

सरदार वल्लभभाई राष्ट्रीय प्रौद्योगिकी संस्थान, सूरत
SARDAR VALLABHBHAI NATIONAL INSTITUTE OF
TECHNOLOGY, SURAT

NEWSLETTER
April 2023 to March 2024

RESEARCH AND CONSULTANCY



Office of the Dean(R&C)
old computer Dept.



0261-2201134/35



dean_rnc@svnit.ac.in



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DIRECTOR'S MESSAGE

Prof. (Dr.) Anupam Shukla



I am happy to introduce you to this publication of the Research and Consultancy (R&C) newsletter by the Research & Consultancy Cell of SVNIT, Surat. The Research & Consultancy Cell at SVNIT is the central hub for all research activities conducted by the various departments of the institute.

This newsletter aims to offer potential future faculty and other stakeholders, a comprehensive insight into the Institute's research and development initiatives, showcasing its commitment to becoming a renowned institution of academic excellence worldwide. This would also be a great way to highlight the achievements of our faculty members who have made significant contributions, while also providing inspiration to continue promoting innovative, progressive, and socially meaningful research.

In this newsletter, we highlight our outstanding research capabilities and the significant impact we have had over the years. Thus, this publication is highly valuable to both the Institute and the industry and research laboratories. It offers essential information on the research capabilities of the Institute, allowing them to efficiently utilise the research services provided.

I hereby express my appreciation to all the faculty members for their efforts in sharing the research activities of SVNIT with all the stakeholders through this initiative. I hope that the research findings of SVNIT reach a wide audience, including academic institutions, research institutions, and industries both in India and abroad. I would like to extend my congratulations to the Dean (R&C) and his team for their efforts in creating this document. I am eager to see future updates of this publication.



ABOUT

The Office of the Dean R&C has been set up with an objective to extend support and to encourage the faculty to accelerate the research activities in the institute. The Office of the Dean R&C offers administrative support and guidance to all Research & Consultancy activities in the institute and maintains complete records of Sponsored Research Projects and Consultancy Assignments by implementation of related guidelines set by the institute. To facilitate and coordinate all research and development activities is the primary aim of the office. The office renders the assistance to ASHINE activities for start-up/incubation and documenting outside world activities through signing MOU's. To facilitate faculty members for their efforts in enhancing research goals and solving societal issues in the form of consultancies for processing documents, keeping data record and further pushing for financial settlement of grant/consultancy amount. Moreover this office aims to establish IPR Cell for converting research innovations into patents and thereby creating mechanism for increasing IRG of the institute.

MESSAGE

It gives me great pleasure to write this message for the Annual Newsletter of the Dean (Research & Consultancy) at the institute. SVNIT is committed to fostering a culture of excellence, innovation, and collaboration in research and consultancy. As the Dean R&C, I am committed to leading our efforts in transforming ideas into impactful solutions.

"Research is to see what everybody else has seen and to think what nobody else has thought." - Albert Szent-Györgyi

This quote perfectly encapsulates our vision at SVNIT. We strive to push the boundaries of knowledge and creativity, exploring uncharted territories to address the complex challenges of our world.

Our dedicated faculty and talented students are at the forefront of cutting-edge research across a multitude of disciplines, from engineering and technology to social sciences and humanities. Our consultancy services are designed to harness our academic expertise and state-of-the-art infrastructure to provide innovative solutions for industry and society. We collaborate with industries, government agencies, and non-profit organizations, delivering high-quality, actionable insights and services that drive progress and development.

It is often said that diagrams and pictures convey information more effectively than words. For engineers, statistics hold a similar power, often speaking louder than detailed descriptions. The meticulously compiled statistics in this letter affirm this notion. They reflect the hard work, dedication, and academic excellence of the SVNIT faculty members. The impressive volume of consultancy assignments, the number and quality of sponsored research projects, the patents, and design registrations achieved—all serve as a testament to the overall brilliance of the faculty.

Let us unite in our efforts to transform SVNIT into a center of groundbreaking research and a shining example of academic and professional excellence.



Prof. Jigisha K. Parikh
Dean (Research & Consultancy)

E Mail Id: dean_rnc@svn timer.ac.in

Contact No. 0261-2201135

CURRENT CORE TEAM



ASSOCIATE DEAN (R & C)-IPR

Dr. Piyush N. Patel

E Mail Id: adean_rnc-ipr@svnit.ac.in

Contact No. 0261-2201135

Responsibility: Establishment of the IPR Cell, IPR (Patents, Copyrights, Design Registration etc.) related activities, MoUs, CIDER, ICSRB & ASHINE, Research Park and SSIP related activities and closing-on the Seed Grant Phase – I.



ASSOCIATE DEAN (R & C)-CRP

Dr. Namrata Jariwala

E Mail Id: adean_rnc-CRP@svnit.ac.in

Contact No. 0261-2201135

Responsibility: The consultancy projects from initial registration to final completion, including status monitoring, dispute resolution etc. Unnat Bharat Abhiyan, all receipt, GST, Tax deduction, settlement with CA, all bank account reconciliation.



ASSOCIATE DEAN (R & C)-SRP

Dr. Manish K. Rathod

E Mail Id: adean_rnc-SRP@svnit.ac.in

Contact No. 0261-2201135

Responsibility: All the activities related to the Sponsored Research Projects – registration, the administrative content of sponsored project proposals, budgetary estimates, actual project sanctions, progress reports, utilization statuses, completion certificates, POH distribution, Physical Stock Verification on project closure etc. RnC Website, Calendar, Newsletter and other publicity related matters of the Dean (R&C) office, Seed Grants to the Assistant Professors, Phase – II.

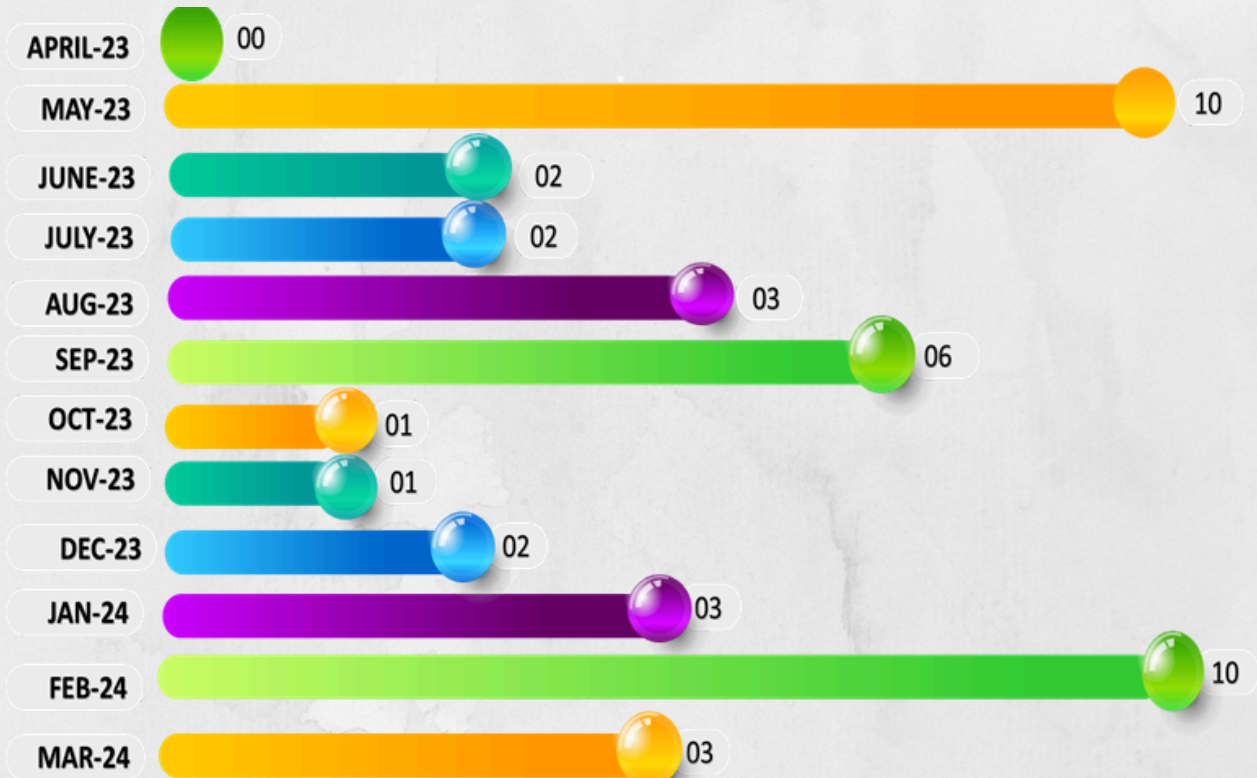
SPONSORED RESEARCH PROJECT

The SVNIT, Surat places a significant amount of importance on sponsored research, collaborative research funded by National and International agencies, and strong industrial contact. The institution features state-of-the-art labs and the necessary equipment to back up its research. Sponsored research has become a significant contributor to the development of infrastructure and enhancement of facilities in various emerging technology domains. The details of sponsored research project during April 2023-March 2024 is as follows.

Month	No. of Projects Submitted	Proposed Amount	No. of Project Sanctioned	Sanctioned Amount
April	13	Rs.10,41,09,556	00	Rs. 00
May	04	Rs. 68,92,000	10	Rs. 1,71,58,716
June	14	Rs. 3,91,48,459	02	Rs. 27,74,800
July	06	Rs. 6,76,24,549	02	Rs. 31,13,580
August	13	Rs. 2,02,26,576	03	Rs.1,45,69,994
September	22	Rs. 54,66,77,655	06	Rs. 62,70,000
October	08	Rs. 3,20,45,575	01	Rs.20,00,000
November	09	Rs. 3,31,59,830	01	Rs.26,80,000
December	10	Rs. 2,21,28,743	02	Rs. 7,30,000
January	26	Rs. 9,02,14,294	03	Rs.1,24,72,818
February	15	Rs. 9,43,49,555	10	Rs. ,2,95,42,729
March	07	Rs. 18,37,80,364	03	Rs.89,33,194

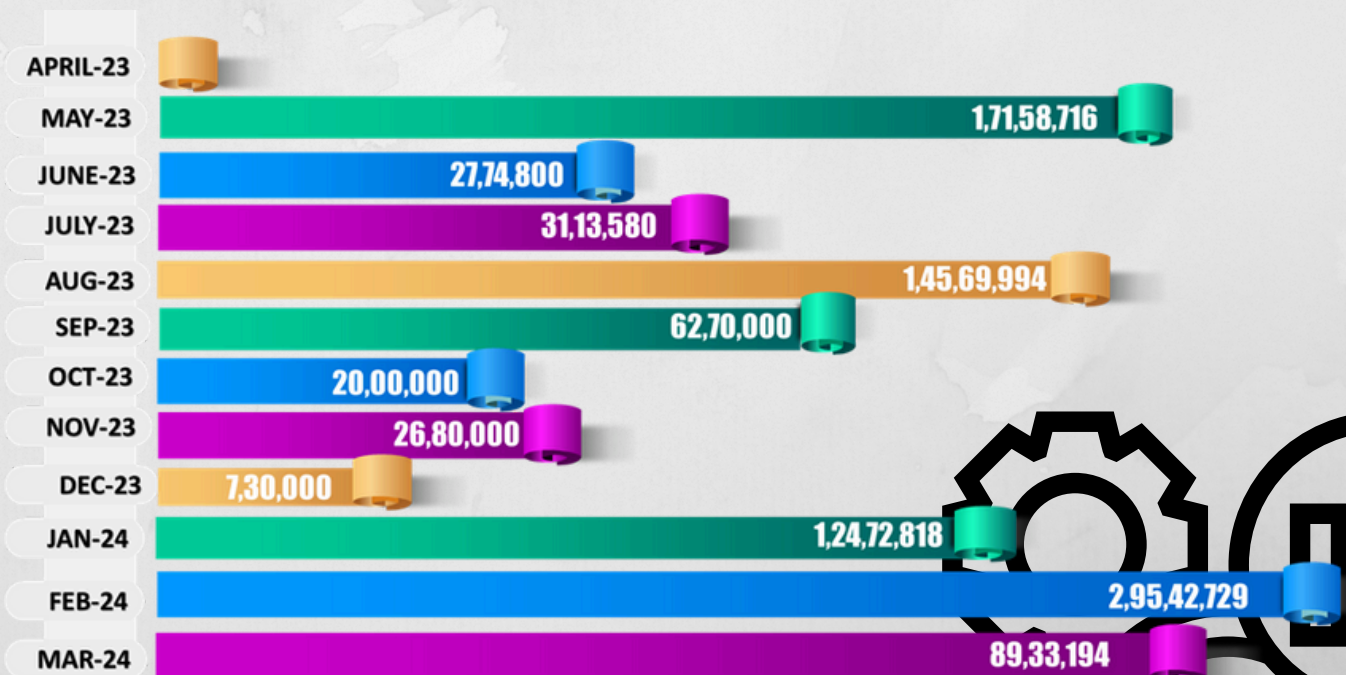
SPONSORED RESEARCH PROJECT

SANCTIONED PROJECTS



F.Y. 2023-24

SANCTIONED AMOUNTS



F.Y. 2023-24

SPONSORED RESEARCH PROJECT

Sr. No.	Research Project Title	Name of PI/Co-PI	Agency	Sanctioned Amount
1	Combustion Dynamics of Rocket Engine and its active Control using high energy plasma Discharge for phase desynchronization	Dr. Nikhil Baraiya	ISRO	Rs. 19,50,000
2	Polarization Tunable Circularly Polarized Antenna with Graphene for Ka band Applications	Dr. Shilpi Gupta Durga Prasad (Student)	ISRO	Rs. 71,500
3	Development of Fuel flexible combustor operating at high-Pressure for optimum emissions and combustion dynamics	Dr. Rupesh D. Shah Dr. Baraiya Nikhil Ashokbhai	SERB	Rs. 35,89,696
4	On-board image compression Algorithms with locally adjustment quality using FPGA	Dr. A. D. Darji Dr. Amit Joshi (MNIT, Jaipur)	ISRO	Rs.18,62,920
5	Development of a Novel Tapered Variable Channel Width Microchannel Heat Sink for Futuristic High-End Microelectronics Cooling	Dr. Jyotirmay Banerjee Dr. Hemant Kumar B Mehta	GUJCOST	Rs .14,20,000
6	Development of Ink-Printed Flexible Solar Cell with Antimony based Nanostructured Perovskite using Slot-Die Coating	Dr. Vipul Amirbhai Kheraj Dr. A. K. Panchal (EED)	GUJCOST	Rs. 22,40,200
7	Low cost selective power deposition process for 3D printing of Metal/ Ceramic composite for Industrial Applications	Dr. Harshit K. Dave Dr. K. P. Desai	GUJCOST	Rs. 33,77,200
8	Design and Development of Active Green House Solar Dryer for Potential Food Products	Dr. Vikram P. Ratod Dr. Vimal K. Patel	GUJCOST	Rs.11,16

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SPONSORED RESEARCH PROJECT

Sr. No.	Research Project Title	Name of PI/Co-PI	Agency	Sanctioned Amount
9	Hydrogel Promoted Transdermal Permeation Anti-Cancer Drug for the Breast Cancer Treatment	Dr. Naved I Malek Dr. Sugam Kumar (BARC)	UGC-DAE-CSR	Rs. 45,000
10	Development of Noise Prediction Model and Mitigation Strategies for Highway Passing through Residential Areas using Natural Vegetation Barrier	Dr. B.N. Tandel Dr. G.J. Joshi	GUJCOST	Rs. 14,86,200
11	Design, Development and techo-economic evaluatin of humidification dehumidification desalination system assited by solar driven heat pump for sustainable water recovery from RO reject of textile industry in land-lock region of Surat City	Dr. P V Bhale Dr. Rohan Pande	SERB	Rs. 24,94,800
12	Making Village groundwater Visible: Outscaling MARVI	Dr. J.N.Patel +investigatoers from WSU Australia and other institute of india	Austrailia India Institute, Australia	Rs. 2,80,000
13	Proposal for a Novel Hybrid PCM-based heat sink coupled with heat pipe for efficient thermal management of electronic systems	Dr. Jyotimay Banerjee Dr. Naresh Yarramsetty	SERB	Rs. 28,70,340
14	Amphiphilic Hydrogel Formulation as Emerging Templates in Drug Delivery Systems	Dr. Ketan C. Kruperkar	UGC-DAE-CSR	Rs.2,43,240
15	Enhancing Cultural Resilience of the third-generation diaspora through digital Technology and Storytrlling of India Tangible & Intangible Heritage	Dr. Dilip A. Patel Dr. Gayatri Vyas Dr. Maria Cerreta (univ. DEGLI studi di federcoll) Dr. Gabriella Epsoste De Vita	Ministry of Education (Research Collaborati on SPARC (IIT Kharagpur)	Rs. 55,19,994

SPONSORED RESEARCH PROJECT

Sr. No.	Research Project Title	Name of PI/Co-PI	Agency	Sanctioned Amount
16	Drone Multi Model video & quatitative data warehouse mangment for precision famming	Dr. Dipti P. Rana Dr. A.D. Darji Dr. Suresh Dahiya	Ministry of electronics and Information Technology (Meity)	Rs. 2,50,000
17	FIST - 2022	Dr. Ashish K. Panchal Dr. Aeidapu Mahesh Dr. Sanjay Tolani Dr. Sushnigdha Gangiredy Dr. Suresh Lakhimsetty	DST	Rs. 88,00,000
18	Role of rotating Magnetic field in the Microwave-induced Plasma source for clean energy: Directed motion and controlled energy distribution of charged particles	Dr. Shail Pandey Dr. Himanshu Pandey	CSIR	Rs. 7,70,000
19	Design and Febrication of BiOI-based Indoor Photovoltaic Devices for Development of Self-Powered IoT Ecosystems	Dr. Vivek Garg Dr. Deepak Joshi Dr. Nithi Chatterji Dr. Abhishek Acharya	I-HUB Divyasampark IIT Roorkee	Rs. 11,00,000
20	Lead free Perovskite Indoor/Outdoor Solar Cell Design for Self-Sustainable Cyber Physical System Design: Bandgap Engineering and Cell Fabrication	Dr. Shivendra Yadav	I-HUB Divyasampark IIT Roorkee	Rs. 11,00,000
21	Machine Learning based mobile Application for Early Shrimp Disease Diagnosis in Aquaculture	Dr. Kamal Captain Dr. Deepak Joshi Dr. Suman Deb	I-HUB Divyasampark IIT Roorkee	Rs. 11,00,000
22	Design fabrication and characterization of optimized 2D -material SOT-MTJ for Energy Efficient Embedded Non Volatile Memory Application	Dr. Abhishek Acharya Dr. Deepak Joshi Dr. Vivek Garg Dr. Suman Deb Dr. Shashidhara M	I-HUB Divyasampark IIT Roorkee	Rs. 11,00,000

SPONSORED RESEARCH PROJECT

Sr. No.	Research Project Title	Name of PI/Co-PI	Agency	Sanctioned Amount
23	Development of a Speech Based Mobile Application for Lung Disease Detection	Dr. Suman Deb Dr. Deepak Joshi, Dr. Abhishek Acharya Dr. Kamal Captain	I-HUB Divyasampark IIT Roorkee	Rs. 11,00,000
24	iHUB Surat Supported by iHUB Divya Sampark	Dr. Deepak Joshi	I-HUB Divyasampark IIT Roorkee	Rs. 20,00,000
25	Various Decay Mechanism of Super Heavy Elements Using energy density functional theory	Dr. Rajni Sunil Kumar Dr. A.K.Rai (Mentor)	DST	Rs. 26,80,000
26	Compact Formation based swarming drone for coordinated surveying	Dr. Raghavendra Pal Dr. Suresh Dahiya Dr. Dipti Rana (DOCSE) Dr, Anand D. Darji	MEITY	Rs. 2,50,000
27	Pilot Scale Development of Greywater treatment system by using constructed wetland technique for student hostel/ residential tower	Dr. Kunwar Durg Vijay Singh Yadav	Gujarat EnVIRONMENT MANAGEMENT INSTITUTE (GEMI)	Rs. 4,80,000
28	Packet capture (pPCAP) and internal protocol data record (IPDR) analysis tool for App identification and activity graph generation using artificial analysis and machine learning	Dr. Raghavendra Pal Dr. Suresh Dahiya	Anti- terrorist Squad, gujarat	Rs. 2,50,000
29	Design and Development of sustainable Light-weight, Cost-effective Biochor-polymer based composites as electromagnetic shields for preventing the hazardous EMI effects in different Electromagnetic environments	Dr. Kirti Inamdar Dr. P. V. bhale	SERB	Rs. 26,22,818

SPONSORED RESEARCH PROJECT

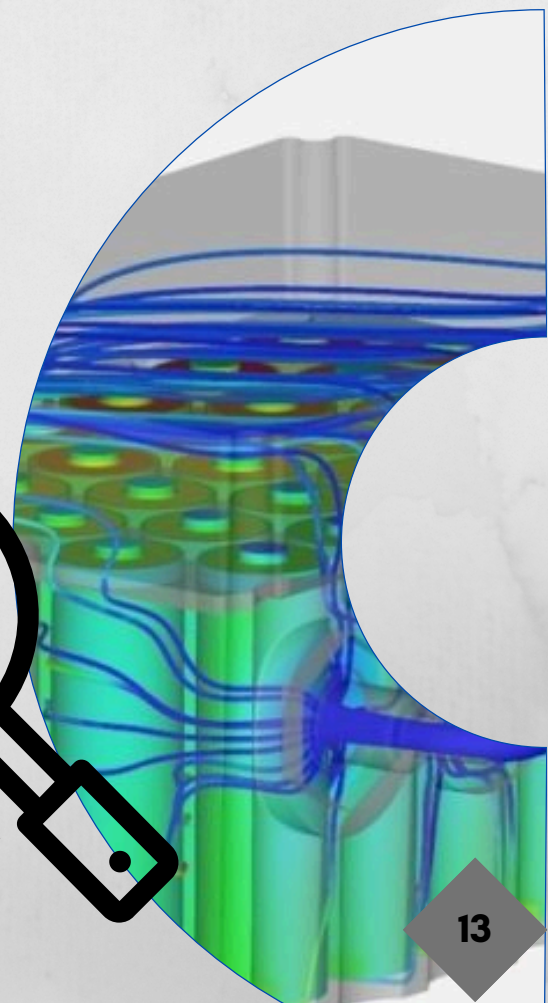
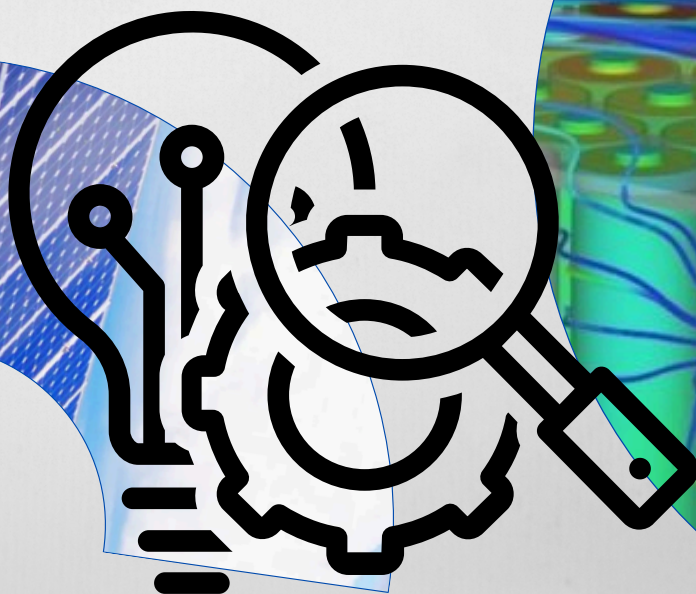
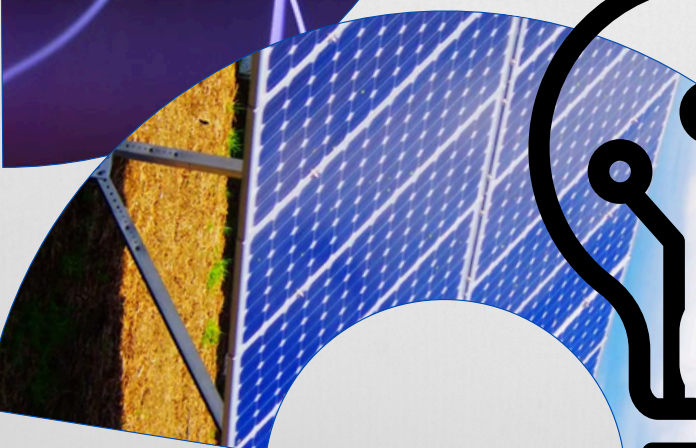
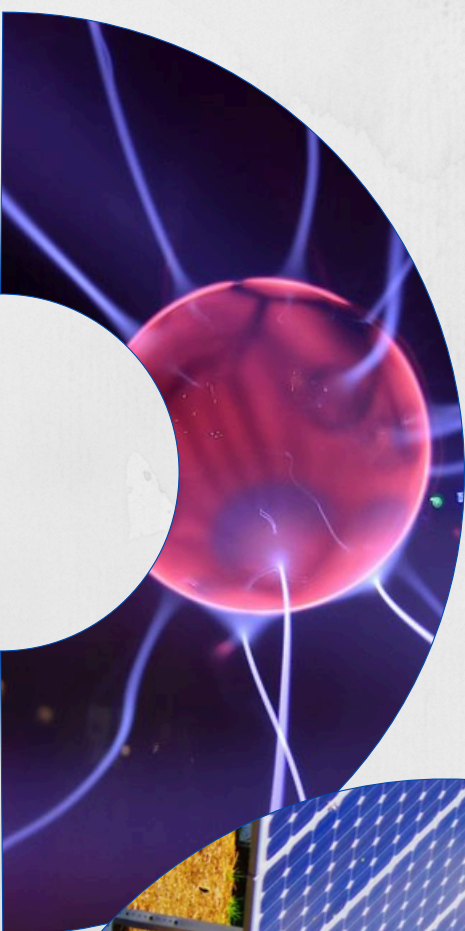
Sr. No.	Research Project Title	Name of PI/Co-PI	Agency	Sanctioned Amount
30	Secure Energy-efficient Mixed domain compute in memory-based AI accelerator chip for edge applications	(1)Dr. Pinal kumar Engineer Dr.Anand darji Dr. Zuber M Patel Dr. Abhishek Acharya Dr. Rasika dhavse (2) Indian Institute of Technology (IIT) Gandhinagar(Joycee Mekie -PI, Nihar Ranjan Mahopatre Tarun Kunar Agrawal) (3) Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT), Gandhinagar (Vinay Palaparthi -PI, Dr. Yash Agrwal Dr. Sreeja Rajendran) (4) Institute of Technology, Nirma University, Ahmedabad (Prof. Usha Mehta -PI, Prof. Piush Bhatasana Prof . Akash Mecwan)	Meity, GOI	Rs. 96,00,000
31	Implementantion of Novel Speed Control strategies for photo voltaic based permanent magnet assisted synchronous retuctance Motor (PMaSyRM) drives in electric Vehicals	Dr. Kunisetti V. Praveen Dr. Rajeshsekhera reddy chilipi Dr. Suresh Lakhimsetty	SERB	Rs. 44,04,400
32	Profit and cost Investigation of Retrial Queueing Models under Admission Control Policies	Dr. Sudeep Singh Sanga	SERB	Rs. 13,12,234
33	Development of Anti-Jamming and Anti -Soofing baseband signal processing algorithms for NaVLC RS receiver provisined UAVs	Dr. Suresh Dahiya	AR&DB(DRDO)	Rs. 31,88,747
34	Design and Characterization of Radiation Hardened slandered cell library using Nanosheet Field effect transistors: improving on Design Margins/reliability	Dr. Abhishek Acharya	SERB	Rs. 21,69,178

SPONSORED RESEARCH PROJECT

Sr. No.	Research Project Title	Name of PI/Co-PI	Agency	Sanctioned Amount
35	Synthesis and design of metal-organic frameworks as enzyme mimics	Dr. Lata Rana	SERB	Rs. 42,39,400
36	Theoretical Investigations and Development of novel pruning techniques for many-objective design optimization of selected thermal systems and devices	Dr. Ravipudi Venkata Rao	SERB	Rs. 6,60,000
37	Development of hybrid fibermetal laminates with nano additives for high temprature Application of stiffened panel: Experimental and numerical studies	Dr. A. A. Shaikh Dr. R. Sriikshmi	SERB	Rs. 31,93,344
38	Development of thermal gradient assisted self-positioning laser head for photothermal therapy Application	Dr. Vipul M Patel Dr. Hement B Mehta Dr. Sumit Khare	SERB	Rs. 34,58,934
39	A Novel approach for continuous fabrication of tailored blanks for automotive applications	Dr. Sunil Kumar	SERB	Rs. 26,63,672
40	High-Temperature Transient Creep in Fire resistance analysis of UHPC RC Columns: Experimental and numerical assessment	Dr. Banti A. Gedam	SERB	Rs. 42,52,820
41	Design and Development of semi active and Hybrid Control Systems for Building stocks in Surat City	Dr. Vishist Bhaiya Dr. Sumit Khare (MED)	SERB	Rs. 19,58,264

SPONSORED RESEARCH PROJECT

Sr. No.	Research Project Title	Name of PI/Co-PI	Agency	Sanctioned Amount
42	Computational Techniques based investigation for diabetic foot Ulcers complications	Dr. Chandra Prakash	SERB	Rs. 39,99,430
43	Synthesis of chiral lanthanide complexes for circularly polarized luminescence and chiral recognition of biomolecules	Dr. Areti Sivaiah	SERB	Rs. 29,75,500



ROBOFEST FUNDED BY GUJCOST

Sr. No.	Research Project Title	Name of PI/Co-PI	Sanctioned Amount
01	Gujarat Robofest 3.0 Competition (Development of Pesticide Spraying Farming Robot)	Dr. Suresh Dahiya	Rs. 1,50,000
02	Gujarat Robofest 3.0 Competition (Development of Pesticide Spraying Farming Robot)	Dr. sweta Shah	Rs. 1,50,000
03	Gujarat Robofest 3.0 Competition (submarine and underwater robot)	Dr. Harshit K. Dave	Rs. 50,000
04	Gujarat Robofest 3.0 Competition (Hexapod Robot)	Dr. Harshit K. Dave	Rs. 7,50,000
05	Gujarat Robofest 3.0 Competition (Two Wheeled Self Balancing Robot)	Dr. Anandita Chowdhury	Rs. 50,000
06	Gujarat Robofest 3.0 Competition (submarine and underwater robot)	Dr. Anandita Chowdhury	Rs. 50,000
07	Gujarat Robofest 3.0 Competition (Fun Robotics : Maze solving Robot)	Dr. Anandita Chowdhury	Rs. 50,000
08	Gujarat Robofest 3.0 Competition (Fun Robotics : Maze solving Robot)	Dr. Mehul C. Patel	Rs. 3,00,000
09	Gujarat Robofest 3.0 Competition (Rover Robot)	Dr. Mehul C. Patel	Rs. 2,50,000

ROBOFEST FUNDED BY GUJCOST

Sr. No.	Research Project Title	Name of PI/Co-PI	Sanctioned Amount
10	Gujarat Robofest 3.0 Competition (Proof of concept)	Dr. Raju Prasad mahto	Rs. 5,00,000
11	Gujarat Robofest 3.0 Competition (Two Wheeled Self Balancing Robot)	Dr. Hiren G. Patel	Rs. 2,50,000
12	Gujarat Robofest 3.0 Competition (Hexapod Robot)	Dr. R.Venkata Rao	Rs. 50,000
13	Gujarat Robofest 3.0 Competition (Proof of concept)	Dr. Vimal K. Patel	Rs. 12,50,000
14	Gujarat Robofest 3.0 Competition (Proof of concept)	Dr. Vimal K. Patel	Rs. 4,00,000



CONSULTANCY PROJECT

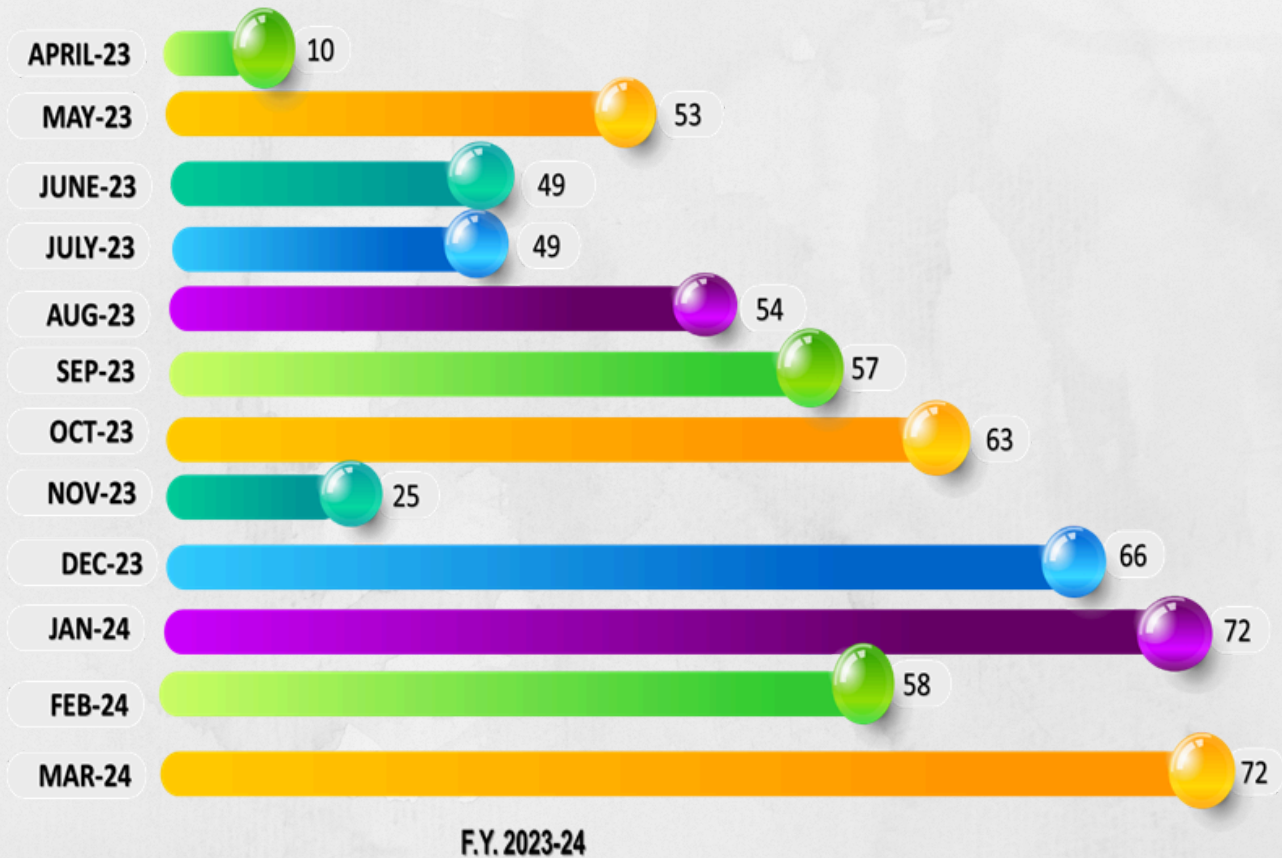
Consultancy Project means a consultancy assignment/job given by an outside agency to a faculty of the Institute for work within a mutually agreed scope. The Institute has expertise in various research areas to provide knowledge and intellectual inputs which are of interest to the industry and other organizations. A consultancy project/task/work is one where faculty and research staff provide knowledge and intellectual inputs to industry or other organizations (within India and abroad), primarily for their purposes. It may also include a consultancy assignment/job referred to the Head of the Department or a functionary of the Institute (i.e. Director or Dean(s) or Registrar). The Institute will then do the needful for complying with statutory laws.

- Faculty or PI will handle the project account and spend funds as required. Share of the Institute should also be transferred.
- The requirement originates from the industry/other organizations concerned or faculty can approach the industry/other organizations. The faculty is expected to estimate the time and cost required to accomplish the task.
- The proposal is then prepared by the PI.
- All consultancy proposals must be sent under the signature of the PI to Dean/Associate Dean R&C for endorsement and office will assign a unique internal number to the project proposal.
- Project responsibility: These projects are headed by a Principal Investigator (PI), and may have Co-Principal Investigators (co-PIs) and the deliverables are the responsibility of the PIs. The Institute provides the PIs necessary support.
- The statement of expenditure and utilization certificate will be prepared at every financial year end by the competent designated authority if required.
- After completion of the project, the final report should be submitted to the funding agency with a copy to the office of SRCD.

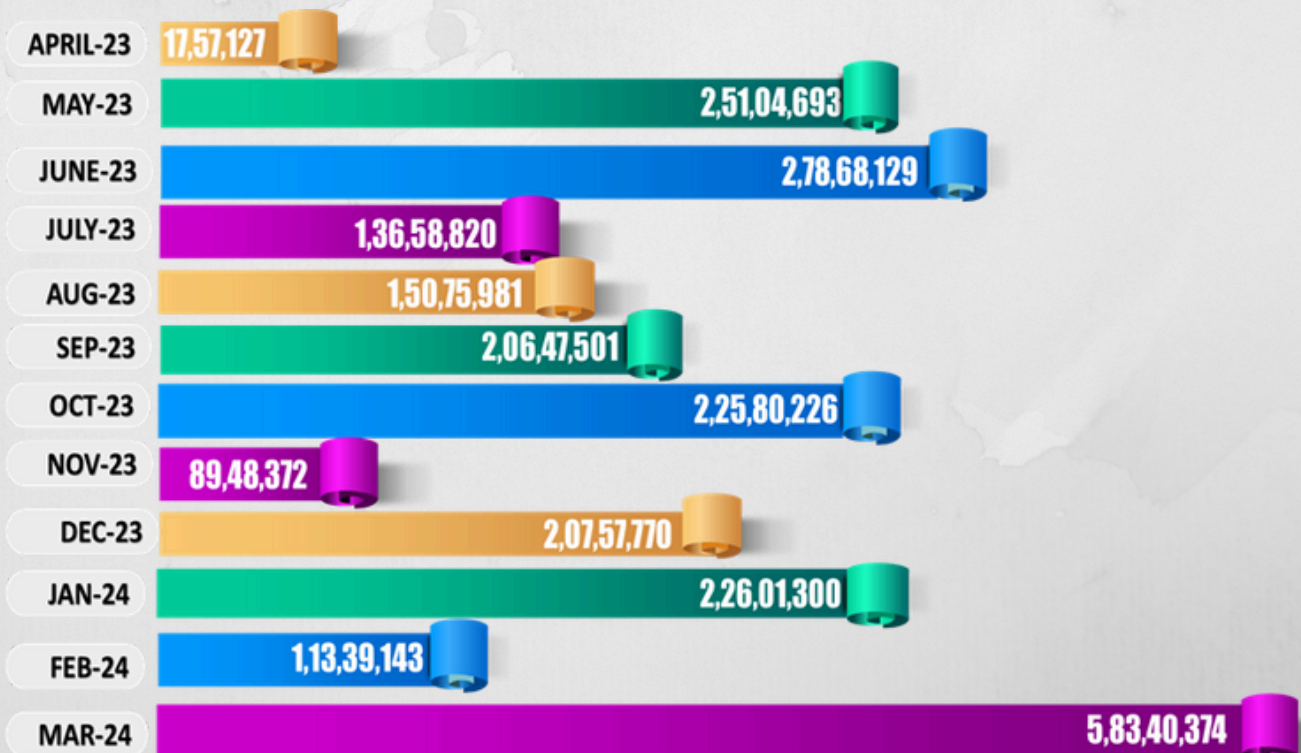


CONSULTANCY PROJECT

NUMBER OF CONSULTANCY



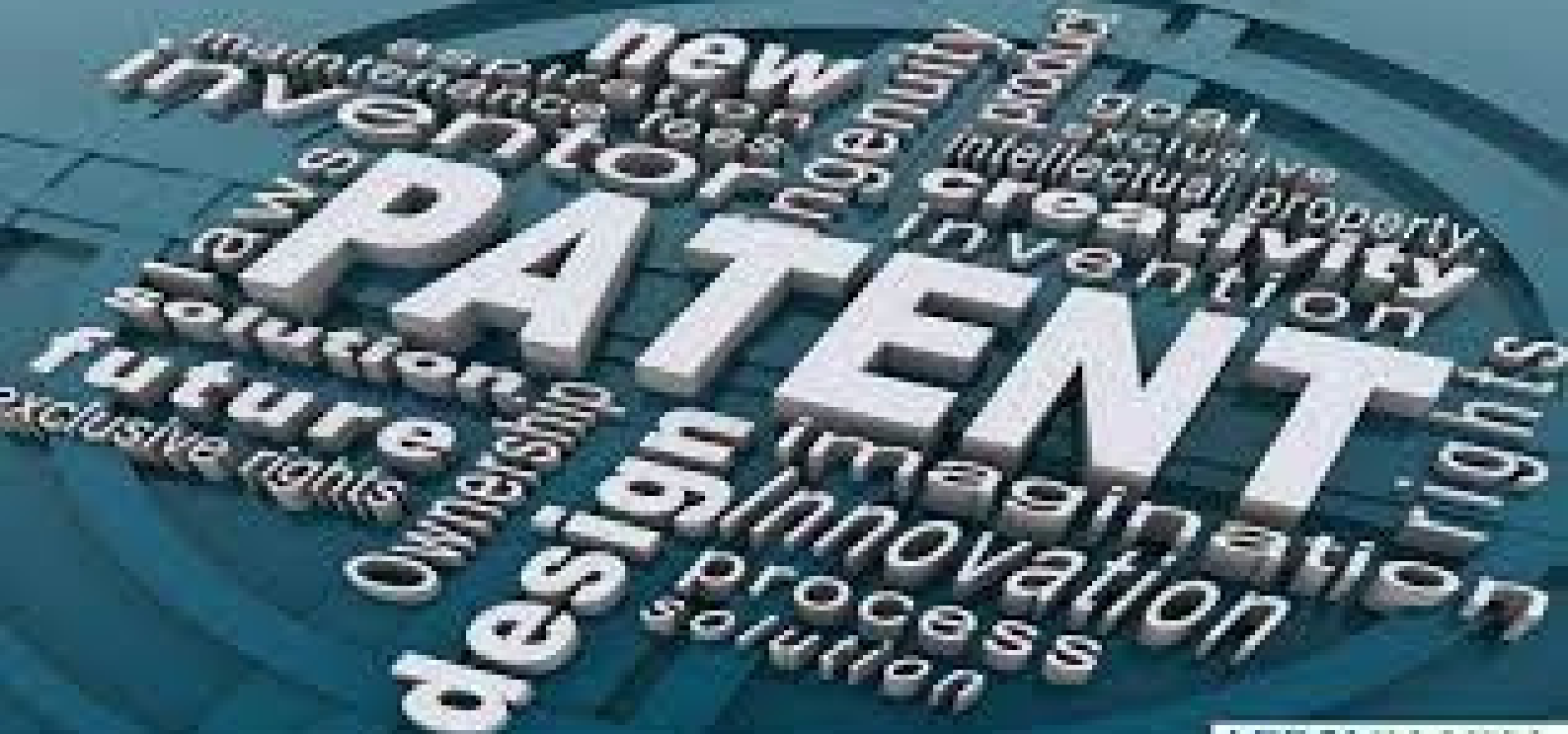
CONSULTANCY AMOUNTS



CONSULTANCY PROJECT

LIST OF MAJOR CLIENTS

- Surat Municipal Corporation, Surat (SMC)
- Surat Urban Development Authority, Surat (SUDA)
- Ahmedabad Municipal Corporation, Ahmedabad (AMC)
- Ahmedabad Urban Development Authority, Ahmedabad (AUDA)
- Gujarat Pollution Control Board, Gandhinagar (GPCB)
- Geo Designs & Research (P) Ltd., Vadodara
- National Rural Infrastructure Development Agency, New Delhi (NRIDA)
- National Highways Authority of India (NHAI), PIU-Bharuch
- Veer Narmad South Gujarat University (VNSGU), Surat
- U. P. Projects Corporation Limited, Lucknow
- Urban Ring Development Corporation Limited, Surat
- Road & Building Department, Gujarat
- Executive Engineer, South Andaman Div, A.P.W.D., Port Blair
- Central Designs Organizations, Narmada Water Resources, Water Supply and Kalpasar Department, Gandhinagar
- Unique Construction, Surat
- NBCC (India) Limited
- Montecarlo Limited
- Project Implementation Unit, Gandhinagar
- Project Implementation Unit, Surat
- Sports Authority of Gujarat, Gandhinagar
- Gujarat Urban Development Company Limited, Gandhinagar
- Multi Media Consultants Pvt. Ltd, Ahmedabad
- Executive Engineer, Kadana Division No.1, Diwada Colony, Gujarat
- Narmada Clean Tech, Bharuch
- Gujarat State Road Transport Corporation (GSRTC)
- Varaha Infra Limited, Jodhpur



A patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem. To get a patent, technical information about the invention must be disclosed to the public in a patent application.



PATENT FILED

Sr. No	Title of Patent	Inventor(s)
1	"System to Control Heat from a Battery Pack System"	Dr. Hemantkumar B Mehta Dr. Vipul M Patel Mr. Kalpak Sagar Mr. Milan Vachhani
2	"Method For Controlling The Formation Of Intermetallic Compound (Imc) In Welding Of Dissimilar Metals"	Dr. Vivek Kalyankar Mr. Gautam Chudasama
3	"Atmospheric Water Harvesting System Based On Evacuated Tube Solar Air Heater"	Dr. Amit Kumar Mr. Anshu Agrawal Mr. Abhishek Tiwari Dr. A D Parekh
4	"Sewage Sludge Dewatering System"	Dr. Prabhansu Mr. Nitin Kumar Soni Ms. Ritu Raj Jaif Mr. Bandhan Kumar Ms. Yashwini Meena Mr. Gautam Totiya
5	"Synthetic Strategies of Indium (III) based MOF and Adsorptive Removal of Dyes"	Dr. Ritambhara Jangir Dr. Sarita Kalla Mr. Ketan Maru
6	"Method of Preparation of Metal-Organic Framework Incorporated Hollow-Fiber Membrane for Rubber Processing Wastewater Treatment Via Membrane Bioreactor"	Dr. Sarita Kalla Dr. Z V P Murthy Ms. Disha H Gajipara Mr. Amol Sonawane
7	"Ambient Temperature Simulator"	Dr. Manish K Rathod Dr. Jyoti V Menghani
8	"A Microwave Based Method for Synthesis of Indium (III)- Based MOF"	Mr. Ketan Maru Dr. Ritambhara Jangir Dr. Sarita Kalla
9	"Electricity Free Liquid Nitrogen Refrigeration System (NITROGENATOR) for Food Preservation"	Dr. Yogendra V Kuwar

PATENT FILED

Sr. No	Title of Patent	Inventor(s)
10	"A Solar Humidification-Dehumidification Desalination System and Method Thereof"	Dr. Amit Kumar Mr. Abhishek Tiwari Mr. Anshu Agrawal
11	"Polymeric Eutectogel for Curcumin Encapsulation"	Dr. Naved I Malek Hiral Ukani Nildhara Parsana
12	"Method of Preparation of Deep Eutectic Solvent Encapsulated MIL-101(Cr) Decorated PVDF Mixed Matrix Membranes for Dye and Salts Removal from Industrial Wastewater"	Dr. Sarita Kalla Dr. Z V P Murthy Mr. Amol Vijay Sonawane Mr. Dipeshkumar Kachhadiya
13	"10-Ton Capacity Multidirectional Loading Fram is for 1g Physical Modelling in Geotechnical Engineering"	Dr. Jitesh T Chavda
14	"A Method for Simulating Failure of Finite Slopes and System thereof"	Dr. Jitesh T Chavda Mr. Kritesh Chauhan
15	"Sustainable Media for Finishing Process Using Abrasive Flow Machine"	Dr. Shailendra Kumar Dr. Bhargav P Pathri
16	"Photo and pH responsive Imidazolium Based Ester Functionalized Surfactant"	Dr. Naved I Malek Mr. Tapaskumar Patel
17	"Design and Development of E-Textile Antenna Bio-Sensor for Knee Effusion Diagnosis"	Dr. Piyush N Patel Dr. Arpan H Shah
18	"System And Method For Facilitating Data Integration And Seamlessly Enabling Movement Of Vehicles"	Mr. Rajesh Chouhan Dr. Ashish Dhamaniya

PATENT FILED

Sr. No	Title of Patent	Inventor(s)
19	"Low Cost Highly Precise and User Friendly Method of Fabrication of Micro Channel without the Use of Sophisticated Instruments/Equipment's"	Dr. V N Lad Mr. Svapnil Kevat
20	"Three-link Mechanism for Energy Harvesting through Speed Breakers"	Dr. Rohit Tamrakar Mr. Kartik Prajapati Ms. Kritika Jain Mr. Tanmay Jog Mr. Anuroop Kumar Bandarupalli
21	"A 2d Polymeric Network Of Zinc Organophosphate With 8-Membered Ring Core"	Mr. Shubham Kumar Dr. Ritambhara Jangir
22	"Transdermal Patch for Delivery of Vitamin B12 using Hydrotrope as a Penetration Enhancer"	Dr. Meghal A Desai Mr. Akash D Patel
23	"A Method of Fabrication of Mixed Cationic Perovskite Solar Cell with UiO66-NH ₂ as Passivating Material"	Dr. Jignasa V Gohel Mr. Srish P Kulkarni
24	"System And Method For Harvesting Water From Atmospheric Air"	Dr. Amit Kumar Mr. Pravesh Kumar Kushwaha Dr. Rajesh Choudhary Mr. Anshu Agrawal
25	"Hydrodynamic Cavitation Reactor for Tertiary Treatment of Municipal Wastewater and Geometrical Intensification of Reactor Thereof"	Ms. Neha S Baghele Dr. R A Chistrian Dr. Anjali K Khambete
26	"A Method For Suppressing Flow Boiling Instability (FBI) In Microchannel Heat Sink (MCHS)"	Dr. J Banerjee Dr. Hemantkumar B Mehta Mr. Nishant M Shah
27	"A Modified Pyramidal Solar Still With Pulsating Heat Pipe For Efficient Desalination"	Dr. Naresh Yarramsetty Mr. Nagendra Prasad Pandey

PATENT FILED

Sr. No	Title of Patent	Inventor(s)
28	"Multi-stable Negative Stiffness Structure and Mechanical Logic Gates"	Dr. Harshit K Dave Mr. Sandip T Patel Dr. Keyur P Desai
29	"Distributor Plate for Gas-Solid Fluidized Bed Reactor"	Dr. Prabhansu Mr. Yash Garhwal
30	"A Method For Compensating Weld Strength Reduction Of Heat-Treatable Aluminums Alloy"	Dr. Vivek Kalyankar Mr. Gautam Chudasama
31	"Double-Ended Vacuum Tube Collector Based Atmospheric Water Harvesting Using Composite Desiccant of Jute/CaCl ₂ "	Dr. Amit Kumar Mr. Anshu Agrawal Mr. Abhishek Tiwari
32	"An Energy Harvesting System For Generating Electrical Energy Based On Sourcing Rotation, And Method Thereof"	Dr. Rohit Tamrakar Mr. Ayushman Sahu Mr. Vipin Sharma Mr. Dev Kanojiya Mr. Rahul Kapure



PATENT GRANTED

Sr. No	Title of Patent	Inventor(s)
1	"Method for Photocatalytic Degradation of Drimaren Orange P2R Dye using MoS ₂ /Ag ₃ PO ₄ /PVDF Photocatalytic Mixed Matrix Membrane"	Dr. Z V P Murthy Mr. Amol Vijay Sonavane Dr. Chetankumar M Patel
2	"Rotary Delayed Entry Valve for Hydrogen Fueled Engine"	Dr. S A Channiwala Dr. Vikas Patel
3	"Zeolitic Imidazolate Framework-67 Based Concrete Composition and Method of Its Preparation"	Dr. G R Vesmawala Dr. Z V P Murthy Mr. Amol Vijay Sonavane Mr. Mallikarjun Hulagbali
4	"Method And System For Maintaining Chain Of Custody For Evidence And Verifying Integrity Of Electronic Evidence Through Smart Contract On Blockchain"	Mr. Aman Framewala Dr. Dhiren Patel Mr. Sarvesh Harale Mr. Vasu Mistry Mr. Sanket Shanbhag Mr. Bhavesh Borisaniya
5	"Reduced Graphene Oxide-Based Concrete Composition And Method Of Its Preparation"	Dr. G R Vesmawala Mr. Amol Vijay Sonavane Mr. Mallikarjun Hulagbali
6	"A Process for Simultaneous Extraction of Pectin & Magniferin From Mango Peel"	Dr. Meghal A Desai Mr. Vishal B Thakre Dr. Girirajsinh Jadeja
7	"A Liquid Cooled Variable Channel Width Double Layered Minichannel Heat Sink (VWcDL-MCHS) with zero overlap"	Dr. Hemantkumar B Mehta Mr. Nirav Kumar M Patel
8	"An Industrial One Pot Process for the Preparation of Chlorzoxazone"	Dr. Premlata Kumari Mr. Mahesh D Vaghasiya
9	"Volumetrically Redistributed Headed Stud Shear Connectors"	Dr. Y D Patil Mr. Prakash Singh Mr. Rahul Pardeshi

PATENT GRANTED

Sr. No	Title of Patent	Inventor(s)
10	"Low Calcium Fly Ash Based Angular Shaped Aggregate And Method For Producing The Same"	Dr. Satyajeet Patel Mr. Sandeep Singh Mr. Shahane Ashok Hrishikesh Mr. Satyakam Rajiv Mr. Soni Naredrakumar Mr. Pranay
11	"Hybrid PCM-based Heat Sink Coupled with Heat Pipe for Thermal Management of Electronics Systems"	Dr. Naresh Yarramsetty Dr. J Banernjee
12	"A Novel Microfluidic Approach For Bio-Mems Applications"	Dr. Anand Darji Mr. Dinesh Rotke
13	"Microfluidic Device For Synthesis Of Fenofibrate Drug Nanoparticle Under Ultrasonic Cooling Crystallization And Process Thereof"	Dr. Sanjaykumar R Patel Ms. Rashmita Behera
14	"Constant Temperature Water Bath for Thermal Cyclic Test"	Dr. Manish K Rathod
15	"H-Bn@Mil-101(Cr)/Pvdf Photocatalytic Mix Matrix Membrane For Degradation Of Reactive Dye From Textile Industry Effluent"	Mr. Amol Sonawane Dr. Z V P Murthy
16	"Cardanol Based Bio-polyol and Process for Preparation Thereof"	Dr. B Z Dholakiya Ms. Nilam Gamit
17	"Fabrication of Deep Eutectic Solvent Encapsulated MIL-53(Fe) based Chitosan Bio-polymeric Membrane for Organic Solven Separation"	Dr. Z V P Murthy Mr. Amol Vijay Sonavane Mr. Dipeshkumar Kachhadiya
18	"Greywater treatment system using combination of phytoremediation and filtration"	Dr. Kunwar Durg Vijaysingh Yadav Mr. Rajnikant Prasad

PATENT GRANTED

Sr. No	Title of Patent	Inventor(s)
19	"Mixed Cationic Perovskite Solar Cell with UiO66 as Passivating Material and method of its Fabrication"	Dr. Jignasa Gohel Mr. Shubham Khare
20	"Method Of Fabricating Tio2@Mil-101(Cr)/Pvdf Photocatalytic Mix Matrix Membrane And Reactive Dyes Degradation Using The Same"	Mr. Amol Sonawane Dr. Z V P Murthy
21	"Polymer Mortar Composite and a Process for Preparation Thereof"	Dr. Y D Patil Dr. Bharat Dholakiya Ms. Bhagyashree Sarde
22	"BANDSAW MACHINE HAVING ADJUSTABLE INCLINATION OF TOP ARM"	Dr. H K Raval Mr. Bhaveshkumar G Mewada
23	"A Blade for Variable Speed Small Horizontal Axis Wind Turbine"	Mr. Neeraj Verma Dr. Beena D Baloni
24	"System to Control Heat from a Battery Pack System"	Dr. Hemantkumar B Mehta Dr. Vipul M Patel Mr. Kalpak Sagar Mr. Milan Vachhani
25	"Metamaterial Integrated Radio Frequency Waveguide for Soil Characterization"	Dr. Piyush N Patel Mr. Paresh Sagar
26	"An Integrated Equipment for Crushing and Extraction"	Dr. Desai Meghal A Dr. Parikh J K Dr. Solanki K P
27	"Upward Swirl Type Combustor With Reverse Fuel Injection And Radial Air Distribution System"	Mr. Parag Rajpara Dr. Rupesh Shah Prof. Jyotirmay Banerjee

PATENT REGISTRATION

Sr. No	Title of Patent	Inventor(s)
1	"Power Converter Board"	Dr. Rakesh Maurya Mr. Prince Jain
2	"Distillation Set-up for Essential Oil Extraction"	Dr. Desai Meghal A Prof. Jigisha K Parikh Dr. G C Jadeja Dr. S R Patel
3	"Continuous Flow 3D Printed Microchannel with Integration of 3D Sidewall Electrode"	Dr. V N Lad Mr. Svapnil Kevat
4	"Foldable Trolley Chair"	Dr. Harshit K Dave Mr. Yash D Mandaliya Dr. Keyur P Desai
5	"Multi Purpose Convertible Hexapod Robot"	Dr. Harshit K Dave Mr. Alok Kumar Sahu Mr. Megh Heruwala Mr. Shubham Singh Mr. Keyur P Desai
6	"Stacked Battery Module Holder for Thermal Management"	Dr. Hemantkumar B Mehta Dr. Vipul M Patel Dr. Kalpak R Sagar Mr. Milan Vachhani Mr. Durga Nand Jha
7	"Cantilever Type Creep Testing Machine for Weak Rocks"	Dr. Ankesh Kumar Dr. Shruti Shukla Ms. Geetanjali Lohar
8	"Bubble Cap for Distributor Plate of Fluidized Bed"	Dr. Prabhansu Mr. Yash Garhwal



PATENT REGISTRATION

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Sr. No	Title of Patent	Inventor(s)
9	"Pervaporation Module"	Dr. Z V P Murthy Mr. Amol Vijay Sonwane
10	"Battery Module Holder for Cooling"	Dr. Hemantkumar B Mehta Dr. Vipul M Patel Dr. Kalpak R Sagar Mr. Milan Vachhani Mr. Durga Nand Jha
11	"Ultrasonication Assisted MBR System for Water and Wastewater Treatment"	Mr. Amol Vijay Sonawane Dr. Z V P Murthy
12	"Multi Rotor Fixed-wing Unmanned Quad Plane with Flying Wings Configuration"	Dr. Rohan Pande Dr. Mukund Bade

DESIGN



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AND TECHNOLOGY, GERMANY**



**GHEORGHE ASACHI TECHNICAL
UNIVERSITY OF IASI, ROMANIA**

**INTERNATIONAL CENTER FOR AI AND CYBER
SECURITY RESEARCH AND INNOVATIONS (CCSRI),
ASIA UNIVERSITY, TAIWAN**



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TECHNOLOGY, MOHALI**



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BUREAU OF INDIAN STANDARDS



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**SWAVLAMBI BHARAT ABHIYAAN,
AHMEDABAD**



EXPERT TALK



“Fulbright Fellowship Opportunities to the U.S.”

Mr. Ryan Pereira,

Regional Officer,
United States-India Educational Foundation,
India





"Digitizing Agriculture"

Mr. Vikas Rastogi,

**IAS, Principal Secretary, Higher and Technical
Education Department, Government of Maharashtra**





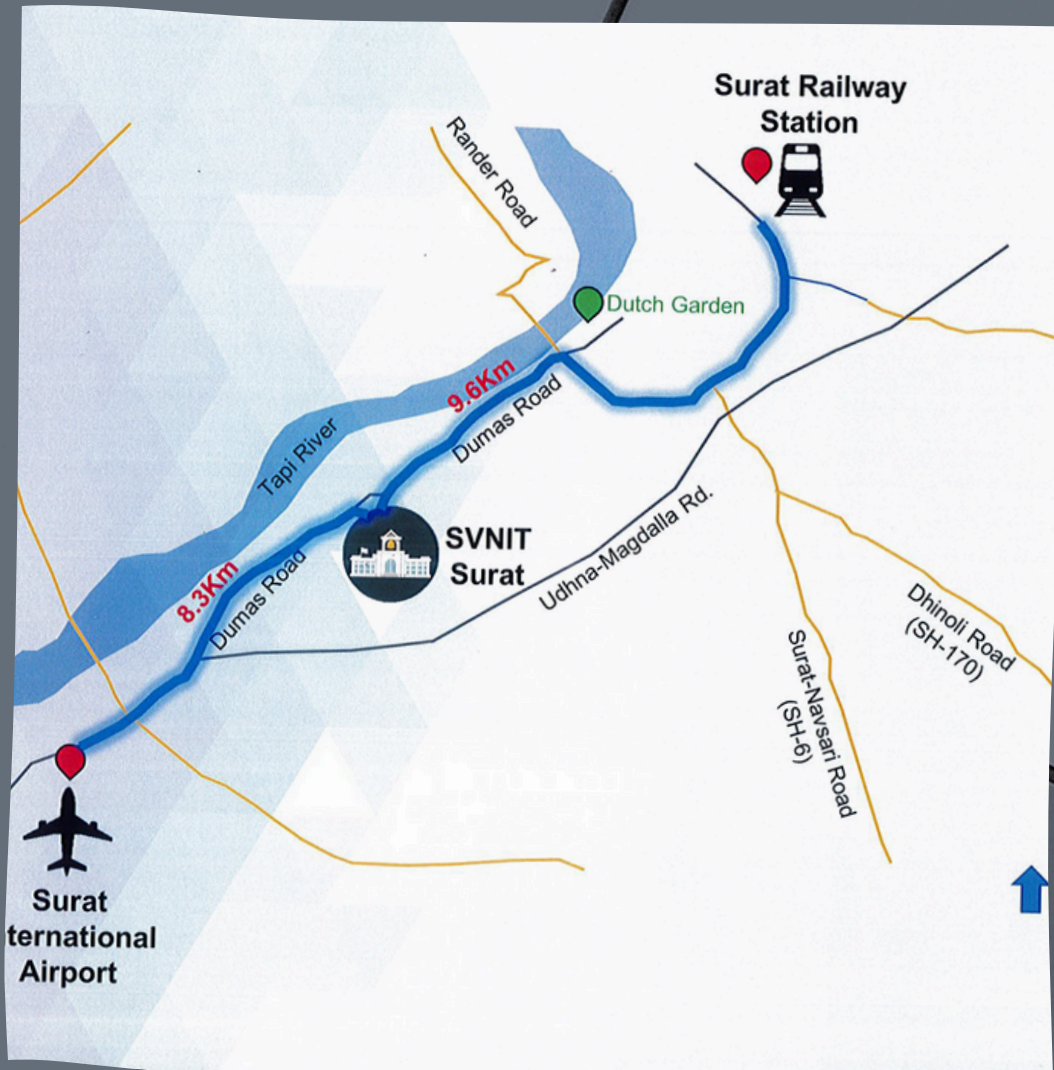
EXPERT TALK

Funding Opportunities at Department of Science & Technology: Navigating the Landscape for Research and Innovation

Shri S. K. Varshney,

**Ex-Head, International Cooperation Division, Department
of Science and Technology, New Delhi**





CONTACT US

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