRAPS-2026, held at the National Institute of Technology Uttarakhand during 6–8 February 2026. The conference was jointly organized by the Departments of Physics and Mathematics at NIT Uttarakhand. He delivered a talk on “Magneto-Electro Peristaltic Flow of Carreau Fluid in Tumor Cells.” He also served as a Technical Session Chair.



**Dr. R. Arulprakasam** delivered a guest lecture on “Engineering Mathematics in Technology and Industrial Applications aligned with SDG 9”, on 18 March 2026. Organized by School of Basic Sciences, Department of Mathematics, VELS Institute of science, Technology & Advanced Studies, Chennai.



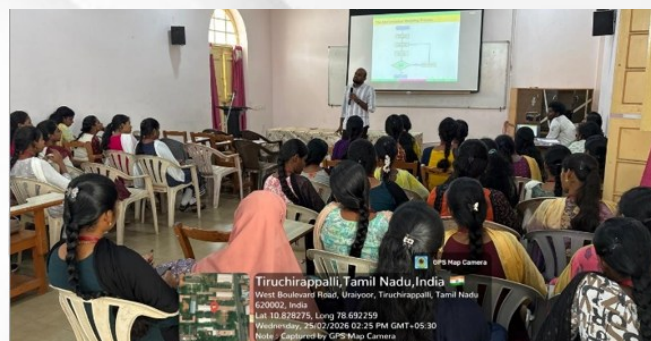
**Dr. Bikas Koli Dey** has given a talk entitled “Pathways to Q1 Publication: Structural Strategies” to PhD students of the School of Engineering of Sciences at Tecnológico de Monterrey on 25 February 2026.



**Dr. E. Suresh** delivered guest lectures at the School of Basic Sciences, Department of Mathematics, VELS Institute of Science, Technology & Advanced Studies, Chennai, on “Queuing Theory and its Engineering Applications” (24 February 2026) and “Understanding the Fundamentals of Random Processes” (17 March 2026).



**Dr. G. Arul Joseph** delivered a guest lecture on Five days National level Virtual Workshop on Mathematical Modeling, Network Analysis and AI Applications in Emerging Research at VEL’s Institute of Science, Technology and Advanced Studies, Chennai on 24 February 2026.



**Dr. Arul Joseph G** delivered guest lecture on “Mathematical Modeling of Disease Transmission: From Classical Models to AI Driven Approaches” as part of the Prof. L. Benedict Michael Raj Endowment Lecture, organized by St. Joseph’s College(Autonomous), Tiruchirappalli, on 25 February 2026.



Keelakarai, Tamil Nadu, India  
Mohamed Sathak Engineering College, Sh. 49, Keelakarai, Tamil Nadu

**Dr. R. Senthamarai**, Associate Professor, Department of Mathematics, SRMIST, delivered an Invited Talk on "Mathematical Analysis of an Amperometric Biosensor by Taylor Series Method" at a one-day event organized by the Department of Mathematics and Chemical Engineering Department on 9 February 2026.



**Dr. Sahadeb Kuila**, delivered an Invited Lecture at the National Conference on Emerging Trends in Mathematical Sciences: Analysis, Modelling, Computation and Algebra (NCETMS-AMCA-2026), held at the Department of Mathematics, Jadavpur University, Kolkata, on March 12–13, 2026.



**Dr. R. Krishna Kumari** invited as the Resource Person for the Faculty Development Program on "Intellectual Property Rights in Academia" organized by Academic Staff College, Dr. M.G.R. Educational and Research Institute (Deemed to be University), Chennai held on 9th March 2026.



**Dr. S. Vidhyanandhini** delivered a talk on Awareness Seminar on "Application of pi on Engineering" held on 13 March 2026 in Sengunthar Engineering College, Kumaramangalam, Thiruchengode, Tamil Nadu.



The outreach program “Empowering Young Minds Through Maths Mastery” was held on 12th January 2026 at SRMIST, Kattankulathur, hosted by **Dr. G. Sheeja** and **Dr. S. Vidyanandini**. A total of 50 government school students from grades 7–8 participated in abacus, Vedic Maths, quizzes, puzzles, and hands-on activities. Distinguished guests including **Dr. G. Ramesh**, **Film Director Mr. Shiva**, and **Headmaster Mr. Chandrasekar** addressed the students on education and emerging technologies. The program successfully reduced math anxiety, boosted confidence, and distributed kits and certificates to all participants.

**Dr. E. Sujatha**, **Dr. Sheena Christy**, and **Dr. Merlyn Margret** have successfully completed the Cambridge International Certificate in Teaching with Digital Technologies (TDL) with distinction, a globally recognized professional qualification.

### Alumni events



The Alumni Talk titled “A Mathematical Perspective on the Foundations of Quantum Computing” was held on 02 March 2026 at Seminar Hall-I, Kattankulathur. The programme was hosted by **Dr. G. Ramesh**, **Dr. G. Sheeja**, and **Dr. S. Vidyanandini** under the guidance of **Dr. Ritesh Kumar Dubey**. The session was delivered by **Dr. Jackson J.**, Visvesvaraya Post-Doctoral Fellow at IIST, Thiruvananthapuram. He explained key concepts of quantum computing, including qubits, superposition, entanglement, and the role of linear algebra in quantum systems. The session concluded with an interactive discussion, providing valuable insights into emerging research areas.



The Department of Mathematics, SRM Institute of Science and Technology, in association with the Directorate of Alumni Affairs, organized an Alumni Talk titled “*Empowering Mathematical Thinking through Python: For Career Growth & Innovation*” on 04 February 2026 at Seminar Hall-I, Kattankulathur. The programme was coordinated by **Dr. G. Ramesh**, **Dr. G. Sheeja**, and **Dr. S. Vidyanandini**. The session was delivered by **Mr. Sivappa S.**, M.Sc. Mathematics (2022 Batch) and App Development Analyst at Accenture Solutions Pvt. Ltd., with 59 participants including students, scholars, and faculty members. **Dr. A. Rathinam** addressed the gathering, highlighting alumni engagement and career opportunities.

The Department of Mathematics, SRM Institute of Science and Technology, in association with the Directorate of Alumni Affairs, organized an Alumni Talk titled “Elementary Concepts of Relation and Function” on 06 March 2026 via Zoom platform. The session was delivered by **Mr. Santosh Kumar Sahani**, currently pursuing M.Sc. at NIT Jaipur. The programme began with a welcome address by **Dr. R. Dhanalakshmi**. The speaker discussed fundamental concepts of relations and functions, enhancing students’ conceptual understanding. The session was interactive and beneficial for students and participants.

## Student Achievements



The Department of Mathematics proudly congratulates **Mr. S. Mukil, II B.Sc. Mathematics**, for his outstanding achievements in the National Level Formula Karting Racing Competition (FKRC Season-6), organized by the Academy of Indigenous Motor Sports. The entire vehicle was meticulously designed and built from scratch by the SRM student team, Autocreed Racing, in which Mr. S. Mukil serves as the Corporate Head, demonstrating remarkable innovation, leadership, and teamwork.

The team secured Acceleration (All India Rank 3), Endurance (All India Rank 4), CAE & Design Report (All India Rank 1), DFMEA (All India Rank 1), Business Plan Report (All India Rank 1), Design Validation Plan (All India Rank 2), Cost Plan Report (All India Rank 2), Design Specification (All India Rank 2), and Driver Seating (All India Rank 3). They also received special recognitions including the Best Captain Award, 6kW EV – Fastest Lap Setter Award, 6kW EV – 1st TI Cleared Award, and 6kW EV – Safety Kart Award. In addition, the team achieved Overall Statics (All India Rank 2), Overall Dynamics (All India Rank 3), and Overall (All India Rank 3). These accomplishments reflect the team's technical excellence, dedication, and competitive spirit, bringing great pride to the institution.

Students **Mr. Majith Ahamed, Mr. Aritra Kar, Mr. Aparajith G. Kumar, and Mr. Mohammed Towheed A.** of I M.Sc. Mathematics participated in the Quiz Competition conducted during the **eXLog Math Fest** on 20 February 2026 by SSN College of Engineering, Chennai. They successfully cleared the preliminary round, demonstrating strong analytical and problem-solving skills.



**Sarmitha G (RA2333001011013)** received the Best Paper Award at the International Conference on Graphs and Fuzzy Graphs (ICGFG-2026) held on 26th & 27th March 2026 at Vellore Institute of Technology, Chennai.



The students of **I M.Sc., Mathematics** interacted with **Prof. S. Ponnusamy**, (Adjunct Faculty-Maths-SRMIST and Emeritus Professor – Maths – IIT Madras) on 12.03.2026 to 13.03.2026. **Dr. A. Selvakumar**, Class Incharge, guided the students during the program.



**Ms. Monisha, III B.Sc., Mathematics**, won the first prize in the Tamil Elocution Competition, conducted by SRM Tamilperaayam.



**Ms. Monisha, III B.Sc., Mathematics**, was awarded for securing O grade in both the Tamil Language Courses during her B.Sc., Programme by the SRM Dr. Parivendhar Student Tamil Association.



**Industry Collaboration: Brakes India Private Limited.** Two B.Tech (Mathematics and Computing) students — **Aditya Agrawal** (RA2511079010004) and **Mayank Khatri** (RA2511079010017) — have sought permission to initiate collaborative projects with Brakes India Private Limited, coordinated by **Dr. L. Shobana**. The students have requested authorization to formally begin their project

planning phase. They have also sought technical guidance and support from the Engineering Research & Development Team at Polambakkam. This industry-academia partnership aims to provide hands-on experience in applying mathematical computing to real-world engineering challenges.



**Ms. N.Harshitha, III BSc Mathematics**, won the SRM Inter-hostels badminton tournament held on 16-3-2026.

#### **Teacher's Enrichment Workshops (TEW) (Externally funded by National Centre for Mathematics)**

The **National Centre for Mathematics** (a joint centre of IIT Bombay and TIFR, Mumbai) has officially sanctioned a grant of ₹1,99,600 to **Dr. G. Ramesh**, **Dr. R. Arulprakasam** and **Dr. R. Perumal**, Department of Mathematics, SRM Institute of Science and Technology, Kattankulathur, for organizing a Teacher's Enrichment Workshop on "Linear Algebra, Partial Differential Equations and Fourier Analysis." The sanction order has officially released on **23 March 2026**, and an 80% advance of ₹1,59,680 released on 28 April 2026. The workshop is scheduled to be held from 8<sup>th</sup> to 13<sup>th</sup> June 2026 at SRM Institute of Science and Technology, Kattankulathur.

## Newly joined faculties :

**Dr. Sumi Kar** has been working as an Assistant Professor in the Department of Mathematics at SRM Institute of Science and Technology since January 2026. She has served for 1 year as a postdoctoral researcher in the Department of Industrial Engineering at Yonsei University, South Korea. She obtained her Ph.D. in Mathematics from the National Institute of Technology Durgapur, India, in 2024. Her main research area is Operations Research, particularly Supply Chain Management and Retail Management. She has published several research articles in reputed international journals. She qualified for two competitive national-level exams, like CSIR-UGC NET and GATE.



**Dr. S. Ramasamy** is a Research Assistant Professor in the Department of Mathematics at SRMIST, Chennai. He obtained his Ph.D. in Mathematical Sciences from The Gandhigram Rural Institute (Deemed University), Tamil Nadu, with research focused on passivity analysis of dynamic neural networks. He has completed postdoctoral fellowships at the Indian Institute of Science, Bengaluru, and Kunsan National University, South Korea. He is a recipient of the UGC Basic Scientific Research Fellowship and the SERB National Post Doctoral Fellowship. He has also been awarded a research grant from the ANRF under the ARG-MATRICES program. His research interests include neural networks and control systems.

**Dr. Shankar Veerabathiran** is currently serving as a Research Assistant Professor in the Department of Mathematics at SRMIST, Kattankulathur, Chennai, India. He completed his Ph.D. at the Ramanujan Institute for Advanced Study in Mathematics (RIASM), University of Madras. He was a Postdoctoral Fellow at the Institute of Mathematical Sciences (IMSC), Chennai, from 2023 to 2025. Prior to this, he held visiting positions as a Visiting Scientist at the Statistical-Mathematics Unit, Indian Statistical Institute (ISI), Bangalore, during 2022–2023, and at the Department of Mathematics, The LNM Institute of Information Technology (LNMIIT), Jaipur, in 2022. He has qualified national-level competitive examinations, including CSIR-UGC JRF and GATE in Mathematical Sciences. His research interests lie in operator theory and operator algebras, with a particular focus on semigroups of adjointable operators on Hilbert  $C^*$ -modules.



**Dr. Punit Kumar Yadav** joined SRM Institute of Science and Technology as a Research Assistant Professor in the Department of Mathematics in 2026. He obtained his Ph.D. in Mathematics from Malaviya National Institute of Technology, Jaipur, in November 2024. He has qualified for the CSIR–JRF examination. His research interests include Linear Algebra, Matrix Analysis, and Optimization Theory. He has also served as a Postdoctoral Researcher in a visiting scientist position at the Indian Statistical Institute. In addition, he serves as a reviewer for reputed journals, including Optimization and the Journal of Computational and Applied Mathematics.

**Dr. Divya** is currently serving as an Assistant Professor in the Department of Mathematics at SRM Institute of Science and Technology. She holds a Master's degree in Statistics from the University of Madras and an M.Phil. in Statistics from Loyola College, Chennai. Later, she obtained her Ph.D. in Statistics from the University of Madras, Chennai. She has over 3.5 years of teaching experience. In addition, she has served as a Consultant (Technical–Non-Medical) at the ICMR–National Institute of Epidemiology, Chennai. Her research interests include survival analysis, high-dimensional data analysis, and statistical learning methods.



# Academics - Physics and Nanotechnology

Physics and Astronomy: **451-500** by subject.  
10<sup>th</sup> position (joint) among Indian universities.

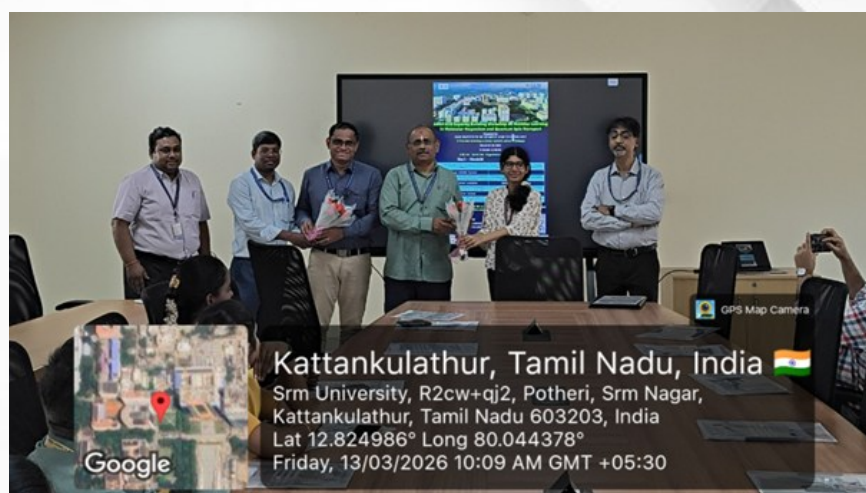
## SciNanoArt-2026:

The Department of Physics and Nanotechnology organized SciNanoArt-2026, co-sponsored by the SPIE Student Chapter, on January 07, 2026. The event aims to highlight the aesthetic and creative aspects of science by showcasing visually striking microscopy and simulation images. Research scholars and students participated by submitting their microscopy or simulation images, demonstrating both scientific insight and artistic creativity, in the form of a printed poster (Convener: Dr. Mohit Saraf; Co-Conveners: Dr. Annie Sujatha R and Dr. Eswara Vara Prasadarao Komarala)



## Capacity Building Workshop

As part of the Scientific Social Responsibility (SSR) initiative funded by the Anusandhan National Research Foundation (ANRF), Government of India, with the aim of promoting awareness of emerging research areas among college faculty members, the Department (Convenor – Dr. Arijit Sen, Co-Convenor – Dr. Jaivardhan Sinha and Dr. Goutam Kumar Kole) organized two-day workshop titled “Capacity Building Workshop on Machine Learning in Molecular Magnetism and Quantum Spin Transport” on 13–14 March 2026.



## Quantum Crossroads Workshop (21–24 January 2026):

The workshop “Quantum Crossroads: Materials, Computation, Communications and Information” was conducted from 21–24 January 2026 by the Department of Physics and Nanotechnology, SRMIST, in association with IIT Madras. It featured 251 participants and 25 expert speakers from academia and industry. The event included keynote lectures, technical sessions, poster presentations, and hands-on workshops such as Qiskit. The program covered diverse topics including quantum materials, computation, and communication, concluding with awards and strong participant feedback.



## Eye Awareness Programme – “Vision for Tomorrow” (5 March 2026):

The outreach programme “Vision for Tomorrow” was conducted on 5 March 2026 at Panchayat Union Middle School, Orathur, by SRM Muthucharam Community Radio in association with Unnat Bharat Abhiyan 2.0. The event focused on eye health awareness among rural students and the local community. Expert talks addressed preventive care, hygiene, and vision-related issues. The session was interactive and well-received, with active participation from students and teachers. Refreshments were distributed, and the event concluded successfully with acknowledgements.



The awareness session was led by **Dr. Abinaya P**, Assistant Professor, Department of Community Medicine, SRM Medical College Hospital and Research Centre, who spoke on common eye problems, preventive measures, and the need for regular eye check-ups. The session also emphasised healthy lifestyle practices such as proper nutrition, reduced screen time, and eye hygiene. The programme witnessed active participation and interaction from students and teachers. It was anchored by Mr. S. Thairiyaraj and concluded with a vote of thanks by **Dr. R. M. Hariharan**.

## Talent Expo 2026: Inspiring Young Minds at Thirutheri



The Department of Physics and Nanotechnology, in collaboration with the UHV Cell, organized a vibrant Talent Expo on March 24, 2026, at **Panchayat Union Middle School, Thirutheri**. This outreach initiative aimed to bridge the gap between higher education and local school communities through value-based learning.

**Event Highlights:** Inspirational Leadership: The event opened with remarks from **Dr. A. Geetha**, followed by felicitations from **Dr. T. Vijayakumar** and **Dr. K. Janani Sivashankar**. School Principal **Mrs. Jayanthi** inaugurated the session, highlighting the role of outreach in building student confidence.

**Keynote Address:** Chief Guest Dr. P. Supraja (UHV University Coordinator, SRMIST) delivered a motivating session on moral values, self-confidence, and creativity, sparking an enthusiastic dialogue with the students.

**Active Engagement:** Over 150 students participated in various talent-based activities. The day concluded with prize distributions and refreshments, celebrating the creativity of every participant.

The program, coordinated by **Dr. K. Santhi**, was a resounding success, leaving a lasting positive impact on the young students of Thirutheri.

### Awards Received by Faculty Members:

**Prof. P. Malar** delivered an invited talk titled, "*Optoelectronic applications of binary chalcogenides thin films*," at the **National Conference on Smart and Sustainable Functional Materials (SSFM-2026)**. The conference was hosted by the Institute of Physics, Bhubaneswar, Odisha, from March 19–21, 2026. Her presentation highlighted critical insights into the development and application of advanced functional materials within the field of optoelectronics.

**Dr. Basker Chandra Behera** was invited to present a talk at the **National Conference on Sensing and Technologies (NCST-2026)**. This event was also held at the Institute of Physics, Bhubaneswar, India, taking place from March 14–16, 2026. Dr. Behera's participation underscores the department's ongoing research initiatives and expertise in the rapidly evolving domain of sensing technologies.

**Dr. Sougata Mallick** delivered an invited talk in **Symposium on Magnetism and Spintronics (SMS-3)**, held from **22-24 January 2026** at **IIT Hyderabad, India**.

**Dr. Jaivardhan Sinha** delivered an invited talk in **Symposium on Magnetism and Spintronics (SMS-3)**, held from **22-24 January 2026** at **IIT Hyderabad, India**.

**Dr. Jaivardhan Sinha** presented an invited talk in **International Conference on Sustainable Nanomaterials Integration & Organization for Energy and Environment** during January 19 - 22, 2026 at **Shiv Nadar Institution of Eminence (SNIOE), Noida, India**

**Dr. Dibyendu Dey** delivered an invited talk titled "Descriptor Enabled Rational Design of High-Entropy Materials Over Vast Chemical Spaces" at the Platinum Jubilee Conference on Contemporary Physics, organized by the Indian Institute of Technology Kharagpur, held during March 29–31, 2026.

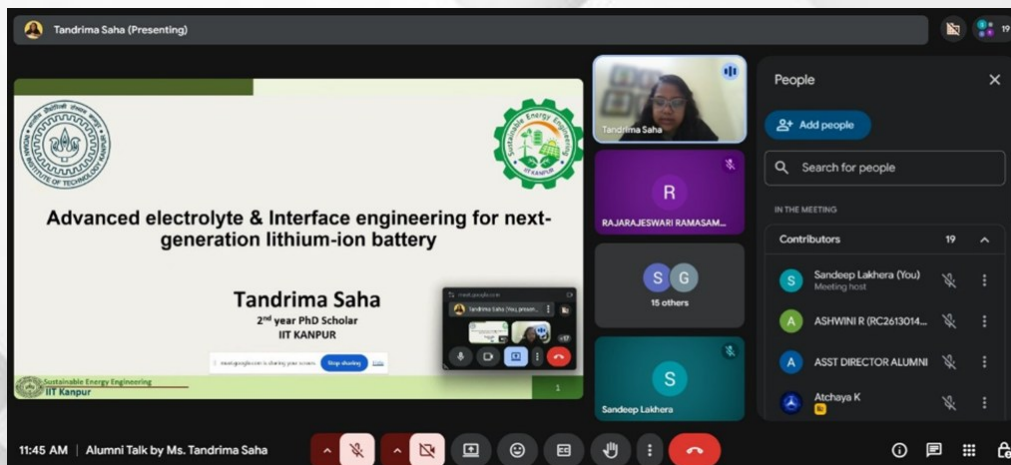
### Awards/recognitions received by students

| S.No | Register Number | Scholar Name     | Guide Name               | Achievements Awards/<br>Place, Date                                                                                                                                                                      | Scholars photo                                                                        |
|------|-----------------|------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1    | RA2333002011028 | Balasundhar BV   | Dr. Alladi Hemanth Kumar | Best – Poster Presentation<br>International Conference on Advanced Functional Materials and Devices (AFMD-2026), SRMIST-KTR, March 19 – March 24, 2026                                                   |    |
| 2    | RC2633002011045 | KUMARAN R        | Dr. Madhuparna Karmakar  | International conference on Advanced Nanomaterials for Clean Energy and Health Applications, Alagappa University, Karaikudi. Held on 11-12 march 2026.                                                   |    |
| 3    | RA2433002011009 | Karthika MU      | Dr.K.Kamala Bharathi     | Best-Poster Presentation. International conference on Advanced Nanomaterials for Clean Energy and Health Applications, Alagappa University, Karaikudi. Held on 11-12 March 2026.                         |   |
| 4    | RA2333002011017 | Kaviyarasana S   | Dr. K. Mani Rahuln       | Best Oral Presentation. National Conference on Innovative Materials Technology for a Sustainable Future, SRM Valliammai Engineering College, Kattankulathur, on 11/03/20                                 |  |
| 5    | RC2233002011013 | Ganesh Gadudhula | Dr. Eswaraiharvarra      | He has been selected for a Grant (covering the registration fee) for Graphene India 2026, held in Kochi, Kerala, from March 9-12, organized by C-MET in collaboration with the University of Manchester. |  |

| S.No | Register Number | Scholar Name     | Guide Name                | Achievements Awards/Place, Date                                                                                                                                                    | Scholars photo                                                                        |
|------|-----------------|------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 6    | RA2533002011062 | Nishitha T P     | Dr.Triparno Bandyopadhyay | GATE 2026 Cleared                                                                                                                                                                  |    |
| 7    | RA2413014011001 | Vinoth Kumar A R | Prof. Kamala Bharathi K   | Best-Poster Presentation<br>International conference on Advanced Nanomaterials for Clean Energy and Health Applications, Alagappa University, Karaikudi. Held on 11-12 March 2026. |    |
| 8    | RA2333002011027 | Haritha J        | Dr. R. Annie Sujatha      | Best- Oral Presentation Bharathidasan Univeristy, Tiruchirappalli/ 8 & 9 January 2026                                                                                              |   |
| 9    | RC2533002011016 | B SRIDHAR        | DR. R. ANNIE SUJATHA      | Best Poster Presentation<br>National Conference on Innovative Materials Technology for a Sustainable Future, SRM Valliammai Engineering College, Kattankulathur, on 11/03/2024     |  |
| 10   | RA2533002011026 | S Venkatesh      | Dr. Rohit Dhir            | GATE 2026 Cleared                                                                                                                                                                  |  |

## Alumni Talks

The Department of Physics and Nanotechnology organized an Alumni talk by **Ms. Tandrima Saha, an alumna of the B.Tech. Nanotechnology programme (Batch 2016–2020)** at SRMIST and currently, a **PhD Research Fellow at Indian Institute of Technology Kanpur** on 25 February 2026 (Wednesday) titled “Advanced Electrolyte & Interface Engineering for Next Generation Lithium-Ion Battery.” The talk was delivered via Google Meet from 11:40 AM to 12:40 PM. She has previously worked as a System Engineer at Tata Consultancy Services.



The Department of Physics and Nanotechnology organized an Alumni talk on 05 March 2026 (Thursday) titled “Engineering a Path from MSc to PhD: Research Life in Denmark.” The talk was delivered by **Ms. Swetha Gopalakrishnan, an alumna of the B.Tech. Nanotechnology programme (Batch 2015–2019)** at SRMIST. Currently she is pursuing a **PhD at Technical University of Denmark (DTU)**. The session was conducted online via Google Meet from 12:00 PM to 1:00 PM IST, with active participation from faculty members, research scholars, and undergraduate students of the department. During the talk, Ms. Gopalakrishnan shared her academic journey from completing her undergraduate studies at SRMIST to pursuing higher studies and research in Denmark.



## Value-added courses

**CSIR-NET/GATE Preparatory Course:** A value-added course entitled “CSIR-NET/GATE Preparatory Course” offered to final-year MSc (Physics) students aimed at preparing them for PhD admission in premier Indian institutes such as IIT/NIT/IISER has been successfully completed with 30 hours duration spanned over the entire even semester, including four assessment components. 38 students were enrolled, and more than 75% of the students have completed the course successfully (course coordinators: Dr. P. Sivakumar & Dr. Jaivardhan Sinha).

# Research—Chemistry

Number of Journal publications : 87

Average Impact Factor : 5.63

Highest Impact Factor Journal published : 39.3

## Highest impact factor papers (>10) : 5

**S. Sreejith**, C. Sanjay, **B. Vedhanarayanan** and **A. Ajayaghosh**. "Squaraine dyes for biophotonics: sensing, imaging and theranostics". *Chemical Society Reviews* (2026): DOI: 10.1039/d5cs01375e (Impact Factor: 39.3). (Impact factor - 39.3).

S. Jayapandi, A. Shrishail Maraddi, S. Premkumar, **B. Neppolian**, S.K. Nataraj. "Experimental and DFT insights into LaCoO<sub>3</sub>-modified PES Nanofiltration membranes for enhanced removal of dyes and pharmaceuticals". *Chemical Engineering Journal*, (2026), 174191. (Impact factor - 13.2).

S. Karthikeyan, U. Rajaji, T. -Y. Liu and **S. Anandhakumar**. "Facile Synthesis of Sodium Titanate Nanosheets as Promising Electrode Material for High Power and Energy Density Supercapacitors". *Small*, 22, (2026): DOI: org/10.1002/smll.202507879 (Impact factor - 12.1).

S. Nayak, L. Anushree, S. Guha, N. Raghul, A. Stewart, G. Das, B. Maity and **P. Das**. "NBD Integrated and Vitamin B6-Driven Charge-Reversible Peptide-Based Nanocarriers for Targeted Therapeutic Delivery". *Small*, 22 (2026): DOI: org/10.1002/smll.202513436 (Impact factor - 12.1).

S. Behera and **K. K. R. Datta**. "Harnessing Amine-Functionalized Fluorinated Graphene Ink for Composite Membrane Design toward Seawater Desalination". *Small*, (2026): DOI: org/10.1002/smll.202600008 (Impact factor- 12.1).

## Nature indexed publications : (3)

A. John David, M. G. Nandini, U. Gopika, A. H. Ibrahim, **A. Pullanchiyodan**, D. Ghosh and **A. Das**. "Nickel (II) driven activity enhancement of donor-acceptor porous organic polymer for selective photoreduction of carbon dioxide". *Chem. Comm.*, 62, (2026), 6405-6409 (Impact factor – 4.2).

V. Ganesh Moorthi, V. Thavasianandam Seenivasan, N. Sharmila, A. Manick Joel, W-Y. Lin and **G. C. Senadi**. "Base-catalyzed switchable reactivity of N-acyl- $\alpha$ -aminonitriles: oxidative decyanation to imides and hydrolysis to amides in batch and flow". *Chem. Comm.* 62, (2026), 5477-5481 (Impact factor – 4.2).

T. S. Kannan, U. Kurakula, R. Medishetty, **G. K. Kole**. "Photochromic, Thermosensitive, Photophysical, and Electrochemical Properties of Pyridyl-Quinolinyl-Ethylene-Derived Multifunctional Organic Materials". *J. Phys. Chem. Letters*, 17, (2026), 2000-2009 (Impact factor – 4.7).

## Patents Granted: 2

**P. K. Nayak**. "A dual cation electrolyte system and a process for its preparation". The Patent office, Government of India. Patent Number: 6578452

A. G. Al-Sehemi, P. Muthukumar, P. Nantheeswaran, **M. Mariappan**, S. Philip Anthony, M. Pannipara. "Electrocatalysts for oxygen evolution reaction and method of fabrication thereof". US Patent, Patent Number: 12546019

## Book Chapter Published: 6

J. Dennis and **T. K. Mistri**. "Nanoplastics in the Biological System: A Microscopic Menace with an Impact. IntechOpen, (2026), DOI: 10.5772/intechopen.1013429 (indexed in Web of Science).

K. C. Seetha Lakshmi and **B. Vedhanarayanan**. "Challenges in Scaling Up 2D Material-Based Electrocatalysts". Engineering Materials, Springer Nature, (2026), 291-323.

P. Zygouri, K. Spyrou, **K. K. R. Datta**. "An overview of metal and metal oxide nanoparticles / Metal and Metal Oxide Nanoparticles in Textile Applications. The Textile Institute Book Series, Elsevier, (2026), 1 - 41.

M. Sanjay Kumar, C. Gopalakrishnan, A. Thomas and **M. Prakash**. "Chapter 32- Confinement-induced effects at solid-liquid interfaces: insights from electronic structure calculations". Handbook of Electronic Structure Theory, Elsevier, (2026), 601-621.

N. K. Ravikumar, **P. Perumal**, M. Kour and N. P. S. Chauhan. "Chapter- 1, 3 and 05. Composite Polymer Electrolytes for Battery/Redox-active Polymers for Energy Storage and Medical Devices. Routledge, Taylor and Francis Group, CRC Press, (2026).

A. R. William J. Nuttall, **B. Neppolian** and M. Madhavi. "Prospects for hydrogen energy and its production in India" Chapter 14, Elsevier, 2026, 281-302.

## Research Grants: 12

### ANRF-IRG

**Dr. V. G. Anju**. "2D Bismuthene/Nitrogen -Doped Graphitic Carbon Heterostructure for Electrocatalytic C-N coupling". Duration: 3 years. Amount: **55.89 Lakhs**

**Dr. V. Kumaran**. "Scalable and Solvent-free Fabrication of Flexible Solid Polymer Electrolyte for Room Temperature Operation of Energy Dense Sodium Metal Batteries". Duration: 3 years. Amount: **60.00 Lakhs**

### SRMIST - SERI PROJECT

**Dr. V. Ravi Kumar**. "Structure & Dynamics Correlation of Biomimetic Peptide Hydrogel: a Step towards A Priori Design of Stimuli Responsive Peptide Hydrogel". Funding Agency: SRMIST. Duration: 2026-2028 (2 Years). Amount: **3.50 Lakhs**.

**Dr. Ananya Mishra**. "Plasmonic Protocells: Bio-Nano Hybrid Platforms for Artificial Photosynthesis". Funding Agency: SRMIST. Duration: 2026-2028 (2 Years). Amount: **3.75 Lakhs**.

**Dr. A. John Bosco**. "MXene-g-C<sub>3</sub>N<sub>4</sub> Hybrid Composites: Interfacial Chemistry, Chemistry-Driven Photocatalytic Hydrogen Production". Funding Agency: SRMIST. Duration: 2026-2028 (2 Years). Amount: **2.50 Lakhs**.

**Dr. B. Natarajan**. "Design and Development of II-IV-V<sub>14</sub> Semiconductors for Solar Hydrogen Production". Funding Agency: **SRMIST**. Duration: 2026-2028 (2 Years). Amount: **1.50 Lakhs**.

**Dr. E. Ravindran**. "A Narrowband Multi-Resonant Thermally Activated Delayed Fluorescent Emitter for Efficient OLEDs". Funding Agency: **SRMIST**. Duration: 2026-2028 (2 Years). Amount: **3.00 Lakhs**.

**Dr. Tarak Nath Mandal**. "Stabilizing Halide Perovskites in Nanoporous Hosts for Efficient Photocatalysis". Funding Agency: **SRMIST**. Duration: 2026-2028 (2 Years). Amount: **3.10 Lakhs**.

**Dr. V. G. Anju**. "Photoelectrochemical Ammonia Oxidation on Ag/Cu-Decorated TiO<sub>2</sub> Nanotubes Toward Selective Nitrogen Formation & Solar Hydrogen Production". Funding Agency: **SRMIST**. Duration: 2026-2028 (2 Years). Amount: **3.10 Lakhs**.

**Dr. N. Abirami.** "Wastewater to Hydrogen Energy: NiFe-Carbon Catalysts for Seawater Splitting". Funding Agency: SRMIST. Duration: 2026-2028 (2 Years). Amount: **1.80 Lakhs.**

**Dr. Santi Prasad Rath.** "Molecularly Engineered Solution-Processed Nanoscale Memristive and Memcapacitive Devices". Funding Agency: SRMIST. Duration: 2026-2028 (2 Years). Amount: **4.10 Lakhs.**

**Dr. B. Vedhanarayanan.** "Development of High-Performance Electrodes Using Layered Transition Metal-Based Hybrid Materials". Funding Agency: SRMIST. Duration: 2026-2028 (2 Years). Amount: **3.50 Lakhs.**

**Number of Ph.D's completed: 09**

| S. No. | Name of the candidate                                                                                           | Reg. No.        | Area of Research                     | Date of the Award | Supervisor                                   |
|--------|-----------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------|-------------------|----------------------------------------------|
| 1.     | <br>Dr. M. Siva                | RC2133003011010 | Supramolecular Chemistry             | 12.01.26          | Dr. Priyadip Das, Res. Assoc.Prof.           |
| 2.     | <br>Dr. Rakesh C Prabhu       | PA1933003013003 | Solid State Pharmaceutical Chemistry | 23.01.26          | Prof. M. Arthana-reeswari, Chair-person,SOBS |
| 3.     | <br>Dr. Jithin Rafi          | RA2133003011016 | Electrochemical Sensors              | 28.01.26          | Prof. B. Neppolian, Dean (Research)          |
| 4.     | <br>Dr. Crescentia Yazhini S | RA2133003011017 | Chemical Sensors                     | 28.01.26          | Prof. B. Neppolian, Dean (Research)          |
| 5.     | <br>Dr. Subash M             | RA2133003011012 | Non thermal plasma                   | 06.02.26          | Dr. B. Natarajan, Assoc. Prof.               |

| S. No. | Name of the candidate                                                                                        | Reg. No.        | Area of Research    | Date of the Award | Supervisor                                 |
|--------|--------------------------------------------------------------------------------------------------------------|-----------------|---------------------|-------------------|--------------------------------------------|
| 6.     | <br>Dr. Sanmugapriya R      | RC2033003011002 | Corrosion studies   | 09.02.26          | Prof. J. Arockia Selvi                     |
| 7.     | <br>Dr. Jeyakiruba P        | RA2033003011003 | Lithium-ion Battery | 20.02.26          | Prof. Helen Annal Therese                  |
| 8.     | <br>Dr. Muhammad Sadiq      | RA1933003011048 | Organic Chemistry   | 04.03.26          | Dr. M.R. Ganesh, Asst. Prof, IISM          |
| 9.     | <br>Dr. Dhatshanamoorthy B | RC2133003011051 | Energy storage      | 27.03.2026        | Dr. Prasant Kumar Nayak, Res. Assoc. Prof. |

#### Events Details (January- March- 2026):



**Dr. Abhishek Kumar Gupta**, Organic Semiconductor Centre, School of Physics and Astronomy, University of St Andrews, UK, delivered an **invited lecture** on “Thermally Activated Delayed Fluorescence (TADF) Emitters for Organic Light Emitting Diodes (OLEDs)”, January 05, 2026 (Monday) at 02:30 PM at Seminar Hall - 1, 13<sup>th</sup> Floor, University Building, SRM Institute of Science and Technology, Kattankulathur



**Release of the Proceedings of ICGHET 2026 (held between 8-10 January 2026).** From left to right: Dr. T. Maiyalagan (Research Professor, Convenor, ICGHET 2026), Prof. Prakash Muthuramalingam (Head, Department of Chemistry, SRMIST), Dr. Harshad Velankar (Guest of Honour; Chief Scientific Officer, altM, Bangalore), Dr. Leenus Jesu Martin M. (Dean, Faculty of Engineering and Technology, SRMIST), Dr. P. Thani-kaivelan (Director, CSIR-Central Leather Research Institute, Chennai), Prof. A. Ajayaghosh (S. S. Bhatnagar Chair Professor, SRMIST), Prof. M. Arthanareeswari (Chairperson, School of Basic Sciences, SRMIST), Prof. Neppolian Bernaurdshaw (Dean Research, SRMIST), Prof. Yair Ein-Eli (Technion - Israel Institute of Technology), and Prof. Soorathep Kheawhom (Chulalongkorn University, Thailand).



**Prof. Minyoung Yoon**, KNU Institute of Basic Sciences, Department of Chemistry, Kyungpook National University, Daegu, Republic of Korea, delivered an **invited lecture** on “Inorganic Materials Research: (1) MOFs for Redox-Hopping Electron Transfer and (2) Nanocatalysts for Hydrogen”, February 2<sup>nd</sup>, 2026 (Monday) at 11:00 AM at Seminar Hall - 1, 13<sup>th</sup> Floor, University Building, SRM Institute of Science and Technology, Kattankulathur.

**Dr. Shashi Bhushan Arya**, Associate Professor, Department of Metallurgical and Materials Engineering, National Institute of Technology Karnataka Surathkal, Mangalore, India, delivered an **invited lecture** on “Internal Corrosion of Pipeline Steels in Indian Oilfield Water”, February 09, 2026 (Monday) at 02:30 PM at Seminar Hall - 1, 13<sup>th</sup> Floor, University Building, SRM Institute of Science and Technology, Kattankulathur.

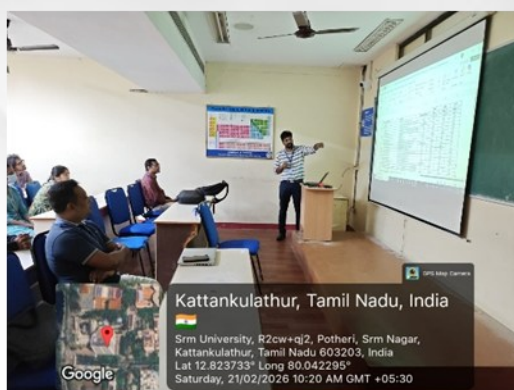
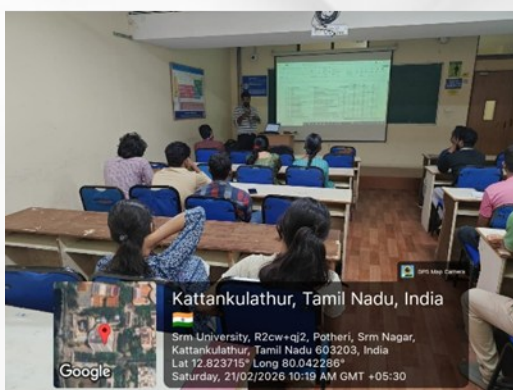


**Dr. Manish Kumar Mishra**, Scientist, Physical and Materials Chemistry Division, CSIR–National Chemical Laboratory, Pune, India, delivered an **invited lecture** on “From Motion to Mitigation: Designing Crystalline Materials for Smart Actuation and Direct Air Capture”, March 02, 2026 (Monday) at 02:30 PM at Seminar Hall - 1, 13<sup>th</sup> Floor, University Building, SRM Institute of Science and Technology, Kattankulathur.

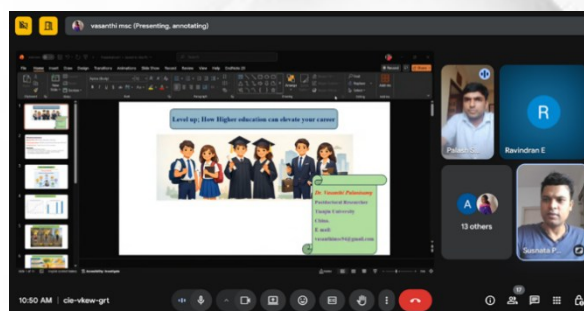


**Prof. S. Thayumanavan**, Distinguished Professor, Departments of Chemistry and Biomedical Engineering, **University of Massachusetts, Amherst, USA**, delivered an **invited lecture** on “Nature-Inspired Responsive Systems: From Materials to Biological Applications”, March 03, 2026 (Tuesday) at 02:30 PM in RRP, Seminar Hall, 9<sup>th</sup> Floor, SRM Institute of Science and Technology, Kattankulathur.

**Dr. Srinivasan Anandan**, Scientist ‘F’, Centre for Advanced Materials & Batteries, International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad, Telangana, India, delivered an **invited lecture** on “Translating Lab-Scale Innovations into Technology Demonstration: Indigenous High-Performance Materials for Energy and Environmental Applications”, March 27, 2026 at 02:30 PM at Seminar Hall -1, 13<sup>th</sup> Floor, University Building, SRM Institute of Science and Technology, Kattankulathur.



### Chemistry Association Seminars and Professor of Practice (POP) lectures



### Alumni Talks at the Department of Chemistry

| S. No. | Name of the Speaker                   | Speaker's Affiliation                                                                                                                              | Title                                                                                                       | Name of the Event             | Date     |
|--------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------|----------|
| 1.     | Dr. Abhishek Kumar Gupta,             | School of Physics and Astronomy, University of St Andrews, UK.                                                                                     | Thermally Activated Delayed Fluorescence (TADF) Emitters for Organic Light Emitting Diodes (OLEDs)          | Chemistry Association Seminar | 05.01.26 |
| 2.     | Dr. A. Aravind, Professor of Practice | Deputy General Manager, Head of the Department-CRAMS, R&D, Solara Active                                                                           | Life cycle management of API                                                                                | POP Interaction Meeting       | 31.01.26 |
| 3.     | Prof. Minyoung                        | KNU Institute of Basic Sciences, Department of Chemistry, Kyungpook National University, Daegu, Republic of Korea                                  | Inorganic Materials Research: 1) MOFs for Redox-Hopping Electron Transfer and 2) Nanocatalysts for Hydrogen | Chemistry Association Seminar | 02.02.26 |
| 4.     | Dr. Sivagnanam Subramaniyam           | Postdoctoral researcher, JSPS Postdoctoral Research Fellow, National University Corporation Shizuoka University, Shizuoka                          | From Classroom to Career: Navigating Industry and Postdoctoral Pathways                                     | Alumni Talk                   | 07.02.26 |
| 5.     | Dr. Shashi Bhushan Arya               | Associate Professor, Department of Metallurgical and Materials Engineering, National Institute of Technology Karnataka Surathkal, Mangalore, India | Internal Corrosion of Pipeline steels in Indian Oilfield Water                                              | Chemistry Association Seminar | 09.02.26 |
| 6.     | Dr. A. Aravind, Professor of Practice | Deputy General Manager, Head of the Department-CRAMS, R&D, Solara Active                                                                           | Specification and Monograph                                                                                 | POP Interaction Meeting       | 14.02.26 |
| 7.     | Dr. A. Aravind, Professor of Practice | Deputy General Manager, Head of the Department-CRAMS, R&D, Solara Active                                                                           | Time Management in Pharma Industry                                                                          | POP Interaction Meeting       | 21.02.26 |
| 8.     | Dr. Manish Kumar Mishra               | Scientist, Physical and Materials Chemistry Division, CSIR-National Chemical Laboratory, Dr. Homi Bhabha Road, Pune 411008, India.                 | From Motion to Mitigation: Designing Crystalline Materials for Smart Actuation and Direct Air Capture       | Chemistry Association Seminar | 02.03.26 |

|     |                       |                                                                                                                                                                                       |                                                                                                                                                   |                               |          |
|-----|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------|
| 9.  | Prof. S. Thayumanavan | Distinguished Professor, Departments of Chemistry and Biomedical Engineering, University of Massachusetts, Amherst, USA                                                               | Nature-Inspired Responsive Systems: From Materials to Biological Applications                                                                     | Chemistry Association Seminar | 03.03.26 |
| 10. | Dr. Vasanthi P        | Postdoctoral Fellow in Crystal Engineering, Tianjin University, Tianjin, China (PhD Chemistry 2018–2022) in virtual mode.                                                             | Level Up: How Higher Education Can Elevate Your Career                                                                                            | Alumni Talk                   | 21.03.26 |
| 11. | Dr.Srinivasan Anandan | Scientist 'F', Centre for Advanced Materials & Batteries, International Advanced Research Centre for Powder Metallurgy and New-Materials (ARCI), Balapur, Hyderabad, Telangana, India | Translating Lab-Scale Innovations into Technology Demonstration: Indigenous High- Performance Materials for Energy and Environmental Applications | Chemistry Association Seminar | 27.03.26 |

#### Memorandum of Understanding (MoUs) Signed: 3



SRM Institute of Science and Technology (**SRMIST**), Kattankulathur, entered into a Memorandum of Understanding (MoU) with CSIR-Indian Institute of Chemical Technology (**CSIR-IICT**), Hyderabad, on 23<sup>rd</sup> January 2026. The MoU was formalized in the presence of **Prof. C. Muthamizhchelvan**, Vice Chancellor of SRMIST; **Dr. D. Srinivasa Reddy**, Director of CSIR-IICT; and **Prof. V. Subramanian**, Visiting Professor, Department of Chemistry, SRMIST, along with other senior officials from both institutions. This collaboration aims to promote joint research projects, co-supervision of students, capacity building initiatives, shared use of advanced research facilities, and technology transfer and development. The partnership is envisioned to foster innovation, support national scientific missions, and create meaningful opportunities for students and faculty to contribute to the nation's scientific and technological advancement.



SRM Institute of Science and Technology (SRMIST), Kattankulathur, signed a Memorandum of Understanding (MoU) with CSIR–Central Leather Research Institute (CSIR-CLRI), Adyar, Chennai, on 4<sup>th</sup> March 2026. The MoU was formalized in the presence of **Prof. C. Muthamizhchelvan**, Vice Chancellor of SRMIST; **Dr. P. Thani-kaivelan**, Director of CSIR-CLRI; **Dr. K. J. Sreeram**, Former Director of CSIR-CLRI; **Dr. B. Neppolian**, Dean (Research), SRMIST; and **Dr. M. Prakash**, Head of the Department of Chemistry, SRMIST, along with other officials from both institutions. This collaboration aims to strengthen research and academic exchanges, with a focus on interdisciplinary areas including biomedical sciences, advanced materials, artificial intelligence and data sciences, and chemical and biological systems engineering. The partnership is expected to foster joint research initiatives, drive innovation, and contribute towards a sustainable future.

SRM Institute of Science and Technology (**SRMIST**), Kattankulathur, signed a Memorandum of Understanding with the **UPASI Tea Research Foundation**, Coimbatore, Tamil Nadu, on 19<sup>th</sup> March 2026. The collaboration was facilitated by **Dr. M. Ganesh Pandian**, Assoc. Prof., Department of Chemistry, SRMIST. UPASI Tea Research Foundation, a premier research organization under the United Planters' Association of Southern India (UPASI), is dedicated to scientific advancements in tea cultivation and plantation management. This partnership aims to advance research relevant to the tea industry, including sustainable agricultural practices, crop improvement, and technology-driven innovations, thereby strengthening industry-academia interaction.

#### Placements:



**Dr. S. Ramya** worked under the Guidance of Dr. T. Pushpa Malini, Assoc. Prof. got placed as a project staff (Research Fellow) under the ISRO project at the Indian Institute of Information Technology Design and Manufacturing (IIITDM) - Kancheepuram, Tamil Nadu, India.

**Dr. P. Pawel** worked under the Guidance of Dr. T. Pushpa Malini, Assoc-Prof. got placed as an Assistant Professor at Bannari Amman Institute of Technology, Sathyamangalam, Erode Dist., Tamil Nadu, India.



# Research—Mathematics

Number of Journal publications : 40

Average Impact Factor : 2.0

Highest Impact Factor Journal published : 6.4

## Highest impact factor paper :

**Muhammad Roshan**, Sneha Jaiswal, Bhupesh Dutt Sharma, Pramod Kumar Yadav, Magnetohydrodynamic flow of couple stress fluid with temperature-dependent viscosity inside a heated rectangular porous channel: Homotopy perturbation approach, International Communications in Heat and Mass Transfer, 172, 2026, 110699 (**Impact Factor = 6.4**)

Shafqat Hussain, Anirban Chattopadhyay, Musaad Aldhabani, **Krishno Das Goswami**, Energy storage and thermal management using a micropolar nano-encapsulated phase-change material in a vented cavity, International Communications in Heat and Mass Transfer, 172, 2026, 110712 (**Impact Factor = 6.4**)

## Top 5 Publications:

Bapin Mondal, Shubhadeep Ghosh, **Abhijit Sarkar**, Ranjit Kumar Upadhyay, Multistability and noise-induced transitions in a fear-driven Leslie-Gower predator-prey model with predator harvesting *Nonlinear Dynamics*, 114, 2026, 359. (**Impact Factor = 6.0**)

A. Kamatchi, **R. Arulprakassam**, Non-uniform second-order reversible cellular automata with chaos-based permutation for lossless image encryption, *Nonlinear Dynamics*, 114, 2026, 464. (**Impact Factor = 6.0**)

Rupchand Malo, Anirban Chattopadhyay, Swapan K. Pandit, Mikhail A. Sheremet, **Krishno Das Goswami**, Numerical insight into hybrid nanofluid flow around a heated block in trapezoidal enclosures: application in microelectronics cooling, *International Journal of Numerical Methods for Heat & Fluid Flow*, 36, 2026, 1208–1242 (**Impact Factor = 5.1**)

A.A. Devi, **Tanmoy Chakraborty**, Nanoparticles shape effects on controlling irreversibilities of a Jeffrey hybrid nanofluid flow over a curved surface embedded in non-Darcy medium, *International Journal of Numerical Methods for Heat & Fluid Flow*, 36, 2026, 937–984. (**Impact Factor = 5.1**)

Sayantana Majumder, **Tanmoy Chakraborty**, Prabir Kumar Kundu, Taguchi analysis on heat transfer of triple diffusive flow of a nanofluid over a rotating sphere in presence of Hall current, *Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanomaterials, Nanoengineering and Nanosystems*, Article in Press, 2026 (**Impact Factor = 5.0**)

## No of Patents Published: 12

**R. Perumal** “A System for Medical Image Encryption Based on the Greatest Integer and Cosine Map.” Patent Application No. 202641002810 A

**R. Senthamarai** and E. Jenitta, “Predictive Mathematical Pest Control System Using Fixed Micro Nozzle Trunk Assembly for Tall Trees.” Patent Application No. 202541130042

**R. Senthamarai** and R. Dhinesh, “Smart Wearable System for Rabies Detection and Prediction Using Salivary Biomarkers, Behaviour Analytics and Mathematical Modelling” Application No. 202541130045

**R. Arulprakasam**. “Petri Net-Based Image Encryption Using Pixel Permutation and Keystream Masking.” Patent Application No. 202641016722 A

**R. Arulprakasam.** "Image Encryption Using Chaos-Based Permutation and Non-Uniform Second-Order Cellular Automata." Patent Application No. 202641016723 A

**K. Dhanalakshmi,** Scalable Framework for Efficient Optimization of Complex Mathematical Models. Patent Application No. 20264116762 A

**G. Arul Joseph ,** Dynamic Algorithm for Automated Error Correction in Complex Mathematical Computational Systems, Patent Application No. 20264116722 A

**R. Krishna Kumari,** DNA Testing Device, Patent Design No. 478162 - 001

**R. Varadharajan,** AI And Blockchain-Based Cloud Security Device, Patent Design No. 480602-001

**N. Balaji,** Neural Network Assisted Numerical Methods for Solving Nonlinear Differential, Patent Application No. 202541091371

**N. Balaji ,** Risk Assessment Method Using Multivariate Optimization Mathematics. Patent Application No. 202511128359

**N. Balaji ,** Yuvaraj D patil, Prof.Komal Shashank Shinde, Dr.Omkar Singh, Shashikant Rameshrao Thakare. AI Based Food Quality checking Device, Patent Design No. 487046-001

#### **No of Book Chapter Published: 12**

**V. Muthukumaran,** Bindu Joseph P Rose, Nisha B Antline, N. Thillaiarasu, Guimin Qin. "Enhanced Diagnostic Vision Algorithm (EDVA): A Novel Deep Learning Framework for Multimodal Medical Image Analysis and Disease Classification." CRC Press, Taylor & Francis, 2026.

**V. Muthukumaran,** Maria Selvam A George, Kavitha M Angeline, Meram Munirathnam, Adnan Khan. "DeepScan Imaging Using VoxelMorph for High-Resolution Tissue Mapping and Quantitative Analysis in Neurological Disorders." CRC Press, Taylor & Francis, 2026.

C. Pavithra, M. Saradha, **V. Muthukumaran.** "A Nonlinear SVM in Cardiovascular Diagnostics: Disentangling Myocardial Infarction with 2D Data Analysis." CRC Press, Taylor & Francis, 2026.

S. Kala, Beena Suresh Gaikwad, Kumar S Satheesh, **V. Muthukumaran,** Mingqiang Wang. "Real-Time Detection of Epileptic Seizures Using a Hybrid Deep Learning Framework with Temporal CNN and BiLSTM." CRC Press, Taylor & Francis, 2026.

S. Satheesh Kumar, **V. Muthukumaran.** "Machine Learning Model Comparative Analysis for IoMT Data Security." Bentham Science Publishers, 2026.

**D.K. Sheena Christy.** "Equivalence Classes of Complement-Invariant CA on Finite 2D Triangular Lattice." Communications in Computer and Information Science, Springer, 2026.

**D.K. Sheena Christy.** "An Algorithmic Approach of Two-Dimensional Cellular Automata Rules Splicing with Comparative Distance Metric." Communications in Computer and Information Science, Springer, 2026.

**N. Balaji** "Industry 4.0 and Machine Learning." Industry 4.0 and Machine Learning, 2026.

**R. Krishna Kumari** "Research Methods for Computing and Informatics." In: Testing of Hypotheses: A Practical Approach for Computing and Informatics, IGI Global, 2026.

G. Sarmitha, **S. Vidyandhini.** "Square Difference Labeling and Co-Secure Domination in Middle Graph of Certain Graphs II." Proceedings of the Eleventh International Conference on Mathematics and Computing (ICMC 2025), Lecture Notes in Networks and Systems, vol. 1404, Springer, Singapore, 2026.

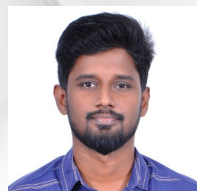
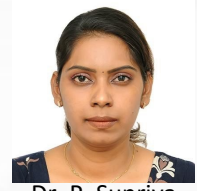
**R. Krishna Kumari ,** A Cellular Automaton Model for Zari Pattern Generation in Kanjeevaram Silk Sarees, Communications in Computer and Information Science, Springer 2026

**Dr. Karthick B.** "Analytical Optimization on a Two-Echelon Supply Chain with Fuzzy Production Rate and Environmental Effects." Artificial Intelligence and Robotics, De Gruyter, 2026.

#### Research Grants: 1

**Dr. Bikash Koli Dey.** "Integrating AI-Driven Optimization and Smart Manufacturing for Sustainable, Resilient Supply Chains in the Era of Industry 5.0 and Digital Retailing". Funding Agency: SRMIST. Sanction Number: SRMIST/R/AR(A)/SERI2025/174/52. Co-Principal Investigators: **Dr. Abhijit Saha** and **Dr. Uma Maheswari P.** Duration: 2026-2028 (24 months). Amount: **1.90 Lakhs.**

#### Number of Ph.Ds completed: 5

| S. No. | Name of the candidate                                                                                       | Reg. No.        | Area of Research             | Date of the Award | Supervisor         |
|--------|-------------------------------------------------------------------------------------------------------------|-----------------|------------------------------|-------------------|--------------------|
| 1      | <br>Dr. K. Aarthi          | RC2233001011003 | Graph Theory                 | 12.01.26          | Dr. E. Suresh      |
| 2      | <br>Dr. A. Ponmaheshkumar | RC2133001011005 | Algebra and Cryptography     | 27.02.26          | Dr. R. Perumal     |
| 3      | <br>Dr. P. Supriya       | RA2133001011026 | Computational Fluid Dynamics | 05.03.26          | Dr. Bapuji Pullepu |
| 4      | <br>Dr. R. Soundararajan | PC223300101300  | Numerical Analysis           | 06.03.26          | Dr. V. Subburayan  |
| 5      | <br>Dr. R. Priyanka      | RA2133001011019 | Fuzzy Neural Network         | 16.03.26          | Dr. G. Gajendran   |



**Dr. Ponmaheshkumar A** (RA2233001011001), a full-time research scholar, has been selected as a Research Associate (PostDoc) for an IBITF-sponsored project at the Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Kurnool. He successfully completed his viva voce examination on 27 February 2026 under the supervision of **Dr. R. Perumal.**

# Research—Physics and Nanotechnology

Number of Journal publications : 90

Average Impact Factor : 5.01

Highest Impact Factor Journal published : 12.1

## Highest impact factor paper:

M. Hossain, K. Chatterjee, K. Mohanty, K. Tarafder, S. Sen, S. Kundu, **E. Varrla**, B. Satpati, P. Pal, Unconventional Gas Sensing Mechanism in Phase-Separated n-Type Mixed Tungsten Oxide 2D-Nanosheets Compared against Tungsten (VI) Oxide. *Small*, e13074. <https://doi.org/10.1002/smll.202513074> (**Impact Factor = 12.1**)

T.D. Raju, M. Tirupati, N. Kim, M. Subramanian, P.K. Odugu, **A.V. Kesavan**, J.H. Kwon, T.G. Kim, Next-Generation Blue OLED Emitters: Efficiency, Color Purity, and the Road to BT.2020, *Materials Horizons* (2026). <https://doi.org/10.1039/D5MH02390D> (**Impact Factor = 10.7**)

## Nature Indexed journal publications (5):

S. Priyadharshini, V. Vijay, **J. Archana**, M. Navaneethan, Tuning the phonon dynamics via Sn-resonant impurities assists strong anharmonicity in p-type Zintl Mg<sub>3</sub>Sb<sub>2</sub>, *Appl. Phys. Lett.* 128 (6) (2026). <https://doi.org/10.1063/5.0310517> (**Impact Factor = 3.6**)

Dhivya Mahalakshmi Chavali Naresh, Mohamed Jibri Khaja Peer, **Jayaram Archana**, and Navaneethan Mani. Synergistic Lattice Softening and Polaron Engineering in Cu<sup>2+</sup>-Doped Cs<sub>2</sub>SnCl<sub>6</sub>: Decoupling Thermal and Electrical Transport for Enhanced Thermoelectric Performance. *J. Phys. Chem. Lett.*, 17, 10, 3030–3038 (2026). <https://doi.org/10.1021/acs.jpclett.5c04029>. (**Impact Factor = 4.7**)

Pavithra Karthikesan, Sugasri Chinnasamy, Harshini Sharan, Jayachandran Madhavan, and **Alagiri Mani**. Leveraging acoustic and mechanical wave phenomena to fabricate Cu<sub>(2-x)</sub>Co<sub>x</sub>P<sub>2</sub>O<sub>7</sub> as electrocatalysts for energy storage and electrochemical water splitting application. *Appl. Phys. Lett.* 128, 113901 (2026). <https://doi.org/10.1063/5.0319907>. (**Impact Factor = 3.6**)

Love Bansal, Subin Kaladi Chondath, Nivin Thulasibai Sasidharan, **Shailendra K. Saxena**, and Rajesh Kmar. Photo-supercapacitors for the Future: Integrating Solar Conversion and Energy Storage into a Single Platform. *J. Phys. Chem. Lett.* (2026). <https://doi.org/10.1021/acs.jpclett.6c00074>. (**Impact Factor = 4.7**)

Jayachandran Murugesan, Akshaya Perumal, Nishanth Sudarsanan, Maiyalagan Thandavarayan, and **Vijaya-kumar Thangaraj**. PEDOT:PSS-assisted interfacial stabilization of Li-rich NMC cathodes for high-performance lithium-ion batteries. *Appl. Phys. Lett.* 128, 133904 (2026). <https://doi.org/10.1063/5.0316146>. (**Impact Factor = 3.6**)

## Book Chapter Published: 1

**Sujoy Kumar Ghosh**, Biswajit Mahanty, Kritish Roy & Syed A. M. Tofail, Ch 9: Soft Heat Harvest: Advancing Energy Sustainability with Pyroelectric Nanogenerators in Diverse Soft Materials, *Energy Generation and Storage with Soft Materials*, Royal Society of Chemistry, 2026, DOI: <https://doi.org/10.1039/9781837677597>.

Number of Ph.Ds completed: 15

| S. No. | Name of the candidate                                                                                         | Reg. No.        | Area of Research                                     | Date of the Award | Supervisor                     |
|--------|---------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------|-------------------|--------------------------------|
| 1.     | <br>DR. VIJAY VEL R          | RC2233002011017 | HYDROGEN PRODUCTION                                  | 08-01-26          | DR. C. SIVA                    |
| 2.     | <br>DR. NISHAKAVYA S         | RA2133002011018 | MOS <sub>2</sub> NANOHYBRIDS FOR CANCER THERANOSTICS | 12-01-26          | DR. ANANDHAKUMAR SUNDARAMURTHY |
| 3.     | <br>DR. SREERAM JAYAN        | RA2133002011053 | METAL-ION BATTERIES                                  | 20-01-26          | DR. KIRAN MANGALAMPALLI        |
| 4.     | <br>DR. GOURI SANKAR V     | RA2033002011011 | THERMOELECTRICS                                      | 23-01-26          | DR. A. GEETHA                  |
| 5.     | <br>DR. C. B. SARATH KUMAR | RC2133002011023 | FUNCTIONALIZED CQDS FOR TOXIC METAL DETECTION        | 23-01-26          | DR. DEBABRATA SARKAR           |
| 6.     | <br>DR. SNEHA MONDAL       | RA2133002011055 | HYDROGEN PRODUCTION                                  | 30-01-26          | DR. V. GANESH                  |
| 7.     | <br>DR. VIJAYAKUMAR B      | RC2233002011018 | NON-LINEAR OPTICS                                    | 02-02-26          | DR. N. ANGELINE LITTLE FLOWER  |

|     |                                                                                                             |                 |                                                         |          |                            |
|-----|-------------------------------------------------------------------------------------------------------------|-----------------|---------------------------------------------------------|----------|----------------------------|
| 8.  | <br>DR. SAKTHI BALAJI A    | RC2233002011021 | 2D GETE MONO-LAYER: FIRST-PRINCIPLES AND NEGF STUDY     | 27-02-26 | DR. R. M. HARIHARAN        |
| 9.  | <br>DR. UDHAYAKEER-THANA C | RC2133002011038 | P-TYPE 2D NANO-COMPOSITES FOR ENHANCED CHARGE TRANSPORT | 06-03-26 | DR. T. KALAI-VANI          |
| 10. | <br>DR. STENNY BENNY       | RA2033002011016 | ECO-FRIENDLY CHALCOGENIDE THIN FILMS FOR DEVICES        | 09-03-26 | DR. S. VENKATAPRA-SAD BHAT |
| 11. | <br>DR. CHANDRASEAKR K     | RC2133002011019 | PEROVSKITE SOLAR CELLS                                  | 13-03-26 | DR. K. ARUL VARMAN         |
| 12. | <br>DR. NAVEEN T B       | RA2133012011003 | SUPERCAPACITORS                                         | 13-03-26 | DR R. AJAY RAKKESH         |
| 13. | <br>DR. AKASH R          | RA2133002011048 | ASINR-BASED BREATH SENSORS FOR EARLY DIAGNOSIS          | 18-03-26 | DR. R. M. HARIHARAN        |
| 14. | <br>DR. P. UMADEVI       | RA2033002011004 | PHOTOCATALYTIC DYE DEGRADATION                          | 20-03-26 | DR. V. RAMESH              |
| 15. | <br>DR. ANDEM SANDEEP    | RC2233002011015 | HIGH-PERFORMANCE SUPERCAPACITORS                        | 27-03-26 | DR. VENKATA RAVINDRA A     |

## Inauguration of Eswari Ammal Trust and Women Achievers Award Ceremony



Inauguration of Eswari Ammal Trust and Women Achievers Award Ceremony on 27.2.2026 (A noble initiative organized with the gracious blessings and guidance of our beloved Honorable Smt. Eswari Madam and the Honorable Chancellor Sir and his Family, with the vision of serving society and recognizing inspiring women achievers who contribute meaningfully to our Nation and Community)



**Ms. Gulpavit Kaur Bhatia (RA2231512010005)**, B.S Physics - IV – Year received the best Woman student achiever award for the year 2026.

# Faculty Corner

## Group Representations as a Tool to Study Symmetry

The first example we consider when we start studying Algebra in undergraduate mathematics is the symmetry of a square. When we investigate, we find that the symmetries of a square form an algebraic object called a group, and so begins the investigation and generalization of various properties of groups. With advances in Abstract Algebra, the study of symmetries has become essential across many branches of science. For example, in Crystallography, we study the symmetrical arrangements of atoms; space-time symmetry is used in general relativity to describe gravity, etc. Among the many branches of Abstract Algebra, the representation theory of groups plays an integral role. Representation theory allows us to visualize elements of a group as linear transformations of vector spaces. This approach simplifies complex algebraic structures and reveals insights into their properties. Further, the decomposition of representations into irreducible components provides a powerful framework for classification, enabling researchers to systematically and elegantly understand symmetry.

In recent years, the influence of group theory has gone beyond pure mathematics into various interdisciplinary domains. Concepts from representation theory have found applications in areas such as quantum mechanics, cryptography, and combinatorics, where symmetry and transformations are most important. For instance, group representations are used to study particle behaviour in physics and to design secure communication systems in computer science. Furthermore, the development of computational algebra systems such as GAP and MAGMA has enhanced the ability to work with complex group structures, enabling the exploration of large-scale problems that were previously intractable. These advancements are a testament to the growing relevance of algebraic methods in both theoretical and practical problems.

Moreover, ongoing research in representation theory continues to uncover connections with other branches of mathematics, including number theory and geometry. The study of characters, modules, and group actions provides tools to bridge diverse mathematical concepts. By investigating the symmetries underlying algebraic and combinatorial structures, researchers develop new tools and techniques that deepen our understanding of mathematics. At the same time, this field offers rich opportunities for young researchers to engage with challenging problems and advance knowledge. Hence, even though Abstract Algebra is “abstract” in its soul, its impact resonates across scientific disciplines, reinforcing the importance of fundamental research. As mathematics continues to evolve, representation theory will remain a vital area of inquiry, drive innovation, and foster connections between theory and application.



**By**

**Dr. Ayush Udeep**

**Research Assistant Professor,**

**Department of Mathematics,**

**SRM Institute of Science and Technology,  
Kattankulathur**

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## ALUMNI TALK

**EMPOWERING MATHEMATICAL THINKING  
THROUGH PYTHON FOR CAREER GROWTH**






**Dr. A Rathinam**  
Director of Alumni Affairs

**Dr. Ritesh Kumar Dubey**  
Research Associate Professor & Head

**SIVAPPA S, M.Sc. (Maths),**  
Packaged App Development Analyst,  
Accenture Solutions Pvt Ltd





**Dr. G Ramesh    Dr. G Sheeja    Dr. S Vidyandini**

Date : 4<sup>th</sup> Feb, 2026      Time: 10.30 A.M.  
Location: Room No: UB1318, Seminar Hall- I, UB, SRMIST, Kattankulathur.










Category 1 with C Status    Ranked 1<sup>st</sup> University    2025 World Ranking one among 54 Indian Universities    2025 World Ranking one among 11 Indian Universities    2025 World Ranking one among 11 Indian Universities    2025 World Ranking one among 11 Indian Universities    2025 World Ranking one among 11 Indian Universities    2025 World Ranking one among 11 Indian Universities




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**A MATHEMATICAL PERSPECTIVE ON THE  
FOUNDATIONS OF QUANTUM COMPUTING**






**Dr. A Rathinam**  
Director of Alumni Affairs

**Dr. Ritesh Kumar Dubey**  
Research Associate Professor & Head

**Dr. JACKSON J Ph.D (Maths),**  
Visvesvaraya Post Doctoral Fellow, Department Of Avionics,  
IIT, Thiruvananthapuram, Kerala, India





**Dr. G Ramesh    Dr. G Sheeja    Dr. S Vidyandini**

Date : 2<sup>nd</sup> March, 2026      Time: 10.30 A.M.  
Location: Room No: UB1318, Seminar Hall- I, UB, SRMIST, Kattankulathur.










Category 1 with C Status    Ranked 1<sup>st</sup> University    2025 World Ranking one among 54 Indian Universities    2025 World Ranking one among 11 Indian Universities    2025 World Ranking one among 11 Indian Universities    2025 World Ranking one among 11 Indian Universities    2025 World Ranking one among 11 Indian Universities    2025 World Ranking one among 11 Indian Universities

# Notifications



## National Centre for Mathematics

A joint centre of IIT Bombay and TIFR, Mumbai

SRM Institute of Science and Technology, Kattankulathur

Department of Mathematics

TEACHER'S ENRICHMENT WORKSHOP (TEW) on

**"LINEAR ALGEBRA, PARTIAL DIFFERENTIAL EQUATIONS AND FOURIER ANALYSIS"**



**SRM**  
INSTITUTE OF SCIENCE & TECHNOLOGY  
(Deemed to be University u/s 3 of UGC Act, 1956)



08<sup>th</sup> to 13<sup>th</sup> June, 2026

### ABOUT SRMIST

**SRM Institute of Science and Technology (SRMIST)** is one of India's leading universities, with over 60,000 full-time students and more than 4,460 faculty members across its campuses in Kattankulathur, Ramapuram, Vadapalani, Baburayanpettai, and Tiruchirappalli (Tamil Nadu); Modinagar (Uttar Pradesh); Sonapat (Haryana); Amaravati (Andhra Pradesh); and Gangtok (Sikkim). The University offers a wide range of undergraduate, postgraduate, and doctoral programs across six faculties: Engineering & Technology, Management, Medicine & Health Sciences, Science & Humanities, Law, and Agricultural Sciences.

SRMIST adopts a learner-centric approach to education, aligning with evolving academic and industry needs. In keeping with contemporary educational trends, the University offers programs through multiple modes, including Regular, Part-Time, Distance Education, and Online Education. With a strong legacy of academic excellence, SRMIST continues to nurture young minds in a vibrant and dynamic learning environment. Its green and expansive campuses serve as a second home to thousands of students pursuing higher education.

The institution has strengthened its global presence through international collaborations and strategic partnerships. The International Advisory Board (IAB) plays a key role in enhancing the global dimension of research and teaching methodologies. SRMIST collaborates with leading international universities such as Massachusetts Institute of Technology (MIT), Carnegie Mellon University, and the University of Pittsburgh, offering programs like MSIT-ESE. Each year, over 650 students are supported for academic exposure at reputed institutions worldwide, including UC Davis, University of Warwick, and the University of Western Australia.

SRMIST has been recognized as a Category "A" University by the Ministry of Education (formerly MHRD), Government of India. It is accredited with an "A++" Grade by NAAC, ranked among the top institutions in the NIRF, and placed in the 1001–1200 band in the QS World University Rankings, reflecting its commitment to academic excellence and global standards.

### A Brief Description of the TEW

This **Teachers' Enrichment Workshop (TEW)** is aimed primarily for mathematics teachers at the under graduate and post graduate levels. While research scholars in mathematics may also apply, they will be given lower preference in the selection. The sessions will be geared towards understanding the fundamental concepts and results in Linear Algebra, Partial Differential Equations and Fourier Analysis. The workshop will be more focused on problem solving using the concepts learnt. The participants are expected to come prepared with basics of the above subjects. So, only those people who can actively participate in the program need to apply.

#### CHIEF PATRONS:

**Dr. T. R. Paarivendhar**, Chancellor, SRMIST  
**Dr. Ravi Pachamuthu**, Pro-Chancellor (Administration), SRMIST  
**Dr. P. Sathyanarayanan**, Pro-Chancellor (Academics), SRMIST  
**Dr. R. Shivakumar**, Vice President, SRMIST

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**Prof. M. Leenus J Martin**, Dean (CET), SRMIST  
**Prof. A. Duraisamy**, Dean (CSH), SRMIST  
**Prof. B. Neppolian**, Dean (Research), SRMIST  
**Prof. M. Arthanareeswari**, Chairperson, SoBS, SRMIST

#### SPEAKERS:

**Dr. K. N. Raghavan**, KREA University, Andhra Pradesh  
**Dr. Thirupathi Gudi**, IISc, Bangalore  
**Dr. G. P. Youvaraj**, RIASM, Chennai

#### CONVENERS:

**Dr. G. P. Youvaraj**, Former Director & Head (Rtd.), RIASM, Chennai  
**Dr. Ritesh Kumar Dubey**, Research Professor & Head, Maths, SRMIST, KTR

#### CO-CONVENERS:

**Dr. G. Ramesh**, **Dr. R. Arulprakasam**, **Dr. R. Perumal**, SRMIST, KTR



Fill the form to register for the Workshop online through the link or Scan QR:  
<https://www.atmschools.org/school/2026/TEW/lapdefa/application-form>  
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- No Registration fee
- Host institute will provide Local Hospitality (Accommodation & food only) for the selected outstation participants.

