



# SRM

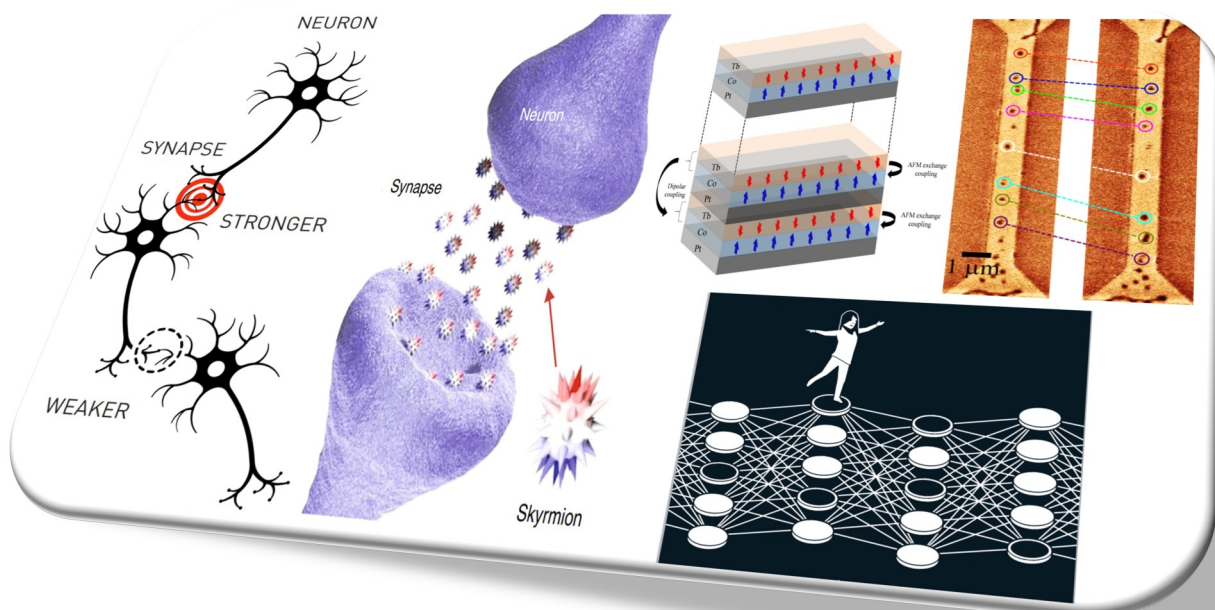
INSTITUTE OF SCIENCE & TECHNOLOGY  
Deemed to be University u/s 3 of UGC Act, 1956

## Horizon

### Quarterly Newsletter

Volume 3, Issue 3

(July to September 2024)



School of Basic Sciences

College of Engineering and Technology  
SRM Institute of Science and Technology

Kattankulathur - 603 203, Chengalpattu District

Tamil Nadu, India



A++



Category 1  
with 12B Status



(2024)  
12<sup>th</sup> Ranked University



(2025) World Ranking  
one among 46 Indian Universities



(2024) World Ranking  
one among 91 Indian Universities



VERY GOOD  
QS 4 Star Rated Globally



(2024) World Ranking  
Ranked 5-7 in Indian Universities

Cover page theme: Magnetic skyrmion-based artificial synapses (for imitating the brain's neural networks)

Pic Courtesy : SRMIST & [www.nobelprize.org](http://www.nobelprize.org)

## Message from the Dean Sciences



**Dr. D. John Thiruvadigal**

Professor and Dean Sciences  
School of Applied Sciences  
College of Engineering and Technology  
SRM Institute of Science and Technology  
Kattankulathur 603 203

I am happy to note that we are releasing Volume 3 , Issue 3 of the newsletter “Horizon” with highlights on the accomplishments and activities of the School of Basic Sciences during July to September 2024. My sincere thanks to the editorial team of the newsletter “Horizon”, hearty congratulations and appreciation to the faculty members, research scholars and students for their accomplishments in publishing high impact factor journals, publishing patents, and securing the research grants. I anticipate all the members to continue working with the same spirit that will enhance not only their individual career but also the school’s growth.

### Cover page theme:

The theme of the cover image this time depicts the magnetic skyrmion-based artificial synapses, celebrating the recently announced Nobel Prize 2024 in Physics for the foundational discoveries that enable machine learning with artificial neural networks and highlighting the research work of our faculty member Dr. Sougatha Mallick from the Department of Physics and Nanotechnology which was recently published in the journals Advanced Functional Materials and Nature Communications.

(D. John Thiruvadigal) 2

## Message from the HoD, Chemistry



**Dr. M. Arthanareeswari**

**Professor and Head (Admin.)**

**Department of Chemistry**

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

The Department of Chemistry is proud to share that one of our faculty members Dr. P. Gopinath, Res. Asst. Prof. has received an AMR-DST project with an outlay of Rs. 44 lakhs for two years. Best wishes to him to complete the project successfully. To motivate the young researchers, the second edition of Electrochemistry Summer School, ESS 2024 was organized. 25 participants from different Institutes including CUSAT, Kerala, CSIR-CLRI, Chennai, Anna University, Chennai, JSS Academy of Higher Education and Research, Mysuru, PSGR Krishnammal College for Women, Coimbatore, St. Joseph's College, Tiruchirappalli participated and gained fundamental knowledge in Electrochemistry and its applications in Batteries and Super capacitors.

Also, another workshop on "Innovative Management for MSMEs" guided the researchers, students and industrial participants from Steri Science, Hyderabad, CavinKare, Chennai, Orbiton Life Sciences, Chennai, Sandoz, Hyderabad, Aragen life Science, Hyderabad, Hetero Research Center, Hyderabad etc. to open up new avenues like startups and Entrepreneurial ventures. International company incubation between Cortecnet, France (A leader in manufacturing and distributing stable isotope solvents) and SRMIST has been initiated. This initiative offers unique opportunities to enable our department to collaborate on various fronts with isotope based research and development.

During this period, 5 research papers were published in natured indexed journals along with three patents were published. Under international internship program, a scholar got selected under TEEP program, Taiwan. Our scholar also fetched a best oral presentation award in a national conference conducted at Indian Institute of Information and Technology Design and Manufacturing, at Andhra Pradesh. 11 PhDs were successfully awarded during this time. Final year UG and PG students visited CAVINKARE Pvt. Ltd. as part of industrial visit.



## Message from the HoD, Mathematics



**Dr. Ritesh Kumar Dubey**

**Research Associate Professor and Head  
Department of Mathematics  
College of Engineering and Technology  
SRM Institute of Science and Technology  
Kattankulathur 603 203**

The Department of Mathematics is delighted with the release of the Third Issue (Volume III) of the newsletter, Horizon. We extend heartfelt congratulations to all contributors for their dedication and hard work in bringing this issue to fruition.

Department extends a warm welcome to our newly joined faculty members. We are excited to have you as part of our growing family. Congratulations to all our researchers who have published in esteemed journals, with a special commendation to Dr. Bikash Koli Dey for his publication in a high-impact journal with an impressive impact factor of 11.

We are also pleased to announce our annual flagship event, “The 12th National Conference on Mathematical Techniques and Applications (NCMTA-2025),” scheduled for January 9-10, 2025. We encourage all passionate researchers to join us and present their original research.

I would like to express my sincere gratitude to the entire department for their unwavering commitment and contributions. As we move into 2025, we look forward to achieving new milestones and enhancing our research and publication stature. Wishing everyone continued success and growth.



## Message from the HoD, Physics & Nanotechnology



**Dr. E. Senthil Kumar**

**Research Associate 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 through this newsletter "HORIZON". I am delighted to share some of our department's recent achievements and ongoing initiatives. It has been marked by significant progress in both academic and research spheres, reflecting the hard work and dedication of our students and faculty. We are excited to share with you about our first-ever Hackathon program on Renewable Energy and Water Access for Rural Development (REWARD) organized in association with UNLEASH. To bridge the gap between research and real-world applications, creating opportunities for innovation and career growth, we organized a two-days workshop on Industry-Academia partnership and Intellectual Property Rights. Eminent personalities from Industry, R&D laboratories and Academic institutions have delivered talks in this two-days program.

Our faculty members continue to push the boundaries of knowledge through cutting-edge research, with 88 papers published in prestigious journals (average impact factor of  $\sim 5.47$ ) including Nature Communications, Advanced Functional Materials, Energy Storage Materials and Small Methods. The count includes six Nature-indexed journals. Our faculty members, Dr. Saurabh Ghosh and Dr. Anand Mohan Srivastava are appointed as Editors of Scientific Reports (Nature publishing group). Ten of our Ph.D. students have successfully defended their thesis in this said period. Congratulations to faculty members Dr. Anand Mohan, Dr. Devanand, Dr. M. Alagiri, Dr. Harish and Dr. Bharath Govindan for being recognized as top 2% of scientists based on the list surveyed by Stanford University. Congratulations to Prof. S. Venkataprasad Bhat for securing a ISRO-RESPOND project with a total outlay of 26.5 Lakhs for the Development of printable CIGS ink for Flexible Solar cell.

We are thrilled to welcome our newly joined faculty member Dr. Rohit Chakraborty to the Department! We are sure that his expertise and perspectives would add significant value both in research and academics. I would like to express my gratitude to our dedicated faculty, hard-working students, and supporting staff for their continued contributions to the department. Their efforts are what make the department thrive.

# **Editorial Team**

**Dr. D. John Thiruvadigal**  
Dean Sciences

**Prof. M. Arthanareeswari**  
Head,  
Department of Chemistry

**Prof. Ritesh Kumar Dubey**  
Head,  
Department of Mathematics

**Prof. E. Senthil Kumar**  
Head,  
Department of Physics  
and Nanotechnology

**Dr. K. Ananthanarayanan**  
Research Associate Professor  
Department of Chemistry

**Dr. K. K. R. Datta**  
Research Associate Professor  
Department of Chemistry

**Dr. A. Anuradha**  
Assistant Professor  
Department of Mathematics

**Dr. E. Suresh**  
Assistant Professor  
Department of Mathematics

**Dr. S. Venkataprasad Bhat**  
Research 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 3, Issue 3 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 quarter (July 2024 – September 2024).

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 [dean.sobs.ktr.et@srmist.edu.in](mailto:dean.sobs.ktr.et@srmist.edu.in)

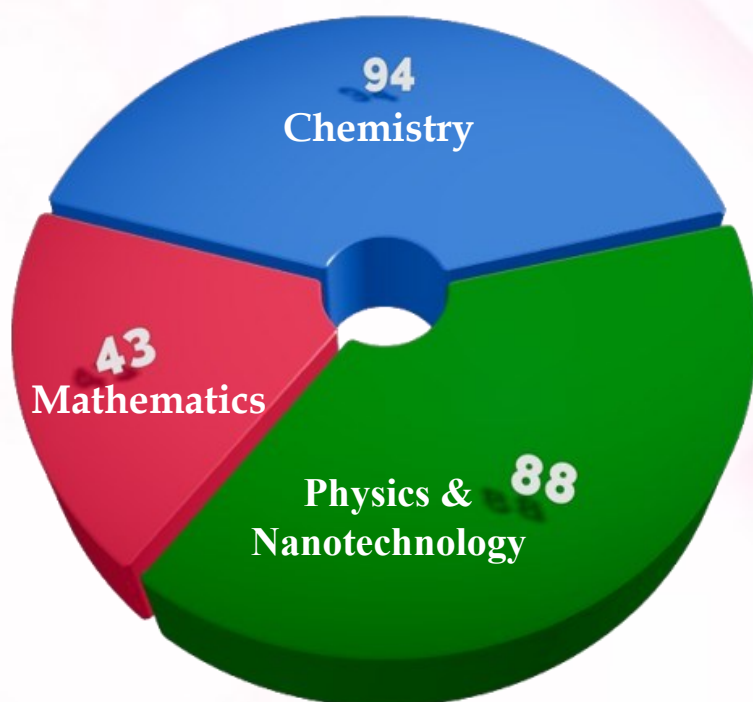
Please enjoy reading our newsletter !!

# Highlights

## School of Basic Sciences

Key Metrics	April to June 2024	July to September 2024
Total No. of publications (SCI/Scopus)	283	225
Highest Impact Factor Journal Publication	27.8	19.2
No of projects sanctioned	1	2
Total grant outlay	19.00 Lakhs	70.70 Lakhs
No of patents filed / granted	4	4
No of book chapters	1	3
MoUs (International / National)	-	2
Number of Ph.D's completed	25	28

Total number of research publications:  
(July to September 2024)



(Impact factor : 19.2)

# Academics - Chemistry

QS world ranking **351-400** by subject.

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

**1<sup>st</sup>** position (joint) under the private institutes.

## TEEP:

Ms.Kiran K. Mandrekar (Reg. No. RA1933003011045) Research Scholar, 2019 batch received a Short-Term Research Internship through Taiwan Experience Education Program (TEEP) at Kaohsiung Medical University at Taiwan under Prof. Chai Lin Kao from Department of Medical and Applied Chemistry, to carry out an internship for a period of 4 months (Sep.2024 – Dec.2024).



Ms. Ragasudha.S (RA2233003011029) Research Scholar received Best oral presentation award for the presentation entitled "Amino functionalized Ni-MOF loaded new sulfonated polyimide as proton exchange membrane for fuel cell application" in the national conference on 'India's National Hydrogen Mission: Recent Developments and Future Prospectus' organized by Department of sciences, Indian Institute of Information and Technology Design and Manufacturing Kurnool, Andhra Pradesh held during 22nd-24th July 2024.

## Faculty Achievements

**Prof. A. Ajayaghosh**, SSB Institute Chair Professor, has recently published a paper in **Adv. Funct. Mater.** (Impact Factor 19.0)

**Dr. Rahul Dev Mukhopadhyay**, Res. Asst.Prof., Dept. of Chemistry, published a paper in **Accounts of Chemical Research** (Impact Factor 18.3). <https://pubs.acs.org/doi/10.1021/acs.accounts.4c00224> and also published an article in the News and Views of **Nature Chemistry** (Impact Factor 19.3). <https://rdcu.be/dOFpr>

**Dr. N. Clament Sagaya Selvam**, Res. Asst. Prof., Dept. of Chemistry received a **"Short-term visiting award-NTHU, Taiwan"** for attending the International Joint Research and Training Program at National Tsing Hua University (NTHU), Taiwan during October 29, 2024 – November 09, 2024.

**Dr. S. Karthikeyan**, Res. Asst.Prof., Dept. of Chemistry was selected for the **Brain Pool Program by the National Research Foundation of Korea at Yonsei University**, South Korea during 1.11.2024 - 31.12.2026. and also he has published a paper entitled Atomic Engineering of 3D Self-Supported Bifunctional Oxygen Electrodes for Rechargeable Zinc-Air Batteries and Fuel Cell Applications, **Advanced Energy Materials**, 2024. (Impact factor = 27.8).

**Dr. Swami Anita**, Assoc. Prof., Dept. of Chemistry has recently published a paper in **'Small' journal** (IF 13.3) and the work is highlighted in "Women in Materials Science" Virtual Issue hosted in Advanced Materials. It can be accessed by the following link: [https://onlinelibrary.wiley.com/doi/toc/10.1002/\(ISSN\)1521-4095.WomeninMaterialsScience](https://onlinelibrary.wiley.com/doi/toc/10.1002/(ISSN)1521-4095.WomeninMaterialsScience).



## Industrial Visit 2024-2025

Industry Visited : Cavinkare Private Limited (R&D Centre)  
Date of Visit : August 2, 2024  
Location : Cavinkare R&D Centre, Ekkatuthangal, Chennai, India  
Participants : II M.Sc.Chemistry (40), II M.Sc.Organic Chemistry (25) & III B.Sc. Chemistry (11) students.  
Faculty  
Accompanied : Dr. V. Sudha, Dr. Anjan Das, Dr. S. Anandhakumar, Dr. Rajorshi Das and Dr. N. Clament Sagaya Selvam.

### Objective of the Visit:

The main aim behind the tour to Cavinkare's R&D Centre was to get insight into the research and development processes that had been transformed into their products. Visitors got a firsthand view of the R&D processes at Cavinkare, its technological innovations, and quality control measures during their visit.



## ESS-2024

The second edition of Electrochemistry Summer School (ESS - 2024) was held at the University Building, UB1010, SRMIST-KTR Campus from 12<sup>th</sup> July to 13<sup>th</sup> July 2024. The event was convened by **Dr. M. Arthana-reeswari**, Professor & Head, Department of Chemistry, and co-convened by **Dr. S. Anandhakumar**, Research Assistant Professor of Chemistry. **Dr. P. Arun Prakash**, **Dr. Clament Sagaya Selvam**, and **Dr. Abhilash P**, supported as the coordinators for the ESS – 2024 event



Inauguration of ESS – 2024 by the Convenor (Prof. Dr. M. Arthana-reeswari, HoD of Chemistry) on 12-July-2024.



Group photo with ESS – 2024 participants





Lecture session for ESS – 2024



Demonstration session for ESS – 2024

## CHEMISTRY ASSOCIATION EVENT

Department of Chemistry, SRM IST, Kattankulathur campus organized a lecture on “Solar Photovoltaics: Performance, Reliability, Durability and Toxicity.” under the “CHEMISTRY ASSOCIATION EVENT” on 18<sup>th</sup> July 2024. The speaker of the event is **Prof. Govindasamy Tamizhmani, Director of Photovoltaic Reliability Laboratory, Arizona State University, USA.**



Dr. K. Ananthanarayanan, Research Associate Professor, Department of Chemistry introducing the speaker



Prof. M. Arthanareeswari, HoD Chemistry welcoming and felicitating the speaker



Prof. Tamizhmani explaining about the critical factors influencing solar photovoltaics





The Chemistry association talk on **“Self-Powered Devices Based on Triboelectrification”** was delivered by **Prof. Zong-Hong Lin** from the Department of Biomedical Engineering, National Taiwan University (Taipei, Taiwan) on the 09<sup>th</sup> August 2024 at 2:30 pm in Seminar Hall 1, University Building, SRM IST-KTR Campus. The event was convened by **Dr. M. Arthanareeswari**, Professor & Head, Department of Chemistry, and co-convened by **Dr. P. Arun Prakash**, Research Assistant Professor of Chemistry.



Prof. M. Arthanareeswari, HoD Chemistry felicitating the speaker **Prof. Zong-Hong Lin**.

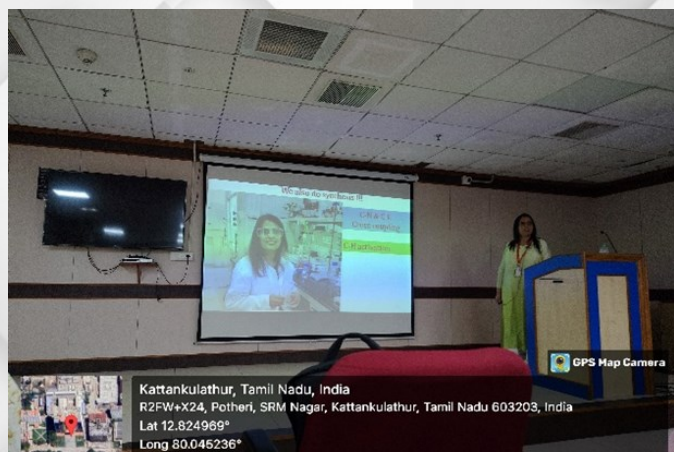


Prof. Zong-Hong Lin is presenting a talk on **“Self-Powered Devices Based on Triboelectrification”** on 9.8.2024.

The Chemistry association talk on **“Density-Based Reactivity Descriptors for the Design of Catalytic Materials,”** delivered by the eminent **Prof. Sourav Pal** from Department of Chemistry at Ashoka University, Sonipat on the 12.08.2024 at 2:30 pm and **Prof. Vidya Avasare** on **"Computational Catalysis: Unraveling Mechanisms and Designing Catalysts."** Department of Chemistry at Ashoka University, on the 12.08.2024 at 3:30 pm at Turing Hall (Tech Park 8th Floor) , SRM IST-KTR Campus.



**Prof. Sourav Pal** is presenting a talk on **“Density-Based Reactivity Descriptors for the Design of Catalytic Materials,** on 12.8.2024 at 2.30pm.



**Prof. Vidya Avasare** is presenting a talk on **"Computational Catalysis: Unraveling Mechanisms and Designing Catalysts,** on 12.8.2024 at 3.30 pm.



The Department of Chemistry at SRM Institute of Science and Technology (SRMIST) held a one-day workshop on **"Innovative Management for MSMEs"** on August 30, 2024. The event, hosted in Sir Vishveshvaraya Hall at the KTR Main Campus. The workshop featured six expert speakers from industry and the Central Leather Research Institute (CLRI), who shared insights on innovative management strategies for Micro, Small, and Medium Enterprises (MSMEs) in three sessions.



Felicitation of Dr. T.V. Madhusudhan, Deputy Controller of Patents & Designs (Rtd.), Chennai Patent Office by Dr. M. Arthanareeswari, HOD, Chemistry.



Felicitation of Mr. Daniel Prabhakaran, Associate Vice President, Tamil Nadu Technology Hub (iTNT), Chennai by Dr. J. Arockia Selvi, Associate Prof. Chemistry.



Felicitation of Dr. A. Aravind, Assistant General Manager, Solara Active Pharma India Limited, Chennai by Dr. Srinivasarao Kancharla, Asst. Prof., Chemistry.



Felicitation of Mr. Venkatesan, Managing Director, ICA Specialties[p] Limited, Chennai by Dr. G.T. Senthil Andavan, Assoc. Prof., Chemistry.



Felicitation of Dr. R. Sankara Subramanian, Managing Director, Vishwa-Syntharo Pharma Chem[p]limited, Chennai by Dr. D. Paradesi, Asst. Prof., Chemistry.



Felicitation of Dr. Subhendu Chakrabarthi, Chief Scientist, Knowledge Portfolio Management Department (KPM), CSIR-Central Leather Research Institute, Adyar, Chennai by Dr. D. Karthick, Res. Asst. Prof., Chemistry.





Glimpses of One Day Workshop on Innovation Management for MSMEs



Interaction meeting with Cortecnet CEO Mr. Phillippe Corcos and SRMIST on 19.9.2024 for a possible Industry Incubation Program at SRMIST.



Meeting with the Taiwan delegates on 24.9.2024 for possible MOUs



# Academics - Mathematics

## Dr. A.P.J. Abdul Kalam Memorial Lecture

Eminent Mathematician, Prof. Dr. Ambat Vijayakumar, Emeritus Professor, Cochin University of Science and Technology, delivered a mesmerizing talk on the aspiration and dreams of our Former President Dr. A. P. J. Abdul Kalam on 27.07.2024.

**Department of Mathematics**  
**Faculty of Engineering and Technology**  
**SRM Institute of Science and Technology**  
**Kattankulathur**

**Dr. APJ Abdul Kalam Memorial Lecture**

**Topic:**  
Rameshwaram  
to  
Rashtrapati  
bhavan

**ASPIRE  
TO  
INSPIRE**

**JULY  
2024  
27**

**Time:**  
10.00 am -11.00am

**Convenor:**  
Dr. V. Subburayan  
HOD, Department of Mathematics

**Coordinators:**  
Dr. P. Vignesh  
Dr. R. Sriraman  
Department of Mathematics

**Microsoft Teams:**  
<https://shorturl.at/jNR9X>

**Dr. Ambat Vijayakumar**  
Emeritus Professor  
Cochin University of Science and  
Technology

To register, please fill the form: <https://forms.gle/WEvcveVvbWPCFqRy5>

NAAC  
Category 1 with CSE Status

NIRF  
Ranked 1st University

QS  
QS World Ranking one among 10 Indian Universities

THE  
QS World Ranking one among 10 Indian Universities

VSRID  
QS 4 Star Rated Globally

SHANGHAI RANKING  
QS World Ranking one among 10 Indian Universities

## Anti-Drug Pledge

The students and staffs members of Department of Mathematics actively participated in the Nasha Mukta Bharat Abhiyan from the Indian Government by undertaking the Anti-drug Pledge on 12.08.2024





Dr. Swaraj Paul delivered an invited talk at Harish Chandra Research Institute (HRI), Allahabad, on July 30, 2024. The presentation, titled "Microbial Analysis through Continuous Shearlet and Radon Transform," highlighted innovative techniques for analyzing microbial structures. His research offered new insights into the applications of mathematical transforms in biological data analysis.

**Harish-Chandra Research Institute (HRI)**  
An Aided Institute of the Department of Atomic Energy, Govt. of India  
Jhansi, Prayagraj (Allahabad) -211019, India

*Mathematics Colloquium*

**Speaker :** Dr. Swaraj Paul  
SRM, Tamil Nadu, India

**Title :** Microlocal analysis through continuous shearlet and Radon transform

**Date :** 30<sup>th</sup> July, 2024

**Time :** 11:15 a.m.

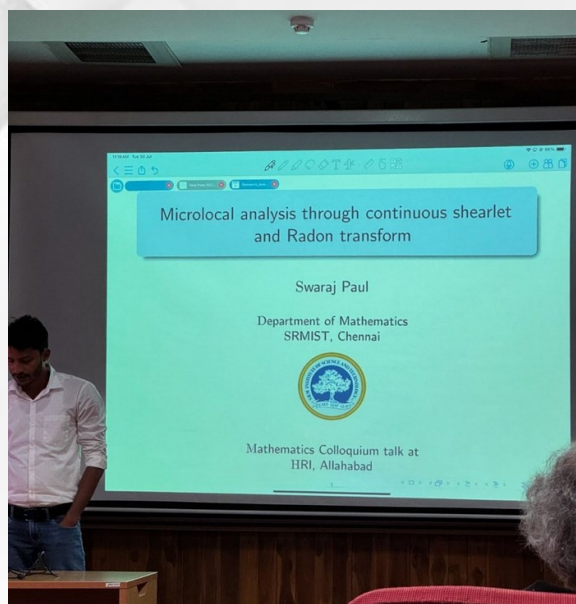
**Venue :** Higgs Lecture Hall

**Tea :** 11:00 a.m.

**Abstract:** Microlocal analysis techniques are mainly used to study wave front sets, oscillatory integrals, Fourier integral operators for the analysis of linear as well as nonlinear PDEs. In general, singularities of any distribution are measured by the wavefront set. The classical tool for the analysis of the wavefront set is the Fourier transform. In this talk we use continuous shearlet transform to characterize different types of wavefront set. We also discussed the affine radon transform and its relation between continuous shearlet transform. Finally we discussed some intertwining properties of shearlet transform with Radon transform and its application to characterize wavefront sets.

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### Online Research Lecture Series

Dr. Swaraj Paul, Research Assistant Professor, initiated and delivered a four-week Research Lecture series (Online) for Research Scholars on the topic “Wavelets and Microlocal Analysis”



Dr. E. Suresh, delivered an invited talk in the International Seminar on Essence of Mathematics in Data Science – Ethiraj College for Women, Chennai. ( 04-09-2024 )



Dr. Swaraj Paul: An invited seminar talk “On Love's integral equation using wavelets” was delivered on September 20th, 2024 at TIFR CAM, Bangalore. This talk was part of Dr. Swaraj Paul’s visit to Prof. Venky Krishnan, Professor, TIFR CAM from 15th Sep. to 20th Sep. 2024.

**RESEARCH COLLOQUIUM**  
**TITLE OF TALK: FRACTIONAL CALCULUS APPLICATIONS IN IMAGE PROCESSING**  
 Organised by  
 Department of Mathematics  
 SRMIST, KTR Campus



**Prof. Rajesh Pandey**  
 Department of Mathematics,  
 IIT BHU.



**SRM**  
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**Abstract:**  
 In this talk, we will discuss a new fractional filter and an algorithm for retinal blood vessel segmentation. The proposed fractional filter is designed with the help of a weighted fractional derivative and an exponential weight factor. We have utilized the fractional filter and the eigenvalue maps of a local covariance matrix to develop the algorithm for retinal vessel segmentation. The local covariance matrix is formed by a second-order image moment. Experiments are performed on two well-studied evaluation databases named STARE and DRIVE and the simulation results are discussed.

**24 SEPTEMBER 2024**  
**1.30 PM-2.30 PM**  
**UB717, SRM IST KTR CAMPUS**

Prof. Rajesh Pandey from the Department of Mathematics, IIT BHU, delivered a captivating research colloquium titled "Fractional Calculus Applications in Image Processing" on September 24, 2024, at SRMIST, KTR Campus. The event, organized by the Department of Mathematics, provided insightful discussions on advanced algorithms for image analysis.



Dr. L. Shobana served as a BOS Member at PERI Institute of Technology, Chennai. The Board of Studies meeting was held on 30 July 2024.



Dr. E. P. Siva delivered an Invited talk and chaired a session in the Second International Conference on Recent Advances in Fluid Mechanics and Nanoelectronics, organized by Manipal University, Jaipur during July 10-12, 2024.

- Dr. R. Varadharajan – Reviewer for the journals Quality & Quantity (QUQU); Current Pediatric Reviews and Indian Journal of Science & Technology during July – September 2024.
- Dr. N. Balaji attended NPTEL-FDP-Python for Data science ( 4 weeks) .
- Dr. E. Suresh served as reviewer for numerous journals including Computational and Applied Mathematics, Discrete Applied Mathematics, Applied Mathematics and Computation and Heliyon.
- Dr. K. Dhanalakshmi reviewed a journal titled "Cardinality and Isomorphic Properties of Hajós graphs and Hajós Fuzzy Graphs" in the journal " Indian Journal of Science and Technology".
- Dr. Priyajit Mondal participated in an online technical talk titled "Career in Space Industry" presented by Mr. Shivam Kumar Singh Founder & Director, Spaceonova PoSSUM Scientist - Astronaut Candidate at IIAS, USA, Organized by Department of Aerospace Engineering, SRM Institute of Science and Technology and The Institution of Engineers (India) Kattankulathur Local Centre on 12.09.2024 at 6:00 PM.
- Dr. Priyajit Mondal participated in Short Term Course on "Computational Methods in Engineering" organized by Department of Mechanical Engineering, SRM Institute of Science and Technology, Kattankulathur held during 17.08.2024 to 14.09.2024 only on weekend (Every Saturday).



Mr. Vivek Sivaramakrishnan [B.Sc., Mathematics [2020-2023]], was the speaker of the event. During his stay at SRMIST, Mr. Vivek actively represented SRMIST in the hackathon organised by Telangana State Innovation Cell, Govt. of Telangana and secured the runner-up position. In 2022, he was selected as the representative for College of Science and Engineering, SRMIST, for the British Council Summer School Training Program. He is currently working as a Teaching Assistant at IIT Madras.



The talk was informative and interactive to the students. During the speech, Mr. Vivek invited the audience to play simple AI - based games and explained the self-developing concept behind AI.



## Newly joined faculty:



**Dr. Deeksha Singh** joined SRM IST as an Assistant Professor of Mathematics in July 2024. She has received her PhD degree from IIT(BHU) Varanasi, in the year 2024. Her broad area of research is Numerical Analysis and Analysis of Partial Differential Equations. Her current research focuses on the numerical solution of non-local PDEs using FEM and DG methods. Dr. Deeksha has been a recipient of the Inspire scholarship from 2012 to 2017. Further, she has Qualified UGC-CSIR JRF with AIR 78. She has presented her research internationally, supported by DST-SERB and CSIR travel grants, at prestigious events such as the 10th ICIAM Waseda University, Tokyo, Japan, and the 21st IMACS World Congress in Italy.

**Dr. M. Sathishkumar** joined the Department of Mathematics at SRM Institute of Science and Technology as a Research Assistant Professor in July 2024. He received his Ph.D. in Mathematics from Anna University, India, in 2018. Previously, he was an Assistant Professor at Christ the King Engineering College, India, from 2013 to 2014. He worked as a Post-Doctoral Research Associate at National Cheng Kung University, Taiwan, from 2019 to 2023, followed by a position as Research Staff at Tokyo Institute of Technology, Japan, from 2023 to 2024. His current research interests include networked control systems and their security control, multi-agent systems, cyber-physical systems, and time-delay systems.



**Dr. Debabrata Singh** has joined SRM Institute of Science and Technology as an Assistant Professor in the Department of Mathematics in July, 2024. He received his Ph.D. from Visva-Bharati, a Central University in West Bengal. Dr. Singh qualified the GATE exam in 2016 and the NET-JRF exam in 2017. He was also awarded the INSPIRE Fellowship from DST, Govt. of India in 2017. His research interests focus on the wavelet-based approximation schemes for differential and integral equations appearing in the field of peridynamics and quantum mechanics.

**Dr. Tamizhazhagan S** completed his Ph. D. at the National Institute of Technology, Tiruchirappalli. He has also qualified competitive exams such as JAM, GATE, NET, and SET. His research interests are to securitize the macroscopic nature of traffic systems, including ant trail, pedestrian flow, intracellular transport process, vehicular traffic, and protein synthesis. Further, he is also interested in the interdisciplinary research areas where ordinary and partial differential equations play an essential role in comprehending the behavior of the problem. He worked as a Teaching Assistant at IISER Tirupati and NIT Trichy. In July 2024, he began working as an Assistant Professor in the Department of Mathematics at the SRM Institute of Technology in Kattankulathur, Chennai.



**Dr. Sandip Maji** joined SRM Institute of Science and Technology as an Assistant Professor in the Department of Mathematics in July 2024. Before that, he received his Ph.D. degree from IIT Guwahati in July 2024. He received the Best Ph.D. Thesis Award 2024 in Mathematics from IIT Guwahati during convocation 2024. Before joining for Ph.D., he worked as a Junior Research Fellow at the Department of Mathematics, IISER KOLKATA. He holds an M. Sc. degree in Mathematics from IIT Madras in 2018 and a B. Sc. degree in Mathematics from Midnapore College in 2016. He qualified for JAM 2016 to join M.Sc. at IIT Madras and qualified twice for both NET and GATE. His research interest focuses on Some efficient numerical techniques to solve fractional order differential equations.

**Dr. Bikash Koli Dey** is a Research Assistant Professor in the Department of Mathematics, SRM Institute of Science and Technology, Chennai, India. Prior to this, he held a postdoctoral research position at Hongik University, South Korea, funded by the Korean National Research Foundation (KNRF) from November 2019 to August 2024. Dr. Dey earned his Ph.D. degree from the Department of Mathematics & Statistics, Banatsthali Vidyapith, Rajasthan, India, in September 2019 and his master's and bachelor's degrees from Vidyasagar University, India in 2012 and 2014, respectively. Since 2017, he has published 36 journal articles in reputed SCIE/SSCI - Q1, Q2, and Q3-Indexed and ABDC-indexed journals of Applied Mathematics and Industrial Engineering, and he has published two book chapters. He is the Editorial Board Member and Academic Editor of some reputed Scopus-indexed International Journals of Applied Mathematics and Industrial Engineering. He is an Associate Editor of the Scopus-indexed Journals. He has served as the Guest Editor of several special issues of some Scopus-indexed journals. He is a member of several learned societies. He has presented several research papers at international conferences as an Invited Speaker and chaired several international conferences. His per year average publication is 8 over last three years and average impact factor of last three years is 51.03. His research has been recognized with over 1200 citations, an h-index of 22, and an i-10 index of 26. He is actively involved in reviewing research papers for numerous international journals. Currently, Dr. Dey is focused on innovative research in human-in-the-loop optimization, data-driven inventory control, and sustainable operations. He aims to make significant contributions to the field of operations research and data science.



**Dr. T. Saravanakumar** received his B.Sc., M.Sc., and M.Phil. degrees in Mathematics from Bharathiar University, Coimbatore, India, in 2008, 2010, and 2013, respectively, and a Ph.D. degree from the Department of Mathematics, Anna University Regional Campus Coimbatore, Anna University, India, in 2018. He was a Lecturer with the Department of Mathematics, JKK Munirajah College of Technology, Erode, India, from August 2010 to May 2011. From February 2013 to May 2014, he was an Assistant Professor with the Department of Mathematics, United Institute of Technology, Coimbatore, India. From December 2019 to March 2021, he was a Simon's Postdoctoral fellow with the Institute of Mathematics, Vietnam Academy of Science and Technology, Vietnam. From September 2021 to September 2023, he was a Postdoctoral fellow with the School of Electronic and Electrical Engineering, Jeonbuk National University and Kyungpook National University, Republic of Korea. From November 2023 to July 2024, he was a Postdoctoral fellow with the Department of Scientific Computing, Pukyong National University, Republic of Korea. He is currently an Assistant Professor with the Department of Mathematics, College of Engineering and Technology, SRM Institute of Science and Technology, Kattankulathur, Chennai, India. He has published over 20 research papers in reputed science citation index journals. His current research interests include networked control systems, stochastic systems, fuzzy systems, and robust control techniques. He has been on the reviewer board of various International Journals, including IEEE Transactions journals.



# Academics - Physics and Nanotechnology

## UNLEASH Hack India: Renewable Energy and Water Access for Rural Development (REWARD)

UNLEASH Hack India: Renewable Energy and Water Access for Rural Development (REWARD) was organized by Department of Physics and Nanotechnology, SRMIST, Kattankulathur on 27th and 28th September 2024 with the support of Directorate of Entrepreneurship and Innovation, Directorate of Career Centre, Directorate of Alumni Affairs in SRMIST, Southern India Scientific Corporation, WATSAN Envirotech Private Limited, VayuJal Technologies and Ideaforge Innovations.



The event poster



Opening remarks by Dr. E. Senthil Kumar, HOD, Department of Physics and Nanotechnology.



The lead facilitator Dr. Vivek Manoharan (UNLEASH India Ambassador) introducing other facilitators.



Talent teams working on problem solving.



Talent teams pitching their ideas to the expert panel.



Award winners being felicitated by Prof. B. Neppolian, Dean (Research) & the organizing team



## Special invited talks:



Prof. Gautam Bhattacharya interacting with the audience.

**Prof. Gautam Bhattacharyya:** A special invited talk “Non-decoupling of charged scalars in Higgs decay and symmetries of the scalar potential” was delivered on 27<sup>th</sup> September by Prof. Gautam Bhattacharya, who is the director of Saha Institute of Nuclear Physics, Kolkata. This was part of his visit at SRMIST from 27<sup>th</sup> to 28<sup>th</sup> September 2024.



Dr. Brahmananda Chakraborty being felicitated by HOD Dr. A Karthigeyan

**Dr. Brahmananda Chakraborty:** A special invited talk “Exciting Properties of 2D Nanomaterials: Their Applications for Energy Storage, Sensing Drug Delivery: Perspectives from Quantum Simulations” was delivered by Dr. Brahmananda Chakraborty, Scientist and Associate Professor, Department of High Pressure & Synchrotron Radiation Physics Division, Bhabha Atomic Research Center, Mumbai, on 02nd September 2024.





Dr. Vivek Manoharan interacting with the audience.

**Dr. Vivek Manoharan:** A special invited talk “Lollipops, Chewing Gums and Hard Lessons about Innovation” was delivered by Dr. Vivek Manoharan, a biomedical scientist and entrepreneur, Co-founder & CEO, 221B Biomedical Private Limited, India, Test At Home Private Limited, Singapore on 26th September 2024.

#### Research Colloquiums:

Sl. No	Names and address of the Speaker	Date	Title of the Talk
1.	Dr. Subhajit Sarkar Research Assistant professor Department of Physics and Nano-technology, SRMIST.	04.09.2024	Time Translation Symmetry Breaking in Dissipative Quantum Systems-From Quantum Transport to Passive Error Correction
2	Mr. Marvaan M. S. Research Scholar, Department of Physics and Nano-technology, SRMIST.	11-09-2024	Hemostasis: A built-in bandage system
3	Mr. Dharmalingam Nagaraj Re- search Scholar, Department of Physics and Nano-technology, SRMIST.	18-09-2024	Low-cost and disposable stencil-printed carbon-electrodes for the Electrochemical detection of phytohormones
4	Dr. Arnab Maity Department of Chemical Engi- neering and Russell Berrie Nano- technology Institute, Technion - Israel Institute of Technology, 3200003, Haifa, Israel.	25-09-2024	Atomically Flat 2D Field Effect Transistors and Chiral/Helical Hybrids for Rapid Cancer Biopsy, Toxin Detector Prototypes and Chiral Quantum Device Application



Mr. Dharmalingam Nagaraj



Mr. Marvaan M. S.



Dr. Arnab Maity

### Outreach Activity:

#### NATIONAL BROADCASTING DAY COMMEMORATION

SRM Muthucharam Community Radio, in association with Unnat Bharat Abhiyan 2.0, observed National Broadcasting Day on July 23, 2024, at Panchayat Union Middle School, Thenmelpakkam village.



Dr. Annapurani Panaiyappan, Professor & Head of Networking & Communications at SRMIST addressing the school children.



### NATIONAL SPORTS DAY CELEBRATION

SRM Muthucharam Community Radio, in association with Unnat Bharat Abhiyan 2.0, observed National Sports Day on 29th August 2024, at Panchayat Union Middle School, Kolathur village.



Dr. V. Thirumurugan, Associate Director (Campus Life) & Nodal Officer Unnat Bharat Abhiyan / SBSI-SRMIST distributing the awards to the winners of sports competition.

### Awards/ recognitions / honours received by Faculty & Students:

Faculty members:

Name	Award/ recognition / honor	Awarding agency/event
Dr. R. Ajay Rakkesh	Associate Member, INAE	Indian National Academy of Engineering (INAE), New Delhi
Dr. Anand M. Shrivastav	Editorial Member	Scientific Reports (Nature Publications)
Dr. Anand M. Shrivastav	Top 2% Scientist	List of the world's top 2% of scientists, based on a study published by Elsevier and compiled by the team led by Professor John Ioannidis from Stanford University.
Dr. G. Devanand Venkatasubbu		
Dr. M. Alagiri		
Dr. Bharath Govindan		
Dr. Harish		

### Ph.D. Student achievements & placements

S. No	Name	Achievement/ placement	Details	Photos
1	S. Abimannan	Oral Presentation Prize, Asian Nano 2024.	IITM, 23-24 September 2024	
2	Gadudhula Ganesh	Certificate of Appreciation, Asian Nano 2024.	IITM, 23-24 September 2024	
3	Siddhi Dakave	UNLEASH Hack India - Renewable Energy and Water Access for Rural Development (REWARD) - Certificate of Achievement	Department of Physics and Nanotechnology, SRMIST, 27-28 September 2024.	
4	DC Subhshini			
5	Xavier Thattheyus Peter	NSTC International Internship Pilot Program (IIPP)	Science & Technology Policy Research and Information Center (STPI) National Applied Research Laboratories, Taiwan	
6	Dr. Swamynadhan J	Post Doctoral Fellow	Washington University in St. Louis, US	



## Newly joined faculty:



**Dr. Rohit Chakraborty** joined as a Research Assistant Professor at the Department of Physics and Nanotechnology at the SRM Institute of Science and Technology on 20 September 2024. He completed his MTech and PhD from the University of Calcutta during 2012 and 2017 after which he worked as a National Post-Doctoral Fellow and a C V Raman Post-Doctoral Fellow in National Atmospheric Research Laboratory and Indian Institute of Science during 2017 - 2020. Before joining this position, he was serving as an INSPIRE Faculty in Divecha Centre for Climate Change, Indian Institute of Science, Bangalore during September 2020 – September 2024.

He has about 11 years' experience in research, teaching, supervision, and outreach regarding the characterization and prediction of weather extremes over Indian region and has authored 22 Journal papers with an h index of 16. Besides, he has also worked as the Principal Investigator of 3 projects funded by TEQIP, SERB and DST till date. He has received Young Scientist Award from URSI for 4 consecutive times during 2017 - 2022 and has recently been elevated to senior member status in both IEEE and URSI. His current topics of research include unravelling the physical mechanisms responsible for weather extremes such as thunderstorms and lightning and its sensitivity to natural and anthropogenic factors at various spatiotemporal scales using observations and modelling and investigation of climatic variabilities regarding such extremes in a warming climate across India.

# Research—Chemistry

Number of Journal publications : **94**

Average Impact Factor : **5.38**

Highest Impact Factor Journal published : **19.2**

## Highest impact factor paper:

**Rahul Dev Mukhopadhyay**, A template for artificial life, Nature Chemistry, 2024, 16, 1214-1216.  
(Impact Factor = 19.4)

## Nature indexed publications : (5)

Dipak Patra, Satyajit Das, Sreejith Shankar and **Ayyappanpillai Ajayaghosh**, The Nanoarchitectonics of Sustainable Smart Window Design by LCST Modulation of Photoresponsive Molecular  $\pi$ -Systems, Advanced Functional Materials, 2024 (Impact Factor = 18.5)

**Rahul Dev Mukhopadhyay**, A template for artificial life, Nature Chemistry, 2024, 16, 1214-1216.  
(Impact Factor = 19.4)

Nasrin Banu G, Rama Prakash M, Anantharaj Sengen, and **Bernaardshaw Neppolian**, Ruthenium-infused nickel sulphide propelling hydrogen generation via synergistic water dissociation and Volmer step promotion, Chemical Communications, 2024, 60, 10496-10499. . (Impact Factor = 4.3)

Chezhiyan Sumithaa, Karnan Sugantharam, Aswathy Karanath-Anilkumar, Ganesh Munuswamy-Ramanujam and **Ganeshpandian Mani**, RAPTA-coordinated polydiacetylene self-assembly: A chameleon-like prodrug with a dual-lock strategy for real-time release monitoring of metallodrug, Chemical Communications, 2024, 60, 9566-9569. (Impact Factor = 4.3)

Sajan Raj Sasirajan Littleflower, Vaishnavi Dhanapal, Saraswathi Ramakrishnan, Desai Prashant Hanamantrao, Karthick Kumar, Chang Woo Lee, and **Kumaran VEDIAPPAN**, Polaron inhibited  $\alpha$ -trizinc bis-phosphate(v) as low potential polyanionic negative electrode for lithium-ion batteries, Applied Physics Letters, 2024, 125 (10), 103904. . (Impact Factor = 3.5)




## No of Patents published: 3

S.No.	Patent Application Number	Inventors (Name of Faculty/Students)	Patent Title	Date of Publication
1.	202241052170 A	Michael Raj, Sherlin Nivetha, Natarajan Abirami	Nano composite and A Process for Its Preparation	20.09.2024
2.	202441052228 A	Rachna Bhimkumar Sharma Helen Annal Therese	A Process For Preparation Of Molybdenum Trioxide Nanoparticles Based Composites	12.07.2024
3.	202441052542 A	Prasant Kumar Nayak, Yuvashri Jayakondan	Cathode material and a process for its preparation	12.07.2024



**No. of Ph.Ds awarded: 11**


S. No.	Name of the candidate	Reg. No.	Area of Research	Date of the Award	Supervisor	Photo
1.	Dr. Swetha S	RA2033003011018	Heterocyclic Compounds	24-09-2024	Dr. Gopal Chandru Senadi	
2.	Dr. R. Raman	RA1733003011013	Solar Cell Applications	20-09-2024	Dr. B. Natarajan	
3.	Dr. Pushbaraj P	RA1933003011012	Photocatalysis	13-09-2024	Dr. Gopal Chandru Senadi	
4.	Dr. Priya Rana	RA1933003011043	Bioanalytical Applications	03.09.2024	Dr. Priyadip Das	
5.	Dr. Aswathy Rajan	RC2033003011010	Photocatalysis	28.8.2024	Prof. B. Neppolian	
6.	Dr. Vaithiyalingam M	RA1933003011005	Toxicity	26.7.2024	Dr. R. Mohan Kumar	
7.	Dr. N. Aarthi	RC2133003011038	Polymer	26.7.2024	Dr. Dipankar Das	
8.	Dr. Muthuraj M	RC2033003011007	Nanoparticles	25.7.2024	Dr. Dipankar Das	

S. No.	Name of the candidate	Reg. No.	Area of Research	Date of the Award	Supervisor	Photo
9.	Dr. M. Iyyappan	RA1833003011028	Nanoparticles	15.7.2024	Dr. K.K.R. Datta	
10.	Dr. Prateekshita Mukherjee	RA1833003011031	Electrocatalysts	10.7.2024	Dr. Swami Anita Subhash	
11.	Mr. Sivagnanam S	RA1933003011021	Biomedical Applications	5.7.2024	Dr. Priyadip Das	

#### Research Projects:

Total number of new grants: 1

Total lay out of the new grants: **44.20 lakhs INR**

S. No	Name of the PI	Title of the project	Agency/scheme	Grant amount (Lakhs)	Period of support
1.	 Dr. P. Gopinath	Technology development for scalable, cost-effective drugs/ natural products isolation from cordyceps militaris and medicinal plants: their semi-synthesis and antimicrobial lead identification	DST/TT1/TC/ AMR/2023/1 (C)	44.20	2024-2026



# Research—Mathematics

Number of Journal publications : 43

Average Impact Factor : 2.98

Highest Impact Factor Journal published : 11.0

## Highest impact factor paper :

Biswajit Sarkar, **Bikash Koli Dey**, Jin-Hee Ma, Mitali Sarkar, Rekha Guchhait, Young-Hyo Ahn, Does outsourcing enhance consumer services and profitability of a dual-channel retailing?, Journal of Retailing and Consumer Services, Volume 81, 2024, 103996, ISSN 0969-6989, <https://doi.org/10.1016/j.jretconser.2024.103996>.

(Impact Factor = 11.0)

## Top 5 publications:

Biswajit Sarkar, **Bikash Koli Dey**, Jin-Hee Ma, Mitali Sarkar, Rekha Guchhait, Young-Hyo Ahn, Does outsourcing enhance consumer services and profitability of a dual-channel retailing?, Journal of Retailing and Consumer Services, Volume 81, 2024, 103996, ISSN 0969-6989, <https://doi.org/10.1016/j.jretconser.2024.103996>.

(Impact Factor = 11.0)

Revathi Devi M, **Narsu Sivakumar**, Samad Noeiaghdam, Unai Fernandez-Gamiz, Multiple shape factor effects of nanofluids on marangoni mixed convection flow through porous medium, Results in Engineering, Volume 23, 2024, 102512, ISSN 2590-1230, <https://doi.org/10.1016/j.rineng.2024.102512>. (Impact Factor = 6.0)

M. Mubeen Tajudeen, M. Syed Ali, Ganesh Kumar Thakur, Bandana Priya, **R. Perumal**, Non-fragile control of discrete-time conic-type nonlinear Markovian jump systems under deception attacks using event-triggered scheme and Its application, Mathematics and Computers in Simulation, Volume 227, 2025, Pages 209-225, ISSN 0378-4754, <https://doi.org/10.1016/j.matcom.2024.08.007>. (Impact Factor = 4.4)

Sumanta Shagolsheem, **B. Bira**, K. V. Nagaraja; Exact solutions, conservation laws, and shock wave propagation of two-lanes traffic flow model via Lie symmetry. *Physics of Fluids* 1 August 2024; 36 (8): 087168. <https://doi.org/10.1063/5.0222213>. (Impact Factor = 4.1)

**Abhishek Banerjee**, Alexander Oron, and Yehuda Agnon, Variational approach for Stokes flow through a two-dimensional non-uniform channel. *Sci Rep* 14, 15689 (2024). <https://doi.org/10.1038/s41598-024-66500-4>. (Impact Factor = 3.8)

## No of Patent published: 1

An Advanced System for Forecasting Air Pollution in the Living Area Using Machine Learning Algorithm, **Dr. N. Balaji**, Dr. Ramakrishna Reddy K, Dr. V.Thirimurthulu, Ranjan Kumar Pradhan, Dr. D. B. K. Kamesh, Gulam Mahabub Subhani, Rajesh Durgam, Velugoori Sathish, Dr. R. Santhoshkumar, Publication Date : 30.08.2024.

**No. of Ph.Ds awarded: 7**

S.no	Scholar name	Reg. No.	Area of Research	Date	Supervisor	Photograph
1	Dr. R. Sakthipriya	RA2033001011001	Non-Archimedean Analysis	10.07.2024	Dr. K. Suja	
2	Dr. E. Ragupathi	RC2133001011026	Fluid Dynamics	19.07.2024	Dr. D. Prakash	
3	Dr. S. Hema surya	RC2133001011002	Interval Optimization	22.07.2024	Dr. T. Nirmala	
4	Dr. Sakthivel R	PA1733001012003	Applied Stochastic Processes	13.08.2024	Dr. G. Vijaya-lakshmi	
5	Dr. R. S. Yohapriyadharsini	RC2133001011025	Queueing Theory	06.09.2024	Dr. V. Suvitha	
6	Dr. N. Gunasekaran	RC2133001011013	Fixed Point Theory	20.09.2024	Dr. G. Arul josph	
7	Dr. K. Chinnadurai	RA1933001011012	Mathematical Modeling	27.09.2024	Dr. S. Athithan	



# Research—Physics and Nanotechnology

Number of Journal publications : **88**

Average Impact Factor : **5.47**

Highest Impact Factor Journal published : **18.9**

## Highest impact factor papers:

Rahuldeb Roy, Greeshma R, Abdul Basith, **Rudra Banerjee**, Ashutosh K. Singh, Self-Rechargeable Aqueous Zn<sup>2+</sup>/K<sup>+</sup> Electrochromic Energy Storage Device via Scalable Spray-Coating Integrated with Marangoni Flow, Energy Storage Materials, <https://doi.org/10.1016/j.ensm.2024.103680> (**Impact Factor = 18.9**)

**Sougata Mallick\***, Peng Ye, Willem Boutu, David Gauthier, Hamed Merdji, Manuel Bibes, Michel Viret, Karim Bouzehouane, Vincent Cros\*, OAM Driven Nucleation of Sub-50 nm Compact Antiferromagnetic Skyrmions, Advanced Functional Materials (IF 18.5), <https://doi.org/10.1002/adfm.202409528> (**Impact Factor = 18.5**)

M. J. Swamynadhan, Andrew O'Hara, **Saurabh Ghosh\***, and Sokrates T. Pantelides, Engineering Collinear Magnetization in Hexagonal LuFeO<sub>3</sub> and Magnetoelectric Control of Skyrmions in Hexagonal 2D Epilayers, Advanced Functional Materials, <https://doi.org/10.1002/adfm.202400195> (**Impact Factor = 18.5**)

## Nature Indexed journal publications (6):

**Sougata Mallick\***, Peng Ye, Willem Boutu, David Gauthier, Hamed Merdji, Manuel Bibes, Michel Viret, Karim Bouzehouane, Vincent Cros\*, OAM Driven Nucleation of Sub-50 nm Compact Antiferromagnetic Skyrmions, Advanced Functional Materials, <https://doi.org/10.1002/adfm.202409528> (**Impact Factor = 18.5**)

M. J. Swamynadhan, Andrew O'Hara, **Saurabh Ghosh\***, and Sokrates T. Pantelides, Engineering Collinear Magnetization in Hexagonal LuFeO<sub>3</sub> and Magnetoelectric Control of Skyrmions in Hexagonal 2D Epilayers, Advanced Functional Materials, <https://doi.org/10.1002/adfm.202400195> (**Impact Factor = 18.5**)

Haining Zheng, Arup Ghosh, M. J. Swamynadhan, Qihan Zhang, Walter P. D. Wong, Zhenyue Wu, Rongrong Zhang, Jingsheng Chen, Fanica Cimpoesu, **Saurabh Ghosh**, Branton J. Campbell, Kai Wang, Alessandro Stoppa, Ramanathan Mahendiran & Kian Ping Loh, Chiral multiferroicity in two-dimensional hybrid organic-inorganic perovskites, Nature Communication, <https://doi.org/10.1038/s41467-024-49708-w> (**Impact Factor = 14.7**)

Mohamed Jibri K. P, Simon Sajan John, **Archana J**, **Harish S\***, **Navaneethan M\***, Spin state driven weighted mobility and thermal conductivity properties of electron (Hf) doped strongly correlated Mott insulator LaCoO<sub>3</sub> for thermoelectric applications, Applied Physics Letters, <https://doi.org/10.1063/5.0207132> (**Impact Factor = 3.5**)

Ping'an Li, Sudipta Bera, **Shailendra Kumar-Saxena**, Israel Pecht, Mordechai Sheves, David Cahen, Yoram Selzer, Electron transport through two interacting channels in Azurin-based solid-state junctions, Proceedings of the National Academy of Sciences, <https://doi.org/10.1073/pnas.2405156121> (**Impact Factor = 9.4**)

Avijit Hazra, S. Thejus Mary, Neelesh Sharma, **Rohit Dhir\***, Bc to A transition form factors and semileptonic decays in self-consistent covariant light-front approach. European Physical Journal C, <https://doi.org/10.1140/epjc/s10052-024-13249-9> (**Impact Factor = 4.2**)

**Number of Book chapters published: 3**

Tulika Srivastava, **Anand M. Shrivastav**, **Subhojyoti Sinha**, Debanjan Polley, **K. Shadak Alee**, **R. Annie Sujatha**, Amodini Mishra & **Shailendra K. Saxena\***, Silicon Nanowire: From Fabrication to Its Application, Springer Nature([https://link.springer.com/chapter/10.1007/978-3-031-64542-6\\_3](https://link.springer.com/chapter/10.1007/978-3-031-64542-6_3))


**Annie Sujatha\***, **R.**, **Manirahulan**, **K.**, Ida Florence Sharon, E., Arun Kumar, C. Metal and Metal Oxide Enabled Sensors for Biomedical Applications, Springer ([https://doi.org/10.1007/978-3-031-63961-6\\_8](https://doi.org/10.1007/978-3-031-63961-6_8))

Rugma T P, Ajith P Varghese, K. Priyanga Kangeyan, Shiny Golda A, **Sandeep Kumar Lakhera\*** The Future Is Green: Sustainable Hydrogen Production from Biomass Derivatives through Photocatalysis, ACS Symposium Series, Vol. 1473 (<https://doi.org/10.1021/bk-2024-1473.ch003>)

**Research Projects:**

Total number of new grants: 1

Total lay out of the new grants: **26.5 lakhs INR**

S. No	Name of the PI	Title of the project	Agency/scheme	Grant amount (Lakhs)	Period of support
1	 Dr. S. Venkataprasad Bhat	Development of printable CIGS ink for Flexible Solar cell	ISRO RESPOND	26.5	2024-2026

**New facilities added:**

Spin Coater (Prolyx Microelectronics) at RRP604, Faculty In-Charge: Prof. S. Venkataprasad Bhat, funded by ISRO.



**Spin Coater**



Number of Ph.Ds completed : 10

S. No	Name	Reg. No	Area of Research	Date	Supervisor	
1	Dr. M J Swamynadhan	RA1933002011035	MULTIFERROIC MATERIALS	31 <sup>st</sup> July 2024	Dr. Saurabh Ghosh	
2	Dr. Deepankara V.	RC2033002011020	NUCLEAR MATERIALS	2 <sup>nd</sup> Aug 2024	Dr. Kantha D. Arunachalam	
3	Dr. Prakash G	RA1933002011020	THERMOELECTRIC MATERIALS	9 <sup>th</sup> Aug 2024	Dr. V Kathirvel	
4	Dr. B. Shunmugapriya	RA1933002011007	MATERIALS FOR SUPERCAPACITOR	7 <sup>th</sup> Aug 2024	Dr.T. Vijayakumar	
5	Dr. Jayachandran M	RA1733002011012	MATERIALS FOR LITHIUM-ION BATTERY	14 <sup>th</sup> Aug 2024	Dr.T. Vijayakumar	
6	Dr. Poornima B.H	RC2033002011011	MATERIALS FOR SUPERCAPACITOR	27 <sup>th</sup> Aug 2024	Dr.T. Vijayakumar	
7	Dr. Sruthy Subash	RC2013014011002	MATERIALS FOR THIN FILM LITHIUM-ION BATTERIES	29 <sup>th</sup> Aug 2024	Dr. K. Kamala Bharathi	

S. No	Name	Reg. No	Area of Research	Date	Supervisor	
8	Dr. Rence P Reji	RA2033002011034	VOLATILE ORGANIC COMPOUNDS DETECTION	2 <sup>nd</sup> Sept. 2024	Dr.V.J.Surya	
9	Dr. Shweta Khanna	RA1933002011004	WASTEWATER TREATMENT	9 <sup>th</sup> Sept. 2024	Dr. R Maheswaran	
10	Dr. S. Sugarthi	RA1833002011003	NOVEL COUNTER ELECTRODE MATERIALS	26 <sup>th</sup> Sept. 2024	Dr. G. Bakiyaraj	

#### Memorandum of Understanding: 2

MoU signed with the Faculty of Applied Energy System Engineering, Jeju National University (JNU), The Republic of Korea, South Korea, Faculty Champion- **Dr. Janani Sivasankar**.

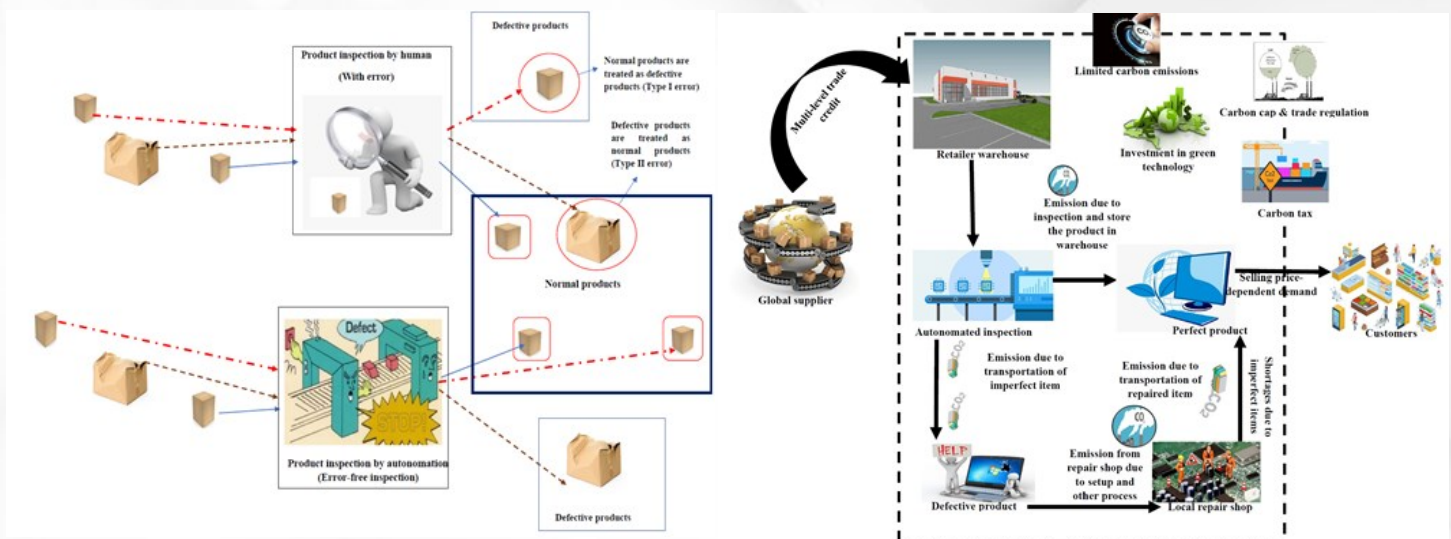
MoU signed with the BK 21 four project: Jeju New Energy Industry Advancement-Based Innovative Human Resource Cultivation, Nanomaterials and System Laboratory, Jeju National University, The Republic of Korea, South Korea. Faculty Champion- **Dr. Janani Sivasankar**.



# Faculty Corner

## Human-Machine Collaboration: Industrial Revolution with Digital Retailing to Achieving Sustainable Manufacturing Goals in Industry 5.0

With the technological revolution, the industrial revolution also took place in the last few years. The industry is now moving towards Industry 5.0 with some intelligent technologies. Industry 5.0 denotes a critical evolution in the manufacturing industry, accentuating the interconnected dynamics between human workers and automated mechanisms. The advent of automated inspection and digital retailing is pivotal in this evolution. Systems for automated inspection, leveraging advancements in artificial intelligence and computer vision, guarantee product quality and uniformity with unmatched precision and expediency. This innovation diminishes human errors, enhances operational efficiency, and supports immediate quality assessment. Conversely, digital retailing transforms the methodologies employed in marketing and selling products. It provides tailored customer interactions, optimizes supply chain processes, and promotes decisions grounded in data analytics. Through the incorporation of innovative technologies, Industry 5.0 nurtures a production ecosystem that emphasizes efficiency, sustainability, and customer-centricity. Recently, most customers have preferred to use smart products, and they want their desired product on door-step. A product is called a smart product when the product can perform several tasks simultaneously. Industries focus on manufacturing smart or intelligent products like smartphones, laptops, and artificial intelligence-based devices.





Opening remarks by Dr. E. Senthil Kumar, HOD, Department of Physics and Nanotechnology.

A smart manufacturing factory is required to produce such products, leading the industry to Industry 5.0. Nevertheless, it is imperative for decision-makers to forecast the demand for newly introduced products to enable the industry to maximize its profitability. Contemporary industrial decision-making faces significant challenges from various uncertainties that permeate both the cognitive processes of the decision-maker and the overarching framework of industrial management. The foundation of such behavioral processes is intrinsically linked to the uncertainties that frequently manifest within the decision-maker's cognition. A deficiency in self-assurance and uncertainties regarding specific decisions may exacerbate numerous risk factors within the industrial economic landscape.

On the other hand, the application of intelligent automated inspection makes the industry smarter. Automation indicates the automated inspection by the computerized numerical controlled (CNC) machines, not by humans. The inspection can be done by humans, which may contain minimal error, but this creates a significant harmful impact on customers about the company's brand image. Therefore, the automated technology can provide vital support to the company for the brand image. This is considered to decrease defective smart products through an automation. Automated inspection represents a transformative advancement in the realms of digital and O2O retailing, providing a multitude of advantages. It enhances inventory management by swiftly scanning and categorizing products, thereby minimizing human error and augmenting operational efficiency. By promptly identifying defects and inconsistencies, automated inspection guarantees that only superior-quality items are delivered to consumers, thereby bolstering brand reputation and customer satisfaction.



Moreover, this technology enhances supply chain transparency, facilitating real-time monitoring of inventory levels and the identification of potential bottlenecks. Additionally, automated inspection systems possess the capability to analyze extensive datasets, revealing trends and insights that support informed decision-making and optimize operational processes. Ultimately, by mechanizing monotonous and error-prone tasks, automated inspection liberates human resources to concentrate on more strategic endeavors, propelling overall business growth and success. The implementation of automated inspection within digital and O2O retail frameworks serves as a vital mechanism for furthering the Sustainable Development Goals (SDGs) by enhancing operational efficiency, diminishing waste, and fostering sustainable practices. By automating the quality assurance processes, enterprises can decrease inaccuracies and defects, which results in fewer product returns and a reduction in waste management. This effort is directly aligned with SDG 12, Responsible Consumption and Production, as it fosters sustainable consumption behaviors and mitigates environmental impacts. Moreover, automated inspection frameworks facilitate real-time oversight of inventory levels, thereby optimizing supply chain operations and minimizing superfluous production and transportation, which corresponds with SDG 13, Climate Action. Additionally, by enhancing operational productivity, automated inspection systems can liberate human capital for more strategic endeavors, thereby contributing to SDG 8, Decent Work and Economic Growth. For enhancing sustainability, proper planning of the manufacturing process and several investments can reduce the carbon emission of the production system. Reminding of the technological revolution, this study will use an automated inspection policy, which can perform error-free inspection, and the industry can short the faulty product perfectly and remanufacture those items. Now, the application of intelligent technology may be harmful to creating job opportunities, that's why we want to introduce the concept of Industry 5.0, where human-machine interaction is possible such that job opportunities are still created. We want to use the concept of corporate social responsibility (CSR) within industry, which helps to earn more profit.



**By**

**Dr. Bikash Koli Dey ,**

**Research Assistant Professor,  
Department of Mathematics,  
SRMIST, Kattankulathur.**

# Alumni Connect

**SRM Institute of Science and Technology**  
Faculty of Engineering and Technology  
**Department of Chemistry**

**Alumni Talk**  
on  
**Placement & Higher Studies**

"Decoding the Global PhD Paradigm:  
Insider Tips and Strategies"



**Mr. Udhaya Ganesh (M.Sc.)**  
Ph. D. Scholar  
University of Wisconsin-Madison,  
USA

Area of Research  
Materials Science &  
Electrochemistry

ON 13.07.2024  
Saturday @ 10 AM  
<https://meet.google.com/cie-vkew-grt>

CONNECT today, TRANSFORM tomorrow  
It's not our MISSION, It's our WISH for YOU

Coordinators  
Dr. Srinivasarao Kancharla  
Dr. Susnata Pramanik

**Department of Chemistry**  
College of Engineering and Technology  
SRMIST, Kattankulathur

**Alumni Talk**

"An Overview of Research  
Opportunities in Foreign  
Countries"



**Dr. R. Jerome (Ph.D.)**  
Postdoctoral Researcher  
UC Irvine, USA

M.Sc. 2016-2018  
Ph.D. 2018-2022

10.08.2024 Saturday  
@ 9 AM, IST  
<https://meet.google.com/cie-vkew-grt>

CONNECT today, TRANSFORM tomorrow  
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Coordinators  
Dr. Srinivasarao Kancharla  
Dr. Susnata Pramanik

**SRM Department of Chemistry**  
College of Engineering and Technology  
SRM Institute of Science and Technology  
Kattankulathur

Invites you  
for

**ALUMNI TALK-19**

on

"Chemistry jobs need and demand in  
pharma, agro and specialty industry"



**Dr. Suneel Chennamsetty**  
Senior Director R&D  
Navin Fluorine International Limited  
SRM IST PhD (2008-2012)

14-09-2024 10:00 AM  
<https://meet.google.com/cie-vkew-grt>

Coordinators  
Dr. Srinivasarao Kancharla  
Dr. Susnata Pramanik



# Alumni Connect

SRM Institute of Science and Technology  
Department of Mathematics & Directorate of Alumni Affairs  
invites you to

**Alumni Talk**

A Primer On Topics, Applications, And Opportunities  
In Data Science And Artificial Intelligence.



**Mr. Vivek Sivaramakrishnan**  
[BSc – 2020-23]  
Teaching Assistant,  
IIT Madras.



18-09-2024 / 1.30 PM to 2.30 PM  
MB41, Main Block, SRMIST, KTR

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Director of Alumni Affairs  
Dr. Ritesh Kumar Dubey  
HOD, Department of Mathematics


Convener  
Dr. Meena Parvathy Sankar  
Coordinators  
Dr. L. S. Senthil Kumar  
Dr. A. Anuradha  
Department of Mathematics



Dept. of Physics and  
Nanotechnology, SRMIST

Invites you for  
**Alumni Talk**

By



**Dr. Jagadish Rajendran**  
Postdoctoral Researcher, Centre  
for Nano Science and  
Engineering (CeNSE), Indian  
Institute of Science, Bangalore,  
India  
**Alumni -**  
(PhD Nanotechnology 2023)

**Title of the talk:** “Research Realms: Industry and  
Academia in Perspective”

**Date:** 27<sup>th</sup> Aug 2024, **Time:** 4.00 PM to 5.00 PM IST

**Alumni Coordinator:**  
Prof. P. Malar  
Dr. Jaivardhan Sinha  
Dr. Trilochan Sahoo  
Dr. Venkata Ravindra A

**Online Meeting Link**  
[meet.google.com/ewk-izbe-wbp](https://meet.google.com/ewk-izbe-wbp)

# Notifications & Announcements

## IMPORTANT DATES

Abstract Submission Deadline\* : 10/12/2024  
Abstract acceptance notification : 20/12/2024  
Submission of full paper deadline : 31/12/2024  
\*Abstract is required for paper presentation in the conference

## BANK DETAILS FOR ONLINE TRANSFER:

Account Name : Sri Ramanujan  
Mathematics Club Account  
Type : Savings  
Account No. : 7111751746  
Indian Bank IFSC Code : IDIB 000 S181  
MICR Code : 600019171

## Website link

<https://www.srmist.edu.in/events/national-conference-on-mathematical-techniques-and-applications-ncmta-2025/>

## Registration link

<https://tinyurl.com/3k4hw5mt>

## Abstract submission link

<https://tinyurl.com/ym83aejt>

## Further queries, reach out to us:

Primary: ncmta.2025@srmist.edu.in  
Phone: 044-2741-6224,  
Secondary: umaj@srmist.edu.in, +91 9047754433  
sujathae@srmist.edu.in, +91 9884708590

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Pro-Chancellor (Academics), SRM IST

Dr. R. Shiva Kumar,  
Chairman, Trichy & Ramapuram Campuses

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Dr. J. Uma, Asst. Prof., SRM IST

Dr. E. Sujatha, Asst. Prof., SRM IST



## 12<sup>th</sup> National Conference on Mathematical Techniques and Applications

NCMTA-2025

09 - 10 January, 2025

## Organized by

Department of Mathematics  
SRM Institute of Science and Technology (SRM IST),  
Kattankulathur, Chengalpattu District, India

## Website link

<https://www.srmist.edu.in/events/national-conference-on-mathematical-techniques-and-applications-ncmta-2025/>

## Venue:

TP Ganesan Auditorium, Mini Hall 1



## ABOUT SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

SRM Institute of Science and Technology (formerly known as SRM University) is one of the top-ranking Universities and most premier engineering destinations in India, established in 1985 by the Founder Chancellor, Dr. T. R. Paarivendhar. Now it is functioning in four campuses located at Kattankulathur, Vadapalani, and Ramapuram in Tamilnadu and Modi Nagar in Ghaziabad with over 55,000 students and 3000 faculty members. It offers a wide range of programs to students applying for undergraduate, postgraduate and doctoral programs in Engineering, Management, Medicine & Health Sciences, Agriculture, Law and Science & Humanities.

SRMIST has been engaged in nurturing minds through a rich heritage of academic excellence. Essentially a hub of bustling student activities, the green and beautiful campus has been a second-home to thousands of students in their journey to pursue higher education. The Institution has moved up through international alliances and collaborative initiatives to achieve global excellence. SRMIST International Advisory Board (IAB) is actively involved in building a stronger international dimension in research and teaching methodology, which creates avenues for research and successful careers. The SRMIST also collaborates with foreign universities like Massachusetts Institute of Technology, Carnegie Mellon University, Pittsburg University, etc., offering a postgraduate academic program MSIT-ESE.

Over 150 students are sponsored to 35 foreign universities like MIT, Carnegie Mellon, UC Davis, Warwick, and Western Australia. Now the Institute enjoys an unsurpassed reputation in academia and corporate circles being the preferred manpower source for vision to be recognized as a world-class learning institution.

SRMIST has been categorized as grade "A" university by the Ministry of Human Resources Development (MHRD), Government of India. SRMIST is accredited by NAAC with "A++" Grade and placed in top positions in NIRF and Shanghai Ranking in the year 2024.

## ABOUT THE DEPARTMENT

The Department of Mathematics, College of Engineering and Technology, SRM Institute of Science and Technology is a thriving community of dedicated teachers, diligent researchers and devoted students sharing the enthusiasm for Mathematics. The department was established in the year 1985 and since then it has

shown continuous improvement in both academic and research criteria.

The department offers courses in Engineering Programmes and Research Programmes at SRMIST. There are 106 faculties; all of whom are PhD holders. Further 16 faculties are PDF. The department also supports 208 research scholars. Esteemed Professors Dr. Peeyush Chandra (IIT Kanpur), Dr. S. Kesavan (Prof, IIT Madras), Dr. Mohan K. Kadalbajoo (IIT Kanpur) and Dr. Debabrata Datta (Senior Scientist, BARC, Mumbai) are the Adjunct Professors and they guide the department in all its endeavors.

Since its inception, the department has obtained a substantial amount of Rs. 278 Lakhs from various funding agencies like DST, NBHM, SRMIST and BRNS for research projects. Apart from regular academic activities, the Department of Mathematics also conducts National/International research workshops, symposia, conferences and conventions, every year. This was mainly due to the incredible effort of the Mathematics Faculty members and the tremendous support from the Administrators of SRMIST.

## ABOUT NCMTA AND ITS THEME

The Department of Mathematics has been conducting National Conference on Mathematical Techniques and Applications (NCMTA) successfully since 2009. The conference aims to bring academics, scientists, leading engineers, researchers and scholar students together to exchange and share their experiences and research results about all aspects of mathematics and discuss the practical challenges encountered and the solutions adopted. The conference includes keynote addresses and plenary sessions by the experts and the presentation of contributed papers. This conference is the premier forum for the presentation of new advances, research results and to discuss the future trends in the fields of Mathematics.

## Topics for paper presentation

### Numerical Analysis, Scientific Computing, and Mathematical Modeling

- Numerical Analysis and Numerical Methods
- Partial Differential Equations (PDEs) and Fluid Dynamics
- Computational Fluid Dynamics and Simulation
- Mathematical Biology and Fixed Point Theory
- Algebraic and Discrete Mathematical Structures for Scientific Computing
- High-Performance Computing and Parallel Algorithms

## Data Science, Machine Learning, and Intelligent Systems

- Statistics and Data Analysis
- Machine Learning and Deep Learning
- Fuzzy Optimization and Decision Support Systems
- Fuzzy Neural Networks and Intelligent Systems
- Data-Driven Modeling and Simulation
- Scientific Data Visualization and Visual Analytics
- Reliability Engineering and Stochastic Models for Data Science
- Graph Theory and its applications

The organizing committee of the conference invites papers from researchers and practitioners, on the above (but not restricted to) areas.

## PUBLICATION

All submitted papers will be reviewed by technical committees of the Conference. The Proceeding containing the abstracts of all the accepted papers will be released on the first day of the conference. Furthermore, all the selected papers will be reviewed by 2-3 peer committee members and will be published in a Scopus indexed journal (Proposal submitted). (Upon acceptance of the article, the publication charges are to be paid).

Registration Fees		
Category	Amount in INR	
	Internal	External
Student	1000	1000
Research Scholar	1000	1500
Faculty	1000	2000
Industrial experts		2500

Accommodation will be provided only to outstation PhD and Postdoc participants on sharing basis.

Accommodation charges extra: INR 800/- in SRM Guest house and INR 2500/- in SRM Hotel (per night on sharing basis)  
The registration fee includes tea/coffee, working lunch and conference kit.



# Notifications & Announcements

## 8<sup>th</sup> International Conference on Nanoscience and Nanotechnology (ICONN-2025)

March 24 - 26, 2025



Organized by

Department of Physics and Nanotechnology

SRM Institute of Science & Technology, Kattankulathur - 603 203, Chennai, Tamil Nadu, India

ICONN Website: <https://www.srmist.edu.in/events/iconn-2025/>

In association with



Shizuoka University, Japan



University of Paris, France



NYCU, Taiwan



Universiti Malaysia, Malaysia



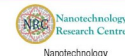
Mordovia State University, Russia



Rīgas Tehniskā universitāte, Latvia



Flinders University, Australia



Nanotechnology Research Centre, SRMIST, India

### About ICONN

ICONN is a biennial International Conference organized by the Department of Physics and Nanotechnology, SRM Institute of Science and Technology, that attracts researchers across the world, working in the areas of Nanoscience and Nanotechnology. Incepted in 2010, the conference has become an important event in the calendar for the scientists, academicians, researchers, industrialists and students to showcase their latest and significant findings. Previous editions (ICONN-2010, ICONN-2011, ICONN-2012, ICONN-2013, ICONN-2014, ICONN-2015, ICONN-2016, ICONN-2017, ICONN-2018, ICONN-2019, ICONN-2021 and ICONN-2023) were successfully conducted in association with Shizuoka University, Japan; GNS Science, New Zealand; National Yang Ming Chiao Tung University (NYCU), Taiwan; University of Rome Tor Vergata, Italy; Asian Consortium on Computational Materials Science (ACCMS), Japan; including national, international societies and research organizations. The conference has been sponsored by various funding agencies of Government of India such as Department of Science and Technology (DST), Science and Engineering Research Board (SERB), Defence Research and Development Organization (DRDO), Council of Scientific and Industrial Research (CSIR), Indian Ceramic Society, Indian Physics Association (IPA), Solar Energy Society of India (SESI), Innovation, Science & Technology Foundation – Trupati (ISTF-T) and also by various private industries. ICONN-2025 comes up with the state-of-the-art themes added to popular sessions of previous version.

### Patrons

Dr. T. R. Paarivendhar, Founder Chancellor, SRMIST, India  
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Dr. Yoshiyuki Kawazoe, Emeritus Professor, Tohoku University, Japan  
Prof. Masakazu Hara, Dean of the Graduate School of Science and Technology, Shizuoka University, Japan  
Prof. Satishchandra B. Ogale, IISER Pune / RISE Kolkata, India  
Prof. Nobuyuki Mase, Director of Research Institute of Green Science and Technology, Shizuoka University, Japan

### Scientific Sessions

Refer the ICONN-2025 website for detailed information

- Low-dimensional materials
- 2D materials
- Surfaces, Interfaces and Thin films
- Nanocomposites and Nanocatalysts
- Multifunctional Nanomaterials
- Molecular and Nanoelectronics
- Nanosensors and Nanosensors
- Nanomagnetism and Spintronics
- Nanotechnology for Energy Harvesting, Transport and Storage
- Nanostructured Solar Cells and Thermoelectrics
- Environmental Nanotechnology
- Nanoscale Modeling and Applications

- Computational Materials, Methods and Numerical Techniques
- Complex and Meta-Nanophotonics: Classical to Quantum
- Nanobiotechnology, Nanotoxicology and Nanomedicine
- Nanotribology
- Manipulation and Characterization of Materials at Nanoscale
- Industrial Nanotechnology: Products and Commercialization
- Quantum Information Processing
- Green Nanotechnology and Water Treatment
- Photonic & Plasmonic Nanomaterials
- Metamaterials and Metasurfaces
- Additive Manufacturing & 3D Printing

### Journal Publications

Manuscripts submitted will be peer-reviewed and accepted papers will be published as a special issue in the following journals.

- Emergent Materials (IF-4.8) - Springer
- Journal of Materials Science: Materials in Electronics (IF-2.8) - Springer
- Journal of Experimental Nanoscience (IF-2.6, Open Access) - Taylor & Francis

All the accepted abstracts will be published in ICONN-2025 abstracts volume with ISBN number.

\*Other journal details will be updated soon.

### Awards

ICONN-2025 declares recognition in the categories listed below:

- SRM-ICONN Award of excellence in Nanoscience and Nanotechnology
- SRM-ICONN Innovation Award
- SRM-ICONN Outstanding Woman Researcher Award
- SRM-ICONN Young Researcher Award
- SRM-ICONN Best Oral and Poster Awards

### Important Dates

First announcement call for abstracts: November 11, 2024

Abstract submission deadline: December 10, 2024

Acceptance notification: December 12, 2024

Registration deadline (Early bird): December 20, 2024

Final registration deadline: February 28, 2025

### Contact Details

Conference Secretariat ICONN-2025  
Phone : +91-044-27417822, 27417835, 27417831  
E-mail : [iconn.2025@srmist.edu.in](mailto:iconn.2025@srmist.edu.in)  
Website : <https://www.srmist.edu.in/events/iconn-2025/>

## CALL FOR ABSTRACTS FIRST ANNOUNCEMENT

### Plenary/ Keynote/ Invited Speakers

Dr. Ariel Ismach, Tel Aviv University, Israel  
Prof. Arindam Ghosh, IISc Bangalore, India  
Dr. Abhishek Mitra, IIT Madras, India  
Dr. Amarnath Reddy, CSIR-CGRI, Kolkata, India  
Prof. Amit K. Chakraborty, NIT Durgapur, India  
Prof. Amlan J. Pal, IACS Kolkata, India  
Dr. Anuradha M. Ashok, PSG Institute of Advanced Studies, Coimbatore, India  
Prof. Aoki Toru, Shizuoka University, Japan  
Dr. Aravind Kumar Chandiran, IIT Madras, India  
Dr. Ashutosh K. Singh, CeNS, Bangalore, India  
Prof. Atsushi Makamura, Shizuoka University, Japan  
Dr. Ayman Mukherjee, 3D Battery, Israel  
Prof. S. Balakumar, University of Madras, India  
Dr. Bhaskar Chandra Mohanty, Thapar Institute of Engineering and Technology, Punjab, India  
Prof. Bijay Kumar Agarwalla, IISER Pune, India  
Dr. Bipul Kumar Mahato, Nanyang Technological University, Singapore  
Dr. Chandan Ghosh, Jadavpur University, Kolkata, India  
Prof. Daniel Moraru, Shizuoka University, Japan  
Prof. Dipankar Mandal, Institute of Nano Science and Technology (INST), Mohali, India  
Dr. D. Durgalakshmi, Anna University, Chennai, India  
Dr. Easwaramoorthi, ARCI, Hyderabad, India  
Prof. Ganapathy Valtheeswaran, University of Hyderabad, India  
Dr. Gobind Das, Khalifa University, UAE  
Dr. Gopal Dixit, IIT Bombay, India  
Dr. Hiroki Kase, Shizuoka University, Japan  
Prof. Hiroya Ikeda, Shizuoka University, Japan  
Prof. Ivo B. Rietveld, University of Rouen Normandy, France  
Dr. Jayachandra Bingi, IITDM, Kancheepuram, India  
Prof. Jun Kondoh, Shizuoka University, Japan  
Prof. V. Kanchana, Department of Physics, IIT Hyderabad, India  
Prof. Kazuhiko Hara, Shizuoka University, Japan  
Prof. Kunio Hayakawa, Shizuoka University, Japan  
Dr. Laksheemi Ganapathy, IIT Rourkela, India  
Prof. M. S. Ramachandra Rao, IIT Madras, India  
Dr. Matthias Opel, Walther Meissner Institute, Germany  
Prof. Malachi Noked, Bar-Ilan University, Israel  
Prof. Mohamed M. Chehimi, University of Paris Cite, France

Registration Fees (\*includes 18% GST)

Category	Early Bird Registration (before Dec 20, 2024)	Registration (Dec 21, 2024 - Jan 15, 2025)	Registration (Jan 16 - Feb 05, 2025)	Registration (Feb 06 - Feb 28, 2025)
Indian students (PG & Ph.D students)	Rs. 2500	Rs. 3500	Rs. 4500	Rs. 6000
Indian postdocs	Rs. 3500	Rs. 4500	Rs. 6000	Rs. 8000
Indian Faculty/Scientist	Rs. 4000	Rs. 5000	Rs. 7000	Rs. 10000
Industry (India)	Rs. 7000	Rs. 10000	Rs. 15000	Rs. 20000
Overseas students/postdocs	USD 100	USD 150	USD 200	USD 250
Overseas Faculty/Scientists	USD 150	USD 200	USD 250	USD 300
Overseas Industry	USD 250	USD 300	USD 350	USD 500

\*The registration fee includes conference participation, conference kit, lunch and dinner.

Account Name : The Convener, ICONN 2013  
A/c No: (15 Digits) : 117001001825236  
Type of Account : Savings Bank (SB)  
RTGS / NEFT / IFSC Code : CIUB0000117  
Bank Name : City Union Bank, Tambaram  
Bank Address : City Union Bank, Branch: 117, Chennai Tambaram branch, Chennai - 600 045

Scan for more Details



Department of Physics and Nanotechnology, SRMIST, SRM Nagar, Kattankulathur - 603 203, Chennai, Tamil Nadu, India