SRM
INSTITUTE OF SCIENCE AND TECHNOLOGY
(Deemed to be University u/s 3 of UGC Act, 1956)
DELHI-NCR CAMPUS, GHAZIABAD (U.P.)

A RESEARCH REPORT

JULY-DECEMBER 2024

VOLUME 1

Director's Message

"Intelligence plus Character that is the True Goal of Education"
Martin Luther King Jr.

Kaetil vizhuchchelvam kalvi oruvarku
maadalla matrai yavai[Thirukural by Thiruvalluvar]

Learning is excellence of wealth that none destroy;
To man nought else affords reality of joy.

Education plays a vital role in everybody's life. To imbibe knowledge is a continuous process and there is no limitation or upper limit to keep learning throughout one's life. In other words, education is the backbone of our society.

SRM Institute of Science and Technology is like a Banyan Tree in the field of education. It provides various courses under one-roof and also has established campuses in the state of Tamil Nadu, Uttar Pradesh, Haryana, Andhra Pradesh and Sikkim.

SRMIST, Delhi NCR Campus, Ghaziabad, Uttar Pradesh was established in 1997 to uplift the younger minds with new approaches in teaching and provide the higher-end of the spectrum in placements in the industry. It is a matter of pride to me to report that students from the Delhi NCR Campus are some of the best placed at various reputed companies.

Research and innovation at the institute is aligned with global and national priorities. Our institute imbues the values of entrepreneurship and innovation amongst its students. Right from the student to faculty member to any staff member, everyone strives to excel and endeavors to achieve perfection to the best of their capabilities. Its salient features are the high-quality teaching and learning process followed that focuses on employability of the students, commitment to research and innovation, close interaction with the industry and peer universities, and value a culture of continuous learning and development.

Dr. Sanjay Viswanathan
Director - SRMIST,
SRM Group of Institutions, G-38, Lajpat Nagar, Part-III,
New Delhi-110024
Email : director@srmup.in, director.ncr@srmist.edu.in

Dean NCR Message

SRM Institute of Science & Technology, Delhi-NCR Campus is one of the premier institutions of India offering quality education in the field of Engineering, Management, Computer Applications, Pharmacy, Hotel and Catering Management and Research. We at SRM IST, strive for innovation and excellence in education, research and consultancy.

SRM IST is accredited by NAAC with the highest 'A++', Category 'A' by MHRD and Category -1 by UGC. Moreover, we are globally diamond rated university by I-Gauge and 4-Star rated by QS Star Rating for Excellence.

SRM strives to achieve excellence in education, research and consultancy with an eye always set for innovation. SRM has highly qualified faculty members who continuously nurture their students and help launch them into their professional careers with complete confidence and zeal. Our students are well-versed in their respective fields of education. Their faculty ensures that they are always updated with the relevant skills that help them embrace all challenges and compete perfectly in the corporate world.

Dr. R. P. Mahapatra
Dean
SRM Institute of Science and Technology,
Delhi-NCR Campus, Ghaziabad, U.P
Email : dean.ncr@srmist.edu.in

Dean Research Message

At SRMIST Delhi NCR Campus, Ghaziabad UP, research is at the heart of innovation, discovery, and societal progress. Our commitment to excellence in research spans across disciplines, fostering an environment where creativity and collaboration thrive.

I invite research collaborations involve partnerships between individuals, institutions, or organizations to conduct joint research projects through Academic Collaborations, Industry-Academia Partnerships, International Collaborations, Interdisciplinary Teams to shape the future.

Our Incubation Centre is designed to nurture young minds, providing the resources, mentorship, and support needed to turn ideas into reality.Whether you have a startup idea, a research-driven project, or a passion for solving real-world challenges, we are here to help you succeed.

Our centre provides cutting-edge infrastructure, mentorship, funding support, and industry connections to help early-stage ventures grow into successful enterprises. We believe in empowering innovators by bridging the gap between research, industry, and market needs.

We offer a vibrant ecosystem and space for incubators and provide collaborations to develop entrepreneurial skills, gain access to funding, industry experts and state-of-the-art infrastructure funded by various Government agencies. From ideation to execution, we guide you through every stage of your entrepreneurial journey.

Join us on this exciting journey of break through research collaborations and innovation with impact for the society!

Prof. (Dr.) A. Geetha Bhavani
Dean Research
SRM Institute of Science and Technology,
Delhi-NCR Campus, Ghaziabad, U.P
Email : dean.research.ncr@srmist.edu.in

HOD Research Message

Research is an integral and crucial component of learning initiatives at SRM Institute of Science and Technology (SRMIST). Since the starting of University, our esteemed and beloved Founder-Chancellor, Dr. T. R. Paarivendhar, diligently emphasized and motivated every member of the SRMIST community to cultivate a research-oriented mindset within our teaching and learning processes. His visionary leadership has enabled us to carve a significant path in our commitment to research, facilitating substantial investments in knowledge resources and empowering us to develop innovative solutions.

Prof. (Dr.) Satya Sai Srikant
Head (Research and Publications)
SRM Institute of Science and Technology,
Delhi-NCR Campus, Modinagar
E-Mail: hod.rp.ncr@srmist.edu.in

RECENT ACTIVITIES AND AWARDS

Dr. Rajendra Prasad Mahapatra

Dr. Satya Sai Srikant

The Institution of Engineers (India) ODISHA STATE CENTRE, BHUBANESWAR is delighted to present the Institution Award to **Dr. Rajendra Prasad Mahapatra and Dr. Satya Sai Srikant** during the 63rd Annual Technical Session & 20th Prof. (Dr.) Bhubaneswar Behera Memorial Lecture held on 23rd March, 2024 in recognition of his outstanding paper titled RECOVERY OF VALUABLE NANO-METALS FROM DISCARDED ELECTRICAL AND ELECTRONICS SAMPLES WITH MICROWAVE ENERGY

Dr. Ankit Sonthalia

DELHI TECHNOLOGICAL UNIVERSITY, Shahbad Daulatpur, Bawana Road, Delhi-110042 Presented COMMENDABLE RESEARCH AWARDS for Excellence in Research to Dr. Ankit Sonthalia, Department of Mechanical Engineering In recognition for the research during the year 2023.

SRM Institute of Science and Technology Delhi NCR Campus, extend our heartfelt congratulations to all the distinguished faculty and researchers who have been recognized with prestigious research awards.

Your unwavering dedication to academic excellence, innovative research, and scholarly contributions has not only brought individual acclaim but has also enhanced the research stature of SRM at national and international levels.
These awards stand as a testimony to your intellectual rigor, persistence, and commitment to pushing the boundaries of knowledge in your respective disciplines.

We take immense pride in your accomplishments and look forward to your continued contributions in transforming ideas into real-world solutions, driving innovation, and mentoring the next generation of researchers.

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INCUBATION CENTRE
SRMIST
DELHI NCR CAMPUS

INCUBATION CENTRE

Welcome to the Incubation Centre - SRMIST Delhi-NCR Campus, a pioneering initiative designed to nurture entrepreneurial talent and catalyze the transformation of innovative ideas into successful ventures. The Incubation Centre serves as a vibrant hub for aspiring entrepreneurs, providing them with the resources, mentorship, and infrastructure necessary to bring their visions to life. Through a carefully crafted ecosystem, we aim to empower the next generation of trailblazers and change-makers, fostering an atmosphere of creativity, collaboration, and growth.

Workshop on Importance of Data Protection and Online Security

The objective of this workshop is to educate and empower participants with the knowledge and skills necessary to protect their personal and professional data online. By the end of the session, attendees will understand the importance of Learn why safeguarding personal and and to recognize the risks associated with data breaches and cyber threats

Empowering MSME's: navigating the future of business in a digital world

The panel discussion aims to explore the opportunities, challenges, and strategies for Micro, Small, and Medium Enterprises (MSMEs) to thrive in an increasingly digital economy. The key objectives were to understand digital transformation and discussing how MSMEs can leverage digital tools, AI, automation, and e-commerce to enhance productivity and competitiveness.

CONGRATULATIONS FOR GRANTING EXTRA MURAL RESEARCH PROJECT

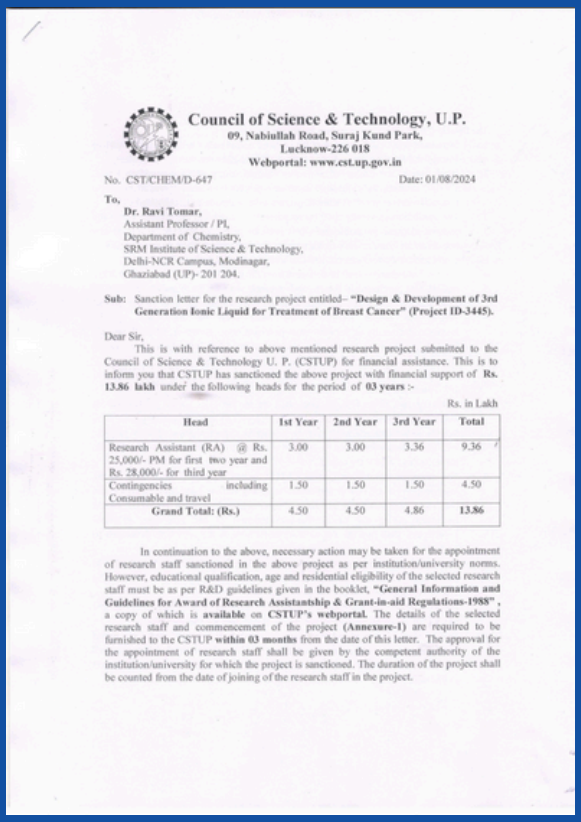
We are proud to recognize and appreciate the unwavering dedication, innovation, and scholarly excellence demonstrated by our faculty members through their ongoing research projects. Your tireless efforts continue to push the boundaries of knowledge and inspire the next generation of researchers.

Your work not only strengthens the academic fabric of our institution but also contributes meaningfully to solving real-world problems across disciplines. Whether through groundbreaking discoveries, impactful publications, or collaborative initiatives, your contributions are a testament to the spirit of inquiry and academic excellence we uphold.

Thank you for your passion, perseverance, and commitment to research excellence. Your achievements make us proud and set a shining example for the entire academic community.

PI: Dr. Ravi Tomar

CO PI: Dr. Garima Panday



Council of Science & Technology, U.P.
09, Nabiullah Road, Suraj Kund Park,
Lucknow-226 018
Webportal: www.cst.up.gov.in

No. CST/CHEM/D-647 Date: 01/08/2024

To,
Dr. Ravi Tomar,
Assistant Professor / PI,
Department of Chemistry,
SRM Institute of Science & Technology,
Delhi-NCR Campus, Modinagar,
Ghaziabad (UP)- 201 204.

Sub: Sanction letter for the research project entitled– **"Design & Development of 3rd Generation Ionic Liquid for Treatment of Breast Cancer" (Project ID-3445).**

Dear Sir,

This is with reference to above mentioned research project submitted to the Council of Science & Technology U. P. (CSTUP) for financial assistance. This is to inform you that CSTUP has sanctioned the above project with financial support of **Rs. 13.86 lakh** under the following heads for the period of **03 years** :-

Rs. in Lakh

Head	1st Year	2nd Year	3rd Year	Total
Research Assistant (RA) @ Rs. 25,000/- PM for first two year and Rs. 28,000/- for third year	3.00	3.00	3.36	9.36
Contingencies including Consumable and travel	1.50	1.50	1.50	4.50
Grand Total: (Rs.)	4.50	4.50	4.86	**13.86**

In continuation to the above, necessary action may be taken for the appointment of research staff sanctioned in the above project as per institution/university norms. However, educational qualification, age and residential eligibility of the selected research staff must be as per R&D guidelines given in the booklet, **"General Information and Guidelines for Award of Research Assistantship & Grant-in-aid Regulations-1988"** , a copy of which is **available** on **CSTUP's webportal**. The details of the selected research staff and commencement of the project **(Annexure-I)** are required to be furnished to the CSTUP **within 03 months** from the date of this letter. The approval for the appointment of research staff shall be given by the competent authority of the institution/university for which the project is sanctioned. The duration of the project shall be counted from the date of joining of the research staff in the project.

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PUBLICATIONS
JULY-DECEMBER
2024

PUBLICATION (JULY 2024)

It is with great pride and admiration that we extend our heartfelt congratulations to all faculty members who have recently achieved success in academic publications in SCI and SCOPUS indexed journals. Your dedication to advancing knowledge and your commitment to research excellence continue to elevate the reputation of our institution.

NAME	TITLE	IF
Dr. Jitendra Kumar	Resource assessment and techno-economic analysis of solar PV integrated hybrid off-grid power generation system: a case study of Krishnanagar, India	4.7
Dr. Jitendra Kumar	Comparative assessment of the performance of a 20kWp Solar photo-voltaic array across five diversified regions of Eastern India	**1.6**
Dr.D.Ganesh Gopal	Artificial Intelligence Based Zero Trust Security Approach for Consumer Industry	4.3
Dr. D. Ganesh Gopal	An improved three factor authentication protocol for wireless body area networks	1.2
Dr. Pallavi Jain	Composite Nanoarchitectonics based on Graphene Oxide in Energy Storage and Conversion: Status, Challenges & Opportunities	4
Dr. Sorabh Chaudhary	Morphological and Pathological Variability of Intra-field Rhizoctonia solani Isolates in a Rice-Potato Rotation and their Sensitivity to Fungicides	2.5
Dr. Rupesh Chalisgaonkar	Investigation and prediction of machining characteristics of aerospace material through WEDM process using machine learning.	2.1
Dr. Sachin Sirohi	Investigation and prediction of machining characteristics of aerospace material through WEDM process using machine learning	1.1
Dr Garima Pandey	Exploring triazole-based drugs: Synthesis, application, FDA approvals, and clinical trial updates–A comprehensive review	2.1
Dr Garima Pandey	Advances in metallopolymers: Synthesis strategies, catalytic insights, and environmental remediation applications	5.5
Dr Vishu VIlaskumar	DNA TRIKKY Based Security Mechanism for Radio Frequency Identification Protocol	3.1
Dr. Kamakshi	Phytochemical investigation, characterisation of methanolic extract of Glycine max seeds using LCMS/MS and in silico studies for wound healing activity	2.3
Dr. Bhawna	Advances in metallopolymers: Synthesis strategies, catalytic insights, and environmental remediation applications	5.5

PUBLICATION (AUGUST 2024)

NAME	TITLE	IF
Dr. Pallavi Jain	An updated review on 1,2,3-/1,2,4-triazoles: synthesis and diverse range of biological potential	3.9
Dr. Pallavi Jain	Analytic and In Silico Methods to Understand the Interactions between Dinotefuran and Haemoglobin	**2.9**
Dr Mudit Prakash Srivastava	Facile Growth of Zinc Oxysulfide Nano Thin Film-based Visible Light Photosensor by Hydrothermal Method	1.8
DR. Rajeev Kumar Sharma	Enhancement of cyber security in IoT based on ant colony optimized artificial neural adaptive Tensor flow	1.1
Dr. Garima Pandey	Computational Insights into Chromene/pyran Derivatives: Molecular Docking, ADMET Studies, DFT Calculations, and MD Simulations as Promising Candidates for Parkinson's Disease	2.3
Oshin Sharma	Adam-Ladybug Beetle Optimization enabled multi-objective service placement strategy in fog computing	1.5
Ravi Tomar	Role of Ionic Liquids as Solvent & Catalyst for Heck and Suzuki Reactions: A Comprehensive Review	2.1
Dr. Ankit Sonthalia	Experimental investigation of ammonia gas as hydrogen carrier in prunus amygdalus dulcis oil fueled compression ignition engine	6.7
Dr. Priyanka Agarwal	A Software Reliability prediction and Management Incorporating Change points based on testing efforts	1.5
Dr. Pushpendra Singh	Sugarcane Diseases Detection using Optimized Convolutional Neural Networks with Enhanced Environment Adaption Method	1.2

PUBLICATION (SEPTEMBER 2024)

NAME	TITLE	IF
Dr. Pallavi Jain	Eutectic Mixtures of APIs: A way to Improve the Physiochemical Properties and Oral Bioavailability of the Drugs	2.1
Dr. Pallavi Jian	Synthesis, Characterization, Biological, ADMET, and Molecular Docking Studies of Transition Metal Complexes of Aminopyridine Schiff Base Derivative	**2.2**
Dr. Pallavi Jain	Exploring Bioinspired Designed DES for Their Acetylene Sensing Capabilities via DFT Calculations and Molecular Dynamics Simulations	1.4
Dr. Sachin Sirohi	Creep and high-temperature tensile deformation behavior of the TIG Welded P92/304L dissimilar steel weld joints	2.2
Dr. Ankit Verma	Fabrication and Compact Modeling of Low-Voltage Flexible Organic TFT Using Self-Assembly of Conductive Polymer Channel Over High-k PMMA/SrZrOx Dielectric	2.9

PUBLICATION (OCTOBER 2024)

NAME	TITLE	IF
Dr. Oshin Sharma	Taylor-based smart flower optimization algorithm with the deep residual network to predict mechanical materials properties	2
Dr. Jitendra Singh	CapsNet-based Precise and Rapid Traffic Sign Detection through AI in Adverse Environmental Scenarios	0.7
Dr. Sachin Sirohi	Advanced ultra super critical power plants: role of buttering layer	2.9
Dr. Sachin Sirohi	Attributes of FSW and UWFSW butt joints of armour grade AA5083 aluminium alloy: Impact of tool pin profile	3.4
Dr. Sachin Sirohi	Effects of welding parameter on the microstructure and mechanical properties of friction stir-welded non-heat treatable alloy AA5083	2.7
Dr. Ravi Tomar	Unveiling the potential: 1, 3-benzodioxole-based ionic liquids as dynamic players against cancer	5.3
Dr. Ravi Tomar	An overview: dinuclear palladium complexes for organic synthesis	4.4
Dr. Pankaj Varshney	Investigation of the enhanced electrochemical performance of a black TiO2/Al2O3/CNT heterostructure for aqueous supercapacitor applications	2.8
Dr. D. Franklin Vinod	Enhanced Multimode DBN for Optimal Classification of Heterogeneous Cancer Images for HealthCare System	1.4
Mr. Amit Kukker	Fuzzy lattices assisted EJAYA Q-learning for automated pulmonary diseases classification	1.3
Dr. Pallavi Jain	Computational Insights for interactions between NsP2 and NsP3 of CHIKV and Hormones through DFT computations and Molecular Dynamics Simulations	2.2
Dr. Vikas Goyat	Investigating the Influence of Thermomechanical Equal Channel Angular Pressing (ECAP) Improved Die on AA-6061	2.2
Dr Gyander Ghangas	Investigating the Influence of Thermomechanical Equal Channel Angular Pressing (ECAP) Improved Die on AA-6061	2.2
Dr. Avneesh Vashistha	A Mathematical Model for Enhancing Cybersecurity in IoT Networks Using LSTM-Based Anomaly Detection and Optimization	1.2

PUBLICATION (DECEMBER-2024)

NAME	TITLE	IF
Dr. Priya Ranjan	Sustainable Machining of Hard to Cut Material Using Bio-mimicked Structured Tool Combined with Nano-green Cutting Fluid	2.2
Dr Pavan Khetrapal	Enhancing the performance of solar-powered EV charging stations using the TOSSI-based CTF technique	**3.3**
Dr. Garima Pandey	Update on Pharmacological Drugs and Macrocyclic Compounds as Corrosion Inhibitors	1.9
Dr. Rajeev Sharma	Reconfigurable data intensive service for low latency cyber-physical systems and IoT communication	1.1
Dr Jayendra Kumar	Formulation And Evaluation of Zinc Oxide Nanocarriers for Antibacterial Activity	0.8
Dr. Pallavi jain	Binding Studies Between Dinotefuran and Bovine Serum Albumin Using Multiple Analytical Approaches	1.9
Dr. Pallavi Jain	Recent progress in the synthesis of C-S bond via sulfonyl hydrazides	2.1
Mr. Sarvendra Kumar	Synthesis of Copper-Coated CuS-Shell Nanoparticle by CBD for Rhodamine Blue Dye Degradation	2.2
Mr. Sarvendra Kumar	Magneto-Optical Studies of Fe3O4-Based Nanomagnetic Fluid	2.2
Dr. Mahesh Kumar Gupta	Computational Analysis of Gold Platinum Nanowires Subjected to Uniaxial Tensile Loading	1

PUBLICATION (NOVEMBER 2024)

NAME	TITLE	IF
Dr. Santosh Kumar Rai	A comprehensive overview of advancements, applications, and impact of Supercritical fluid natural circulation loops	1.9
Mr. Peeyush Kala	Advancements in Multilevel Inverters for Efficient Harnessing of Renewable Energy: A Comprehensive Review and Application Analysis	**3.4**
Mr. Sarvendra Kumar	Synthesis of ZnO nanostructure via CBD and solvothermal method using seed technique	2.3
Dr. Kalpana Patel	Aerosol type classification and its temporal distribution in Kanpur using ground-based remote sensing	1.8
Dr. Kalpana Patel	Study of the Correlation between Angstrom Exponent and Fine Mode Fraction in the Indo-Gangetic Plain Using Ground-Based Remote Sensing AERONET Data	2.2
Dr. Piyush Gupta	Comprehensive Review of Fly Ash: Environmental Impact and Applications	1.3
Dr. Satya Sai Srikant	Judicious combinations of gravity, magnetic, electrostatic separators and microwave heat energy on recovery of ilmenite from Humma lean grade beach placer deposit	0.9
Dr. Satya Sai Srikant	An investigation of radio over fiber link in terms of Q-Factor for the used photonic modulator over dispersive medium	1.4
Dr. Saptarshi Gupta	An investigation of radio over fiber link in terms of Q-Factor for the used photonic modulator over dispersive medium	1.1
Dr. Jhalak Gupta	Green chemistry approach for the synthesis of CrxCu1-xO nanoparticles :An investigation of the structural and dielectric properties	5.8
Dr. Jhalak Gupta	Influence of Ni doping on microstructural, optical and dielectric properties of lanthanum-based chromite	2.8
Dr. D. Ganesh Gopal	Performance Optimization and Link Reliability in Wireless Body Area Networks	1.2
Dr. Pallavi Jain	A multifaceted approach to investigate interactions of thifluzamide with haemoglobin	7.7
Dr. Garima Pandey	Investigate the binding of pesticides with TLR4 receptor protein found in mammals and zebrafish using molecular docking and molecular dynamics simulations	3.8

PUBLICATION (DECEMBER-2024)

NAME	TITLE	IF
Dr. Jhalak Gupta	**Frontiers in metal–organic frameworks: innovative nanomaterials for next-generation supercapacitors**	**23.2**
Dr. Vikas Goyat	Combinatorial Method for Quality Improvement of the Thrust Plate– A Case Study	NA
Dr. Vikas Goyat	Himalayan Sheep Wool Reinforced Composite- A Novel Sustainable Material for Future	1.1
Dr. Sachin sirohi	Microstructure degradation and creep failure study of the dissimilar metal welded joint of heat resistant steel and Inconel 617 alloy tested at 650 C and applied stress range of 100-150 MPa	3
Dr. Sachin sirohi	Microstructural and mechanical investigation of dissimilar U-groove weld of IN 718/ASS 304L employing ERNiCr-3 filler	2.7
Dr. Ajay Singh Yadav	Fair-AutoML : Enhancing fairness in machine learning predicton through automated machine learning and bias mitigatipn techniques	1.2
Dr. Ajay Singh Yadav	Enhancing depression detection in social media using firefly and bee colony optimized support vector machines: A novel machine learning approach	1.6
Dr. Ajay Singh Yadav	Theoretical optimization of group size in group normalization for enhanced deep neural network training	1.3
Dr. Giraja Shankar Chaurasia	An optimized controller for novel asymmetrical 51-level inverter in hybrid solar and wing turbine-connected power system	1.8
Dr. Alok Pratap Singh	Enhanced Neuroprotection in Experiment Multiple Sclerosis through Combined Rosiglitazone and Probiotic-Loaded Solid Lipid Nanoparticles: Modulation of Cellular Signaling Pathways	2.6
Dr. Amit Kukker	Short-Term Electricity Price Forecasting Using the Empirical Mode Decomposed Hilbert-LSTM and Wavelet-LSTM Models	1.5

Thank you for your perseverance and scholarly excellence. We look forward to celebrating many more of your achievements in the future.

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PATENTS

JULY-DECEMBER 2024

PATENTS

We are proud to celebrate the remarkable accomplishments of our esteemed faculty members for their recent success in granting the patents. Your dedication to innovative research, relentless pursuit of knowledge, and commitment to solving real-world challenges through technology and invention have brought great prestige to our institution.

NAME	TITLE	DEPARTMENT
Dr. D. Ganesh Gopal	Blockchain-Based Personalized Medicine Platform With Iot-Enabled Genomic Data Collection And Analysis	CSE
Dr. Sarvendra Kumar	Emission Power Plant Using Renewable Energy Sourcescollection And Analysis	PHYSICS
Mr. Parbhat Gupta	Wireless Medical Appliance Controlling Device	CSE
Dr. Aditya Agarwal	Ml Based Solar Energy Management Device	ECE
Ms. Gurpreet Kour Khalsa	Machine Learning-driven Intrusion Detection System for Secure Wireless Networks using Blockchain	CSE
Dr. Atulya Gupta	Machine Learning-Driven Intrusion Detection System For Secure Wireless Networks Using Blockchain	CSE
Ms. Rupam kumari	Machine Learning-driven Intrusion Detection System for Secure Wireless Networks using Blockchain	CSE
Ms. Ghazala Ansari	Iot Based Air Quality Checking Device	ECE
Dr. Jitendar Singh	10t Device Network Security Management System Using Edge Computing	CSE
Mr. Kuwar Pratap Singh	Ai Based Consumer Behaviour Prediction Device	CSE
Dr. Dinesh Kumar	Virtual Reality Based Educational Device	CSE
Dr. Abhilasha Singh	Ai Based Smart Water Purifier	CSE
Ms. Ghazala Ansari	Ai And Image Processing Based Stroke Disease Prediction Device	ECE

PATENTS

NAME	TITLE	IF
Mr. Peeyush Kala	Three-phase Multilevel inverter System and Method There of	EEE
Dr. Pushpendra Singh	Deep Brain Neurostimator	CSE
Dr. Dineesh Kumar	Deep Brain Neurostimator	CSE
Dr. Atulya Gupta	Ai Based Voice To Text Conversin Device	CSE

The move toward technology transfer not only reflects the strength and relevance of your work but also sets a shining example of how academic research can drive industry partnerships, foster entrepreneurship, and contribute to national development. It is a proud moment for our institution to witness such meaningful outcomes emerging from within our research community.

This milestone marks a remarkable transition from innovative research to impactful implementation, demonstrating the true potential of academic excellence translating into societal benefit. Your dedication to developing technologies that address real-world challenges exemplifies the highest standards of research and innovation.

We applaud your perseverance, creativity, and vision, and we look forward to seeing your technologies create tangible value across industries and communities. May this success be the first of many more impactful contributions to come.

Thank you for your pioneering contributions and for inspiring future generations of researchers and innovators. We look forward to many more milestones together!

MEMORANDUM OF UNDERSTANDING (MOU)

JULY-DECEMBER 2024

Memorandum of Understanding (MOU)

We thank you for collaborating partners and are thrilled to announce and celebrate the successful signing of a Memorandum of Understanding (MoU) between SRMIST Delhi NCR Campus and following industries played significant milestone to start a new chapter of collaboration, innovation, and shared growth.

A heartfelt congratulations to our dedicated faculty members whose hard work, vision, and commitment made this achievement possible. Your efforts continue to strengthen our academic and research ties globally, opening new doors for joint projects, student exchange programs, and groundbreaking discoveries.

ORGANIZATION WITH WHICH MOU IS SIGNED	SCOPE AND PURPOSE OF MOU	SIGNING DATE	DURATION
Heredity Life Science Pvt Ltd **N6**/448, **Jayadv** Vihar, Bhubaneswar-751010	Offer internship program to students of SRMIST, Delhi NCR Campus Ghaziabad.	**09/10/202**	**5 YEARS**
Richesm HealthcareLtd 154, 1st Floor, Wave Silver Tower A, Sector 18, Noida-201301	• Offer internship program to students of SRMIST, Delhi NCR Campus Ghaziabad. • To organize Industrial Training Programs • Industrial visit to Richesm Healthcare Ltd. • To provide guest lectures for students/ faculty.	11.07.2 024	**5 YEARS**
Business Onscreen Media LLP	Offer internship program to students of SRMIST, Delhi NCR Campus Ghaziabad.	26-April-2024	**1 year**
Shavash International	Offer internship program to students of SRMIST, Delhi NCR Campus Ghaziabad.	29-March-2024	**5 Years**
Universetas Trisakti, Indonesia	Offer internship program to students of SRMIST, Delhi NCR Campus Ghaziabad.	19-February-2024	**14SBD2024**
Vijyaa Soft Technologies	Offer internship program to students of SRMIST, Delhi NCR Campus Ghaziabad.	4-April-2024	**5 Years**

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INCENTIVES

JULY-DECEMBER 2024

In recognition of your achievements and unwavering dedication. Your commitment and hard work have set a standard of excellence, and we are honored to celebrate your accomplishments.

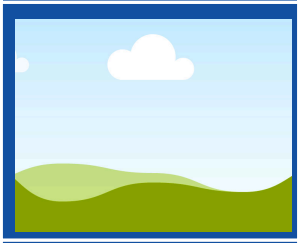
INCENTIVES-2024

We are thrilled to extend our heartfelt congratulations to each of you who have received incentives for your recent publications and patents.

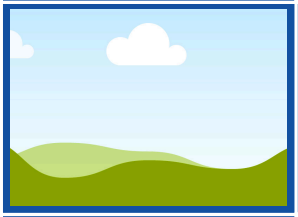
Your dedication to scholarly excellence and commitment to advancing knowledge through high-quality research is truly commendable. These incentives are not just a recognition of your hard work, but also a testament to the important contributions you continue to make to your fields and to our SRMIST family.

FACULTY	NAME
	DR. KAMAKSHI BIOLOGY
	DR. PIYUSH GUPTA CHEMISTRY
	DR. GARIMA PANDEY CHEMISTRY
	DR.PALLAVI JAIN CHEMISTRY
	DR. RAVI TOMAR CHEMISTRY
	DR. MAHESH KUMAR GUPTA ME

FACULTY	NAME
	DR. ALOK PRATAP SINGH PHARMACY
	DR. JAYENDRA KUMAR PHARMACY
	DR. RAJEEV SHARMA MCA
	DR. VISHU VILASKUMAR MCA
	DR. RUPESH CHALISGAONKAR ME
	DR. VIKAS GOYAT ME

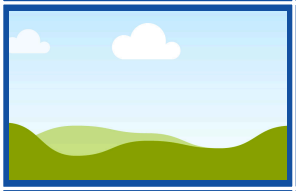
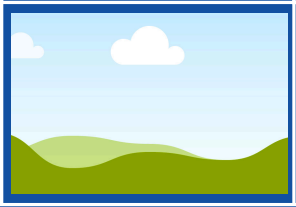
FACULTY	NAME
	DR. SACHIN SIROHI ME
	DR. PRIYA RANJAN ME
	DR GYANDER GHANGAS ME
	DR. PAVAN KHETRAPAL EEE
	MR. PEEYUSH KALA EEE
	DR. GIRAJA SHANKAR CHAURASIA EEE
	DR. SATYA SAI SRIKANT ECE

FACULTY	NAME
	DR. JHALAK GUPTA PHYSICS
	DR. KALPANA PATEL PHYSICS
	DR. PANKAJ VARSHNEY PHYSICS
	DR. MUDIT PRAKASH SRIVASTAVA PHYSICS
	MR. SARVENDRA KUMAR PHYSICS
	DR. AJAY SINGH YADAV MATHEMATICS
	DR. PRIYANKA AGARWAL MATHEMATICS

FACULTY	NAME
	DR. SAPTARSHI GUPTA ECE
	MS. GHAZALA ANSARI ECE
	DR. M. VINOTH KUMAR ECE
	DR. ANKIT VERMA ECE
	DR. ADITYA AGARWAL ECE
	DR. ANKIT SONTHALIA AE
	DR. D. FRANKLIN VINOD CSE
	DR. ATULYA GUPTA CSE

FACULTY	NAME
	DR. JITENDRA KUMAR CSE
	MR. SAURABH GUPTA CSE
	DR. D. GANESH GOPAL CSE
	DR. CHIRANJIT DUTTA CSE
	DR. AMIT KUKKER CSE
	DR. PUSHPENDRA SINGH CSE
	DR. DINEESH KUMAR CSE
	MR.PARBHAT GUPTA CSE

FACULTY	NAME
	DR. AVNEESH VASHISTHA CSE
	DR. NIRANJAN LAL CSE
	DR. OSHIN SHARMA CSE
	DR. ABHILASHA SINGH CSE

FACULTY	NAME
	MR. KUWAR PRATAP SINGH CSE
	MS. RUPAM KUMARI CSE
	MS. GURPREET KAUR KHALSA CSE

SRMIST is deeply committed to "translating knowledge into action through strategic research and innovation policies." This achievement stands as a shining example of that vision in practice. Your contribution demonstrates how academic ingenuity, when supported by a robust institutional framework, can yield solutions that serve industry, healthcare, agriculture, energy, and other critical sectors.

As your technologies progress toward real-time use, they represent more than innovation — they represent SRM's promise to contribute meaningfully to national development, global competitiveness, and community betterment.

We sincerely commend your dedication, perseverance, and pioneering spirit. This milestone is a proud moment for the entire SRM community and an inspiration to all researchers and students striving to make a difference.

Wishing you continued success in your research journey and many more milestones ahead.

Indian Knowledge System - Traditional Research

'Tamaso Mā Jyotir Gamaya' Source: *Bṛhadāraṇyaka Upaniṣad* (1.3.28), **Translation:** "*Lead me from darkness to light.*"

The Indian Knowledge System (IKS) offers a rich and nuanced perspective on traditional research, deeply rooted in centuries of intellectual, scientific, and cultural inquiry. Far from being static or purely spiritual, IKS embodies a dynamic tradition of empirical observation, logical reasoning, and holistic understanding. The Indian Knowledge System (IKS) offers a distinctive perspective on research ethics, intertwining ancient philosophical principles with contemporary scientific practices. Here's an overview of how IKS informs ethical research.

Core Principles of Traditional Research in IKS

1. **Empirical and Rational Inquiry**

IKS emphasizes a scientific approach grounded in observation (pratyakṣa), inference (anumāna), and authoritative testimony (śabda). Disciplines such as astronomy, mathematics, metallurgy, and medicine were developed through systematic experimentation and critical analysis. For instance, ancient Indian texts like the Sulba Sūtras demonstrate advanced geometric knowledge applied to altar constructions.

2. Integration of Knowledge and Ethics

Research within IKS is not solely about acquiring knowledge but also about ethical application. Fields like Ayurveda and Yoga intertwine scientific understanding with moral and spiritual dimensions, aiming for the well-being of individuals and society. This holistic approach ensures that knowledge serves a greater purpose beyond mere intellectual pursuit.

3. Oral Tradition and Community-Based Validation

Traditional research methods often relied on oral transmission and community validation. Knowledge was preserved and refined through generations via storytelling, apprenticeships, and communal practices. This collective approach ensured that research remained relevant and adapted to the community's needs.

1. Epistemological Foundations: Pramāṇa and Ethical Inquiry

In IKS, knowledge acquisition is guided by the concept of pramāṇa, or valid means of knowledge. The Nyāya school, for instance, identifies four primary pramāṇas:

Pratyakṣa (Perception): Direct sensory experience.

Anumāna (Inference): Logical reasoning based on observed patterns.

Upamāna (Comparison): Drawing analogies to understand unfamiliar concepts.

Śabda (Testimony): Relying on the words of trustworthy and knowledgeable sources. These methods emphasize the importance of rigorous validation and the ethical responsibility to seek truth through reliable means.

2. Cognitive Justice: Valuing Diverse Knowledge Systems

The principle of cognitive justice, introduced by Indian scholar Shiv Visvanathan, advocates for the equal recognition of diverse knowledge systems. It challenges the dominance of Western scientific paradigms and underscores the ethical imperative to respect and integrate indigenous and traditional knowledge into mainstream research.

3. Safeguarding Traditional Knowledge: The Role of TKDL

India's Traditional Knowledge Digital Library (TKDL) serves as a repository to document and protect traditional medicinal knowledge. By cataloging formulations from Ayurveda, Unani, Siddha, and Yoga, the TKDL prevents biopiracy and unethical patenting of indigenous knowledge. This initiative reflects an ethical commitment to preserving communal intellectual heritage and ensuring its rightful attribution.

4. Contemporary Ethical Practices in Indian Research

Modern Indian research institutions have adopted stringent measures to uphold research integrity:

Plagiarism Checks: The University Grants Commission (UGC) mandates the use of tools like Turnitin and iThenticate to detect plagiarism, allowing a maximum of 10% similarity.

Open Access Repositories: Theses and dissertations are uploaded to ShodhGanga, promoting transparency and wider dissemination of research. These practices align with traditional IKS values of honesty, transparency, and respect for knowledge.

5. Integrating IKS into Modern Education and Research

Institutions in Indian aim to bridge ancient wisdom with contemporary education. By incorporating IKS principles into curricula, they foster a holistic understanding of ethics, emphasizing the interconnectedness of knowledge, culture, and morality. IKS offers valuable insights for modern research, especially in areas like sustainable agriculture, holistic health, and ethical governance. By integrating traditional knowledge systems with contemporary scientific methods, researchers can develop solutions that are both innovative and culturally resonant.

Integrating the Indian Knowledge System (IKS) into modern research

Integrating the IKS into modern research enriches scientific inquiry with holistic, sustainable, and culturally grounded perspectives. This integration aligns with India's National Education Policy (NEP) 2020, which emphasizes incorporating IKS into education and research to foster innovation and self-reliance

Key Areas of Integration

1. Higher Education and Curriculum Development

Institutions like Jawaharlal Nehru University (JNU) are embedding IKS into curricula across disciplines. For example, political science courses now include ancient thinkers like Kautilya, while botany integrates Ayurvedic principles. This approach promotes interdisciplinary learning and acknowledges India's intellectual heritage.

2. Scientific and Technological Research

Research centers are exploring the application of IKS in modern science and technology. For instance, the study of Vāstu Śāstra informs sustainable architectural practices, and ancient metallurgical knowledge inspires innovations in materials science.

3. Protection and Utilization of Traditional Knowledge

The Traditional Knowledge Digital Library (TKDL) safeguards India's traditional medicinal knowledge by documenting it in multiple languages, preventing biopiracy, and facilitating research.

4. Economic Development through MSMEs

Micro, Small, and Medium Enterprises (MSMEs) are leveraging IKS to create unique products. For example, Varanasi's handloom sector has revitalized traditional weaving techniques, and Ayurvedic wellness MSMEs in Kerala are blending traditional practices with modern business models.

5. Educational Reforms and Skill Development

Educational institutions are incorporating IKS into teaching methodologies. The National Institute of Ayurveda (NIA) in Jaipur has modernized its curriculum to include contemporary scientific methods alongside traditional Ayurvedic practices, preparing graduates for global healthcare roles.

Benefits of Integrating IKS

Sustainability: IKS emphasizes harmony with nature, offering eco-friendly solutions in agriculture, architecture, and healthcare.

Cultural Preservation: Integrating IKS helps preserve and promote India's rich cultural heritage.

Innovation: Blending traditional knowledge with modern research fosters innovation and new perspectives.

Economic Growth: IKS-based industries and MSMEs contribute to economic development and job creation.

Incorporating the Indian Knowledge System into modern research not only enriches scientific endeavors but also fosters a more inclusive, sustainable, and culturally resonant approach to innovation and development.

"Āno Bhadraḥ Kṛtavo Yantu Viśvataḥ" Source: Ṛgveda (1.89.1), Translation: "Let noble thoughts come to us from all directions."

-Prof. (Dr.) A. Geetha Bhavani

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