

Nirma University

Institute of Technology



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Volume V Issue II

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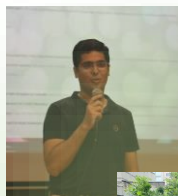
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Ranking

Nirma University is one of the top-ranking universities country wide. Different rankings of the university are as follows:

India Today – The Best Colleges of India 2023

	Ranked 13th Best Private Engineering Colleges of India
	Ranked 3rd Best Private Engineering Colleges in the Western Region

CSR-GHRDC Rankings - Competition Success Review – India's Top Engineering Colleges 2023

	Ranked 1st Top Leading Engineering Colleges of Super Excellence by CSR - GHRDC Rankings Competition Success Review – India's Top Engineering Colleges 2023
	Ranked 1st Top Engineering Colleges ranked by State by CSR-GHRDC Rankings Competition Success Review – India's Top Engineering Colleges 2023
	Ranked 4th among Top 20 Engineering Colleges ranked by Faculty, Research, Consultancy, EDP, and other Programmes
	Ranked 4th among Top 20 Engineering Colleges ranked by Placements, USP, Social Responsibility, Networking and Industry Interface



THEWEEK

The Week-Hansa Survey 2023

	Ranked 38th Best Engineering Colleges in India by The Week-Hansa Survey 2023
	Ranked 13th Best Private Engineering Colleges in India by The Week-Hansa Survey 2023
	Ranked 2nd Best Private Engineering Colleges in the West Zone by The Week-Hansa Survey 2023



Education World Private Engineering Colleges Ranking 2023-24

	Ranked 23rd in the top 100 Private Engineering Colleges by the Education World Private Engineering Colleges Ranking 2023-24
	Ranked 2nd in Gujarat State by the Education World Private Engineering Colleges Ranking 2023-24



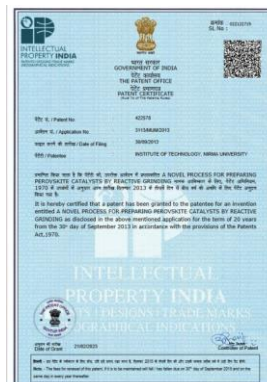
The Times of India: Times Engineering Institute Ranking Survey 2023

	Ranked 41st among top 170 Engineering Institutes in India
	Ranked 38th among top 125 Private Engineering Institutes in India
	Ranked 7th in West Zone under Regional wise Institutes
	Ranked 46th among top 70 Private Engineering Colleges in India on Placement



Patent

A patent was granted to Prof Sanjay Patel and his team on "A Novel Process for Preparing Perovskite Catalysts by Reactive Grinding".



A patent was granted to Prof Mamta Mainak Saiyad (and her team) on "Radiation Hardened Epoxy/Graphite Polymer Composite".

A patent was granted to Dr. Amit Kumar, Assistant Professor, Department of Chemical Engineering and his team on "Intelligent seawater separation (salt and fresh water) process and procedure".





ICMPC 2024

"The 16th International Conference on Material Processing and Characterization (ICMPC) will be held at the Institute of Technology, Nirma University, Ahmedabad, India, from 27th-29th June 2024, hosted by the Mechanical Engineering Department. The conference will focus on creating a cross-disciplinary summit that transcends departmental, institutional, industrial, public and private research organizations and global barriers and lends itself to integrating research and education in the vital field of manufacturing and advanced materials. This conference will mainly focus on significant sectors of advanced processing, material characterization, modelling and simulation, properties, performance, and device fabrication."

The poster for the 16th International Conference on Materials Processing and Characterization (ICMPC) at the Institute of Technology, Nirma University, Ahmedabad, India, from 27th-29th June 2024. It features the ICMPC 2024 logo, the Nirma University logo, and the NAAC Accredited 'A+' Grade logo. The poster lists the 16th ICMPC Editors: Dr. Swadesh Kumar Singh (GRIET Hyderabad, India & Adjunct Professor, Victoria University Melbourne), Dr. K.M. Patel (Institute of Technology, Nirma University), Dr. Nitin Kotkunde (BITS Pilani Hyderabad Campus India), and Dr. Mayur A. Makhesana (Institute of Technology, Nirma University). It also mentions the publication partners for the 16th ICMPC, including Elsevier, Springer, and E3S Web of Conferences.

Proposed STTPs July 2024

	Department Name	Proposed Title of the STTP
	Civil Engineering Department	Applications of Technical Textiles in Civil Engineering
	Mechanical Engineering	Robotics and Artificial Intelligence
	Electronics & Instrumentation Engineering	STTP on Wheels
	Chemical Engineering Department	MATLAB for Chemical Engineers



Industry Meet



- The Civil Engineering Department hosted an Industry Meet in October 2023 that brought together representatives from various construction industries and the faculty members. This event aimed to foster collaboration between academia and industry for the betterment of students and the field of civil engineering.

- Electrical Department of Institute of Technology offered a training programme titled “Auto Electrical and Electronics” for non-electrical Engineers of Tata Motors Ltd.
- **National Seminar on “Parameter Estimation using State Estimation Techniques.”**



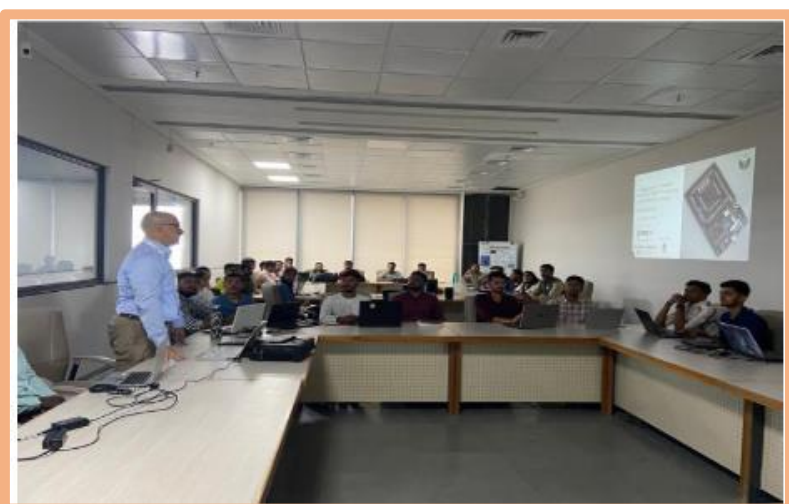
One day National Seminar on “Parameter Estimation using State Estimation Techniques.” was conducted by Prof. Sneha Soni for PhD, PG, UG students under the guidance of Dr.H.K.Patel and organized by Centre for Continuing Education (CCE), Nirma University, on 5th August 2023. In total 20 participants from PhD and UG students registered and benefitted from this National Seminar. .

This immersive and insightful workshop served as an exceptional platform, empowering participants to delve into the vast realms of State Estimation Techniques like Kalman Filter and Extended Kalman Filter with its implementation in MATLAB. The event not only fostered an enhanced understanding of state estimation implementation but also equipped attendees with research opportunities in this domain to excel in their academic pursuits and future professional endeavors. A resounding appreciation to all the enthusiastic participants and dedicated instructors whose unwavering commitment and active engagement made this workshop an extraordinary triumph



On August 5, 2023 Civil Engineering Department organized a one-day National Seminar on "Emerging Trends in Space Technology - Soil to Sky".

The Department of Civil Engineering organized a two-day Workshop on 'Digital Tools for Civil Engineering Applications' under Centre for Continuing Education (CCE) on September 16th and 30th 2023.



The Department of Electronics & Communication Engineering organised a Workshop on "RISC V Roadshow" at Nirma University campus on July 26, 2023



STTP on Artificial Intelligence (AI) Applications in Civil Engineering conducted by Civil Engineering Department



Two-week IST approved Short Term Training Programme (STTP) on “Artificial Intelligence (AI) Applications in Civil Engineering” was organized during 3rd July to 14th July 2023 under auspice of Internal Quality Assurance Cell (IQAC) Nirma University. The main objective of arranging STTP was to introduce faculty members about various AI techniques and their applications for solving problems of Civil Engineering domain, which in turn develop the computer literacy of Civil Engineering graduates.

STTP on Wheels "Recent Trends and Industrial Practices in Electrical Engineering conducted by Electrical Engineering Department during July 03 – July 14 2023

The STTP was envisaged towards industrial exposure related to electrical engineering and upgrading the participants with recent development and advancement of industrial practices relevant to electric engineering. The objective of the STTP were:

- To give industrial exposure related to electrical engineering
- To upgrade the participants with recent development and advancement of industrial practices relevant to electric engineering
- To enhance academia – industry relations for future development in-turn of student internship and project placement.





Deep Learning: Concepts to Deployment conducted by CSE Department during 3rd-15th July, 2023.



The STTP titled "Deep Learning: Concepts to Deployment" spanned over 10 working days, running from July 3 to July 15, 2023. It was conducted under the auspices of the Computer Science and Engineering Department. The event had been collaboratively organized with the support of ISTE, aiming to provide comprehensive insights into deep learning methodologies and their practical deployment. The workshop successfully bridged the theoretical foundations of deep learning with hands-on applications, offering participants a holistic understanding of this cutting-edge technology.

The Department of Electronics & Communication Engineering organized an STTP on "Machine Learning for Electronics Engineers" at Nirma University from July 03, 2023 to July 14, 2023.

A two-week short term training program was conducted during July 3-14, 2023 by Electronics and Communication Engineering Department, Institute of Technology, Nirma University under the auspices of IQAC, Nirma University. The program was approved by ISTE. It was attended by 14 participants. The program was inaugurated at the hands of Dr. Narottam Sahoo, Advisor and Member Secretary, GUJCOST on 3rd July 2023





National level workshop on 'Variable Frequency Drive- VFD A800'

The one-day national level workshop on 'Variable Frequency Drive- VFD A800' was organized by the ATC center of Mitsubishi Electric India Pvt. Ltd. on August 5, 2023. Prof. Alpesh Patel worked as the coordinator of the workshop. Dr. H K Patel and Dr. Sandip Mehta has conducted sessions in the workshop.

National level workshop on 'Advanced Programmable Logic Controllers'



One-week National level workshop on 'Advanced Programmable Logic Controllers' was organized by the Electronics and Instrumentation Engineering department of the Institute of Technology, Nirma University from July 10, 2023 to July 14, 2023. Participants performed the PLC programming using 'Structure Text', 'Function Block Diagram', and 'Sequential Flow Charts'. Mr. Andrew Suwartik, an Expert from Mitsubishi Electric India Pvt. Ltd. delivered a session in the workshop.



Prof. Sarel Lavy, Professor at Texas A&M University, USA delivered expert lecture on facility management on September 18-19, 2023

- Mr. Sarvesh Swarup, Former Deputy Director General, Ministry of Commerce and Industry, Govt of India at present at Ellicott City, Maryland, USA delivered expert lecture on project management on August 25, 2023
- Dr. Raju Narayana Swamy, IAS, Principal Secretary of the Government of Kerala, conducted a session focusing on "Cyber Security, Cyber Laws, and Quantum Computing" on September 26, 2023
- Mr. Mukul Kumar, Engineer, Cader Design systems, Delhi delivered an expert talk titled "Advanced Device modeling" on November 08, 2023
- Dr. Tarun Kumar Rawat, Associate Professor, NSUT, New Delhi delivered an expert talk titled "Applications of Fourier Transform" on November 08, 2023



Ms. Nayana Patel, Senior Firmware Engineer, Intel, Bangalore delivered an expert talk titled "Embedded Systems Programming" on November 07, 2023

- Shri Kaushal Jani, Head, Digital and Smart Factory Support, Ecubix, Industry 4.0 Products and Services, Ahmedabad delivered an expert talk titled "IoT and Industry 4.0" on November 06, 2023

Yash Mewada, Sr Applications Engineer, Infineon Technologies, Bangalore delivered an expert talk titled "Why are FCC/EU regulations important for Electronic System Design engineers?" on November 06, 2023



Dr Naran M Pindoria, Associate Professor, IIT Gandhinagar delivered an expert talk titled "Smart Grid" on November 02, 2023



Prof. Dr. S. V. Kulkarni, Institute Chair Professor, Dept. of Electrical Engineering, IIT, Bombay delivered an expert talk titled "Finite Element Analysis in Electrical Engineering" on October 30, 2023.

Dr. Tapan Mankodi, Assistant Professor IIT, Guwahati delivered an expert talk titled "Thermal Protection Systems in Re-entry Vehicles" on October 26, 2023.



Mr. Aashutosh Vyas, President, ISHRAE Ahmedabad Chapter delivered an expert talk entitled "Career Opportunities in HVAC & R Field and ISHRAE activities" on October 25, 2023.

Mr. Anal Salshingikar, National Forensic Sciences University, Gandhinagar, conducted a session titled "Cyber Hygiene" On October 23, 2023



Mr. Nilesh Pandya, Director, Electrical Testing Center, Vadodara, Gujarat delivered an expert talk titled "Basic acceptance norms for Electrical Items through standards and respective testing" and "Managing the Quality of Industrial Environment" on October 20, 2023.

- Mr. Rimit Shah, ASIC Design Engineer, Micron Hyderabad delivered an expert talk title "Industrial Applications of FPGAs: Scenario, Trends, and Insight" on October 19, 2023

Mr. Umesh Morey, Director & Co-Founder, Engimates Resources & Energy Pvt Ltd, Vadodara, has delivered an expert talk titled "Refinery configuration, Crude and Product specifications" on October 17, 2023.



Mr. Nikhil Sonawane, Engineer, MathWorks, Pune delivered an expert talk titled "Applications of MATLAB for Mechanical, Civil, Chemical, and Electrical Engineering branches" on October 13, 2023



Mr. Karan Shah, Applied AI Research Scientist, Intel, Bangalore delivered an expert talk titled "Industrial requirements for Image Processing issues and applications" on October 13, 2023



Ms. Khushnuma Jhunjunwala, CPU Validation Engineer, Qualcomm, Bangalore delivered an expert talk titled "Processor Design Cycle" on October 06, 2023

Mr. Ravi Patel, Design Engineer, Intel, Bangalore delivered an expert talk titled "Advanced Topics in Verilog" on October 06, 2023



- Mr. Paritosh Raval, IOS LEAD at Apexon Ahmedabad, delivered expert talk titled 'iOS Architecture and its practical applications' On September 30, 2023

•
Mr. Pankaj Kumar, Vice President, Strategic Sourcing and Special Project, PI Industries delivered an expert talk titled "Supply Chain Management" on September 29, 2023



- Mr. Jasmin Panchal, Head, HR TATA Motors Ltd, Ahmedabad delivered an expert talk titled "Opportunity for Mechanical Engineers and the Industrial" on September 27, 2023



Dr. S.S. Pathan, Associate Professor Mechanical Engg. Dept. L D College of Engineering, Ahmedabad, delivered an expert talk titled "Vibration Control Strategies" on September 26, 2023

Mr. Rakesh Tiwari, Retired Head, Essar Power, Jamnagar delivered an expert talk titled "Opportunities and Future Role of Engineers in Indian Power sector, and practical aspects of a Thermal Power Plant" on September 25, 2023



Mr. Raghav Mehta, McGill University delivered an expert talk titled "Explainable AI and its Applications in Healthcare" on September 22, 2023

Shivang Bhagat, Healthark Insights delivered an expert talk titled 'crafting impactful presentations, providing insights into the art of preparing compelling and effective presentations' on September 22, 2023



- Mr. Kumar Vidhani, Scientist and C.T.O. of Research & Development, TCS Research, TCS delivered an expert talk titled 'Dahizhack Solutions, delivered an expert talk titled "Dark Web and Cyber Security" on September 21, 2023



Ms. Sonal Desai, Ergo Energy LLP Energy & Sustainability Solution Provider, Certified Energy Auditor and Green Building Consultant, delivered an expert talk titled "Energy saving in Compressor and HVAC System and Energy Modelling" on September 14, 2023

Mr. Yagnik Suthar, Senior Software Engineer at Simform, delivered an expert talk titled "Building iOS Apps: A Beginner's Guide to Swift and Xcode" on September 14, 2023



Mr. R. D. Chauhan, Ex. Addl. General Manager (Simulator) NTPC Ltd. delivered an expert talk titled "Operation and maintenance of Thermal Power Plant" on September 6, 2023.

Mr. Dhanesh Kumar, Indian Oil Corporation Limited delivered lecture titled "Road Construction Technology and Usage of Bitumen" on September 05, 2023.



Mr. Dipesh Panchal, Physical Design Engineer, eInfochips delivered an expert talk titled "Digital VLSI Design with cadence tool" and "Working with VLSI Physical Design Algorithms" on August 19, 2023

Prof. S.B.Soni, Retired professor, L.D. Engineering College, Ahmedabad delivered an expert talk titled "Design of material handling equipment" on August 09, 2023.

Shri Nilesh M. Desai, Director SAC, Ahmedabad delivered talk titled "India's Moon Mission: Chandrayaan-3" on August 05, 2023



Dr. Abhijit Chakraborty, PRL, Ahmedabad delivered expert lecture titled "Design Aspects of 2.5m diameter Ground Telescope at Guru Shikhar, Mount Abu" on August 05, 2023.

Capt. Dhruven Bhatt, Senior First Officer Boeing 787 Dreamliner, Qatar Airways delivered an expert talk titled "Opportunities and Career Avenues for Engineers in Aviation Sector" on August 1, 2023



Dr. Himanshu Desai, a psychiatrist, delivered a lecture titled 'the significance of mental health' on August 1, 2023



Ms. Surabhi Jain, Manager, Technical Services, Wacker Chemie India Pvt. Ltd., Mumbai, delivered an expert talk titled "Significance and Application of Polymer (VAE) in industries" on July 28, 2023.

Mr. Japen Gor, Director Gor Renewable, delivered an expert talk titled "Overview on Solar cell" on July 18, 2023.



Mr. Sandeep Mathur, Senior Consultant, Construction & Building Material, Ahmedabad delivered lecture titled "Role of Civil Engineer at Construction Site" on July 18, 2023

Ms. Binita Parikh, Google-certified Trainer, delivered an expert talk titled "Digital Persona in Professional World" on July 17, 2023



Shri Hrishikesh Dasa, Youth Counselor, Hare Krishna Mandir, delivered an expert talk titled "Finding Purpose and Passion" & "Art of Mind Control" on July 17, 2023.

- Mr. Sunny Wadhvaniya, Head of Operations, Institute of Defence Studies and Research, Gujarat University delivered an expert talk titled "Defence as a Career", July 17, 2023.

Dr. Nirali Mehta, Founder & CEO at PHARMA - STATS, delivered an expert talk titled "Data Science application in pharma", July 17, 2023



Ms. Manisha Pathak, Founder of "Rising Souls" delivered an expert talk titled "How to balance professional life and personal life and work culture", July 17, 2023.

Mr. Devashish Goswami, Ex group Director, SAC, ISRO delivered an expert talk titled "Robotics and Research Opportunities", July 17, 2023





Dr. Rohit Thanki , Chief Technological Officer and Data Scientist, KRiAN GmbH, Wolfsburg, Lower Saxony, Germany delivered an expert talk titled “Hyper-parameters tuning, Image segmentation and classification ” & “Deep Learning Architectures, Convolution Neural Network” on July 17, 2023.



Prof. M. C. Deo IIT Bombay delivered expert lecture titled ‘Introduction and Applications of ANN / SVR – LWPR’ on July 11, 2023.



Prof. Y. M. Desai IIT Bombay delivered expert talk titled “Numerical Methods & AI” on July 10, 2023



Prof. Gaurav Srivastava IIT Gandhinagar delivered expert talk titled “Computer Programming using Python” on July 05, 2023.





Research Article

Use of Recycled C&D waste, Fly Ash, Bottom Ash, Dredged Marine Sand and Gypsum for Construction of Sustainable Salt Pan Beds for Enhancement of Salt Productivity through Prevention of Brine Percolation



A DST funded Project was carried out by Collaboration of CSIR-CSMCRI & Nirma University. Dr Sonal Thakkar and Dr Urmil Dave from Nirma University and Dr Bhoomi Andharia and Dr Arvind Kumar from CSIR-CSMCRI, Bhavanagar were the members of the project team. The objective of the project was to utilize generated waste in concrete and increase the yield of salt as well as reduce the health hazard of the salt workers.

India is the third largest producer of salt 30 Million MT (~10 % of world production) after China (22.7%) and USA (16.5%). Annual salt demand in India is rising by 5-6%, Projected demand by 2022: 35-40 Million MT. Salt production per acre area is approximately 50 tons. Production can be increased to 60-70 tons per acre of land through the proposed intervention of technology. Presently salt harvesting is done by manual compaction of soil by foot or by static roller. Therefore there is brine losses and health hazards. The main objective of the project was to design an economical concrete mix for salt-pan bed which is sustainable, made from locally available waste material and has good durability for specific field conditions to prevent brine losses and to support mechanization in salt harvesting.



In order to make sustainable salt beds, alkali-activated concrete was developed using industrial waste like fly ash, ground granulated blast furnace slag, waste gypsum, recycled coarse aggregate, dredged marine sand and sodium-based activators. Various trial mixtures were carried out to evaluate the effect of various combinations on the mechanical properties of concrete. Figure 1, shows few of the cast specimens. After significant number of trials, it was possible to get desired compressive strength of M25 grade concrete along with flexural strength. Figure 2 shows the graph of compressive strength of three alkali-activated concrete(AAC) mixes.

Figure 1:
Casted Specimens

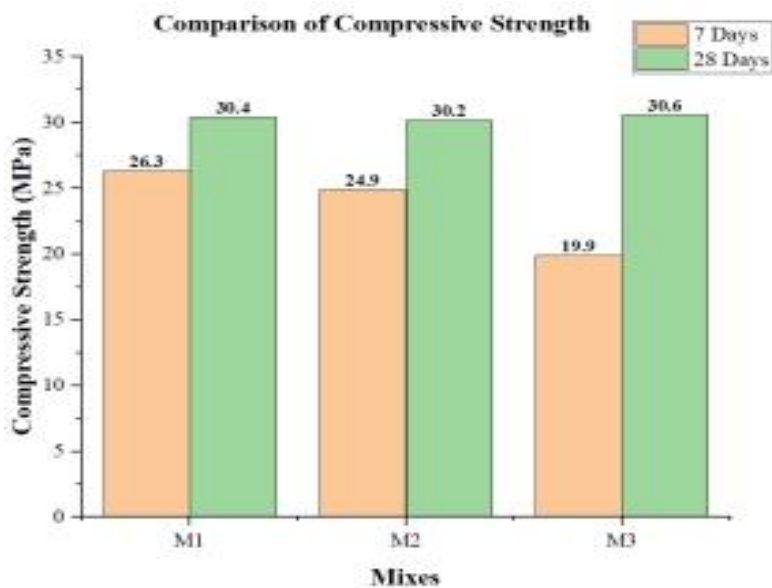


Figure 2:
Compressive Strength of AAC



Fig. 6 Construction of Ponds

(a) Leveling



(b) Bricks wall of pond






(c) Plastering



In order, to validate the results at laboratory scale, four ponds were created and all the ponds were filled with salt water and brine losses are measured in actual conditions. Tests are also being carried out to measure durability parameters of the developed concrete to assess the life cycle of the concrete into actual salt pans.



PhD Completed

	Name of Faculty	Title of the Thesis	Name of the Guide	Name of awarding Institute /University
	Prof. Anand Bhatt	Experimental Investigations on Wickless and Wicked Multi-branch Heat Pipe in Different Orientations	Dr R.N.Patel Dr S.V.Jain	Institute of Technology, Nirma University
	Prof. Hiren Prajapati	Synthesis and characterization of magnetorheological fluid for design of double coil force actuator	Dr Absar Lakdawala	Institute of Technology, Nirma University
	Prof. Usha Patel	Active learning based Hyperspectral image classification	Dr. Vibha Patel	Gujarat Technological University
	Prof. Harsh Kapadia	Advanced imaging techniques for concrete damage characterization	Dr. J.B.Patel and Dr.P.V.Patel	Institute of Technology, Nirma University



New Faculty Joining

Department	Name of the faculty	Qualifying Degree
Civil Engineering	Prof. Indrajeet Kumar	Ph.D.
Electronics & Communications	Prof. Khushboo Sinha	Ph.D.
Electronics & Communications	Prof. Krupa Purohit	Ph.D.
Electronics & Communications	Prof. Amrin Kagdi	Ph.D.
Electronics & Communications	Prof. Ramya Nair	Ph.D.

During the period institute has an ongoing total 43 externally as well as internally funded research projects worth of Rs. 406.07 lacs.

**Research Projects
- Click Here**

**Publications -
Click Here**

During the tenure faculty members of the institute has published more than 109 international publications in high-impacted journals.

The Institute encourages faculty members to attend national and international conferences.

**Conference Attended -
Click Here**



Awards

ISA Educational Foundation Scholarship Award



Prapti Bordoloi

(2020-24 batch)

\$3000



Somya Gupta

(2017-21 batch)

\$3000

Ms Prapti Bordoloi and Ms Somya Gupta from the Electronics and Instrumentation Engineering department of the Institute of Technology, Nirma University are selected to receive the prestigious ISA Educational Foundation Scholarship Award 2023 of 3000 USD.

Best Presenter Award



Mr. Meet Parmar, PhD scholar presented the research paper titled: "Hybrid Force and Position Control of the KUKA IIWA Robotic Manipulator" at International Conference on Artificial Intelligence, Robotics, Signal and Image Processing (AIRoSIP) 2023 in Yogyakarta, Indonesia on August 2023. He received the Best Presenter award in the same.



Dewang Mehta IT Award

Ms Dipti Sharma, Electronic & Instrumentation Engineering department has emerged as the Winner of the Dewang Mehta IT Award 2023 on August 10, 2023 under the guidance of Dr H. K. Patel.



Schlarship awarded

Mr. Dhruvil Kamani, a Civil Engineering Student (21BCL048) was selected for an All India level IEI scholarship for the academic year 2021-22. He has received a scholarship of Rs. 14,000/- from the Institution of Engineers of India (IEI), Kolkata under the category of merit cum means based.



Best Oral Presentation

Himandri Zala, Mahek Vyas and Romil Amipara the students of Chemical Engineering Deparment presented a paper on "An energy efficient and renewable hydrogen production from glycerol over nickel based catalyst doped with different promoters on alumina." and they have been awarded for the best oral presentation at the IMSEEH 2023 conference.

Mr. Haard Shah has been honoured with Excellence in Student Section Leadership Award' from ISA Students' Chapter, Nirma University. This remarkable achievement marks a momentous milestone as it is the first time ever that this esteemed recognition has been bestowed upon chapter on a global scale.



Utkarsh Thumar and Meet Shah from Chemical Engineering Department demonstrated exceptional skills in Inter-Institute Volleyball Competition. Utkarsh, as a spiker, showcased flawless precision, while Meet's relentless play kept the opposition on their toes.

Shruti Mishra, a student of Chemical Engineering Department represented the Institute of Technology, Nirma University at a National level sports competition organized by BITS Pilani, during 21st to 28th September and emerged as the winner of the tournament.



Gunjan Rathi from Chemical Engineering department along with Palak Rathod from Electronics & Instrumentation Engineering Department displayed outstanding performance in the Inter-Institute Carrom Tournament held in November 2023 and emerged as winners.



Team Arrow @ Maryland, USA



Team Arrow, a part SAE Nirma Collegiate club secured overall 5th position amongst 71 international teams participated at Association for Unmanned Vehicle Systems International (AUVSI) Student Unmanned Aerial Systems Competition (SUAS) 2023 competition held at Maryland, USA. Team won a cash prize of 500 USD and a plaque.



Team competed alongside the prestigious institutions such as Cornell University, University College London, North Carolina University, Virginia Tech, Purdue University and 7 other University of US, University of Calgary, Norwegian University, Istanbul Tech University, King Fahd University, University of Warsaw, Royal Thai Airforce Academy, Military school of Egypt etc.



SUAS Winner Team Group Photo

The team members:

B.Tech Electrical Engineering : Jatin Vanjara

B.Tech Instrumentation and Control Engineering : Sidharth Mandaliya

B.Tech Mechanical Engineering : Aditya Gupta, Devansh Talati, Rushil Daruwala, Priyanshi Shah

B.Tech Electronics and Communication Engineering : Vraj Modi, Utkarsh Maheshwari



Team Nirma ROBOCON

Team Nirma Robocon, 10 times National Champion, secured Second Runners up position at DD Robocon National 2023 and also received IHFC Winner award of cash prize of Rs 5000/- at 22nd National Robocon competition held during 15 to 18 June 2023 at Thyagaraj Stadium, New Delhi organized by Doordarshan and IIT Delhi. Team competed with 68 teams from India including IITs and NITs.

The team members:

B.Tech Electronics and Communication Engineering : Harsh Chotaliya, Rudra Kasta, Jay Sanchania, and Sumit Ariwala

B.Tech Mechanical Engineering: Arya Kargathara, and Dev Bhagat, Devam Mathia, and Patel Ridham Manojkumar

B.Tech Electrical Engineering: Aryan Parmar, Raj Bambhaniya

B.Tech Instrumentation and Control Engineering: Devanshu Kotwani, Foram Patel, and Het Patel



Robocon 2023 winner team



Team Arrow @ Competition SAEISS DDC 2023



Team arrow participated in SAEISS DDC 2023 competition in micro and regular category. In this competition the teams were given various task such as to carry high payload, have innovation and to make and aerodynamically efficient aircraft within limits of 1.5 kg and 4kg in micro and regular category respectively.





Total 82 teams participated from all-over the India.
Team arrow has been working on this competition since October 2022 which resulted into the glory. Moreover we are thankful to Nirma University for technical, and financial support.

VENUE: RAJLAKSHMI COLLEGE CHENNAI
Date : 21st to 23rd July

Micro Category
Best design report 10000
Overall second 45000

Regular
Cfd 1st 10000
Design report 2nd



Team Arrow Micro category Team ID:DDC20230175	Team Arrow Regular category Team ID DDC20230174
Team members: 1.Vaibhav Pawar 2.Yug Mevada 3.Ravi Shah 4.Bhavya Radadiya 5.Rahul Patil 6.Shravan Savaliya 7.Rutva Sheth 8.Rishith Vanaliya 9.Monil Ashapuri 10.Dhagash Patel	Team members: 1. Viraj Mujadia 2. Priyansh Fadia 3. Krushan Jain 4. Neel Patel 5. Vijay Vadher 6. Maharshi Kelaiya 7. Tirth Sur 8. Malav Prajapati 9. Achal Doshi 10. Jishan Seta



Mechanical Engineering Students' Association (MESA)

Mechanical Engineering Students' Association (MESA) organized a session of Shri Amol Wagle who is an inspirational speaker and an entrepreneur on the subject "Bond to Lead" on 4th September 2023. Shri Amol Wagle is a well-known international speaker of The Art of Living, he has delivered 50,000+ teaching-training hours and transformed the lives of many top corporate professionals.



Shri Amol Wagle, inspirational speaker



The NBC Idea Factory's season 8 competition

The NBC Idea Factory's season 8 competition was concluded with a final round at NBC Bearing limited, Jaipur on August 9th, 2023. The competition is focussed on innovative ideas in bearing application and research. Among the participants, two teams from Nirma University Team Atoms (Mechanical Engg.) and Team Pioneers (Mechanical Engg.) stood out, making it to the final round. Team Atoms achieved an impressive milestone, securing the 2nd Runner's Up position. Both the Nirma University teams showcased exceptional innovation, teamwork, and presentation skills among the six finalists. All participating teams were tasked with addressing the central theme "Reducing the roller bearing noise in EVs" This challenge prompted students to explore innovative and practical solutions for this crucial engineering concern.

Here are the members of the respective teams:

1) Team Atoms:

Dev Patel
Karthik Gopalakrishnan
Vivek Mehtani,
Zeal Mecwan

2) Team Pioneers:

Bhavy Kala
Ujas Dave
Dhruv Kher
Harsh Pachauri



Team EESA

Team EESA conducted an eye check-up event at Bhagwati Vidyalaya School for the school students in collaboration with certified ophthalmologists and optometrists, Dr. Krishnalal K. Patel and Dr. Chaturbhai G. Patel.



Anant Patel and Nirali Chaudhari from Civil Engineering Department presented a paper on Enhancing water security through site selection of water harvesting structures in semi-arid regions: a GIS-based multiple criteria decision analysis. Water Science & Technology, Water Supply 2023;

Raj Birewar, Kshitij Patel and Parul Patel from Civil Engineering Department presented a paper titled "Productivity Analysis of Column Concreting using the Method Productivity Delay Model" at First National Conference on Modern Construction Practices and Management on June 02 & 03, 2023, SVNIT Surat.

To summarize the concepts of the completed unit, Dr Sapan H Mankad in his MTech course "Applied Mathematics for Computer Science" conducted a quiz to check the knowledge of different concepts of that unit, and this activity got a good response from students.



- Nupur Parikh completed the summer internship at Microsoft with a stipend of INR 125,000.00/- per month
 - Vrutik Patel completed the summer internship at Microsoft with a stipend of INR 125,000.00/- per month
 - Kajal Lochab secured the summer internship at Google, India with a stipend of INR 77,000/- per month
 - Aditi received the Runner Up position in EmpowHER - A Blog Writing Competition organized by WIE IEEE Student Branch, Nirma University in August 2023
 - Riddhi Rajnish Jain secured the Summer Analyst internship at Morgan Stanley from May to July 2023, with a stipend of INR 87,000 per month
 - Heli Naik secured the Winner position in the EmpowHer-Blog Writing Competition held on 9 July, 2023
 - Kartikay Saxena secured the 2nd Runner Up position in the Global Entrepreneurship Bootcamp event on 7 July, 2023 -10 July, 2023.
 - Niraj Chaudhari, Hitesh Mori, Kenil Kaneria and Mihir Patel have won the 2nd Prize in the Hackathon(Tic-Tech-toe '23 at Daiict) during 22nd September, 2023 to 24th September, 2023.
 - Alay and Devam published an article titled "Safeguarding the IoT: Taxonomy, security solutions, and future research opportunities" in the Wiley Journal Security and Privacy, November, 2023.
-
- Mr. Nilesh Kumar Jadav, a Full-Time Ph.D. Scholar under the guidance of Dr. Sudeep Tanwar at the Department of Computer Science and Engineering, Institute of Technology, Nirma University, presented a Research Paper at the IEEE Global Communications Conference (IEEE GLOBECOM 2023) in Kuala Lumpur, Malaysia, which is one of the IEEE Communications Society's flagship conferences dedicated to driving innovation in nearly every aspect of communication.





- Dhairya Jadav published an article titled 'Proxy Smart Contracts for Zero Trust Architecture Implementation in Decentralised Oracle Networks Based Applications' in the Journal Computer Communications in June, 2023.
- Nisarg Patel and Raj Parekh published an article LEAF: A Federated Learning-Aware Privacy Preserving Framework for Healthcare Ecosystem in the Journal IEEE Transactions on Network and Service Management (IEEE TNSM) in June, 2023.
- Sachi Chaudhary and Shahil Shah published an article Blockchain-Based Secure Voting Mechanism Underlying 5G Network: A Smart Contract Approach in the Journal IEEE Access, July, 2023.
- Keyur Patel and Chinmay Mistry has published an article A systematic review on performance evaluation metric selection method for IoT-based applications in the Journal Microprocessors and Microsystems, September, 2023.
- Rushir Bhavsar published an article Classification of Potentially Hazardous Asteroids Using Supervised Quantum Machine Learning in the Journal IEEE Access, July, 2023.
- Khush Shah has published an article AI and Blockchain-Assisted Secure Data-Exchange Framework for Smart Home Systems in the Journal MDPI, Mathematics, September, 2023.
- Devangi Hitenkumar Patel and Kamya Premal Shah published an article Blockchain-Based Crop Recommendation System for Precision Farming in IoT Environment in the Journal MDPI, Agronomy, October, 2023.
- Ali Asgar Padaria and Aryan Alpesh Mehta published an article Traffic Sign Classification for Autonomous Vehicles Using Split and Federated Learning Underlying 5G, October, 2023.
- Harsh Mankodiya and Priyal Palkhiwala published an article 'Deep Learning-Based Robust Morphed Face Authentication Framework for Online Systems Precision Agriculture' in the Journal Computers, Materials & Continua, October, 2023.
- Khushi Raval published an article, 'A survey on safeguarding critical infrastructures: Attacks, AI security, and future directions' in the Journal International Journal of Critical Infrastructure Protection, December, 2023.



- Sachi Chaudhary has published an article Blockchain-Based Energy Trading Scheme for EVs Coordination: A Smart Contract Approach in the Journal International Conference on Communications, Computing, Cybersecurity, and Informatics (CCCI), October, 2023.
- Yogi Patel and Shivang Patel published an article 'Blockchain and AI-based Engine Fault Detection Scheme for Autonomous Vehicles' in the Journal International Conference on Communications, Computing, Cybersecurity, and Informatics (CCCI), October, 2023.
- Faizal Kureshi and Dhaval Makwana have published an article 'Blockchain Based Humans-Agents Interactions/Human-Robot Interactions in the Journal Robotic Process Automation', August, 2023.



Mission Chandra Competition.

Gurjar Dharmik Shaileshbhai, JaiminKumar Gulale, Harshil Kakkad won Prize money of Rs. 15,000/- in Mission Chandra Competition.

ROBOFEST 3.0

Winner of Stage II



The second stage of ROBOFEST 3.0 was organized at Science City, Ahmedabad during October 2023. Total 12 teams participated in the prototype submission stage and showcased their prototype models to the committee. Total of 11 teams cleared the second stage and won the prizes for the preparations of the working models. The list of winners of the second stage is as follows:

Sr. No.	Name of Mentor	Team Member	Theme	Prize Money Rs.
1	Dr Sachin Gajjar	Nilkanth Kapadia Patil Rahul Burhanuddin Sabuwala Ashutosh Tiwari Vedanti Patel	Fun Robotics	1,00,000/-
2	Darshita Shah	Shivam Soni Sahil Menpara Dhir Gandhi Kajal Lochab Bhavylal Pandya	Hexapod	2,00,000/-
3	Dr. Vijay Savani	Vaibhav Sharma Harsh Panara Ayush Kadia Deep Lad Vedant Rokad	Hexapod	2,00,000/-
4	Prof Darshita Shah	Sourabh Rai Purohit Yash Devanand Sharma Rajkumar Devesh Pareek Tirth Ketankumar Vyas	Rover	2,00,000/-
5	Prof. Vishal M Vaidya	Vatsal Rabadia Ritesh Panchal Vedang Panchal Keyur Desai Param Soni	Rover	2,00,000/-
6	Dr. Akash Mecwan	Dev Bhagat Arya Kargathara Aryan Kalariya Aryan Batra Raj bhingradiya	Rover	2,00,000/-
7	Dr. Akash Mecwan	Kathan Patel Neer Patel Vishwesh Rajput Saket Joshi Sanskriti Gondaliya	Submarine & Underwater	2,00,000/-
8	Dr. Akash Mecwan	Harsh Chotaliya Vivek Sondagar Arya Kargathara Dev Bhagat Dhyey Chavda	Two Wheeled	2,00,000/-
9	Harsh Kapadia	Shivam Bhatia Umang Kathiriya Raj Dalwadi Amisha Mahapatra Teesha Bansal	Others	1,00,000/-
10	Dr. Akash Mecwan	Aryan Batra Dev Bhagat Arya Kargathra Dhananjay Lakhani Dheeraj Agrawal	Others	1,00,000/-
11	Prof. Shruti C Bhatt	Dhananjay Lakahani Pratham Panchal Dharan Shah	Others	1,00,000/-



- The Electronics and Communication Students' Organization organised an event named "Codecook" on October 03, 2023..
- The Electronics and Communication Students' Organization organised an event named "Namkaran" to change the name of E department magazine previously named "Spectrum". The unveiling ceremony of newly named magazine was organized on November 09, 2023.

Blood Donation Drive

A Blood Donation Drive was conducted on October 30, 2023, on the Nirma University Campus in honor of National Unity Day. NSS Unit School of Technology and ISA Students' Chapter Nirma University worked together with the Civil Hospital in Ahmedabad to make it possible. The blood donation saw an astounding turnout of 283 units of blood donated, which truly stands out as a remarkable achievement. All the donors dedicated their time and efforts to this noble cause. Their selfless contribution played a vital role in saving lives and improving the well-being of those in need. The hard work and commitment of the volunteers played an instrumental role in the success of the event.

Charity Drive for the kids of 'Prakash School for Mentally Retarded'

The International Society of Automation Students' Chapter Nirma University organized a Charity Drive for the kids of 'Prakash School for Mentally Retarded' on November 7, 2023. This initiative was carried out for the 17th year in a row. The charity drive was conducted under the supervision of Dr. Himanshu Patel, the Head of the Department and Faculty Advisor, and Prof. Sneh Soni, Faculty Coordinator of the ISA, who provided guidance and support to the team throughout the event.



ISA Leaders' Meet

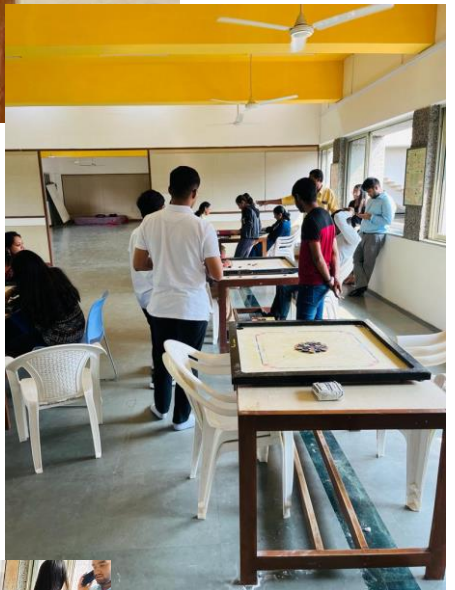
The International Society of Automation (ISA) Students' Chapter, Nirma University hosted the ISA Leaders' Meet on September 13, 2023, graced by the esteemed presence of ISA Global President, Mr. Marty Bince. This event was organized under the guidance of Dr. Himanshu Patel, HoD of the E&I Department at Nirma University and Faculty Advisor of the Students' Chapter.

The ISA Leaders' Meet served as a pivotal gathering that brought together leaders from various divisions of ISA-Gujarat, demonstrating the vibrant network. This event offered a platform for profound discussions, unveiling of innovations, sharing of invaluable perspectives, and an immersive tour of our cutting-edge labs, showcasing the university's state-of-the-art equipment. The ISA Leader's Meet was a resounding success that will be cherished by all stakeholders.





- The International Society of Automation (ISA) Students' Chapter Nirma University conducted a workshop focusing on AI Chatbots on 2nd September 2023. The workshop was aimed at enlightening students about the growing significance of AI Chatbots in today's technological landscape.
- The International Society of Automation Students' Chapter Nirma University recently conducted a workshop focusing on the UR10e Robotic Arm on 16th September 2023. The workshop was aimed at educating students about the uses of robotic arms in various technological fields.
- The International Society of Automation, Students' Chapter Nirma University, organised an event named ABHIVRIDDHI from 27th to 29th October 2023. The event was a blend of technology and finance. The event featured a diverse range of workshops like "Robodrive" which offered participants the opportunity to construct gesture-controlled robotic car, an IoT based home automation workshop and "Bullseye" which provided a virtual environment for stock market exploration. The main feature of the event was "BidBots". Also the IoT workshop was successfully conducted by under the guidance of Mr. Sarwam Miyani.





Alumni's Article

Innovation Of 2023 (HAL)

Humanity is tackling global challenges with inventive solutions. Progress in science and technology is aiding businesses in mitigating greenhouse gas emissions, fortifying vital infrastructure against cyber threats, and empowering teams within a rapidly evolving workforce.



A groundbreaking development lies in technology paving the way for renewable fuel production. An infographic elucidates the process of creating eFuels. Essentially, this technology transforms captured carbon dioxide (CO₂) and green hydrogen into a feedstock capable of generating eFuels, also known as electro fuels. These eFuels can slash greenhouse gas emissions by an impressive 88% when compared to conventional jet fuel.

The innovation lies in the fact that contemporary aircraft can be fueled by up to 50% sustainable aviation fuel (SAF) when blended with traditional jet fuel. Predictions from the International Air Transport Association suggest that sustainable aviation fuels will contribute around 65% of the necessary emissions reduction for the aviation sector to achieve net-zero by 2050.

While SAF is commonly derived from sources such as waste fats, oils, and greases, or other biomass, expanding the adoption and progressing towards powering planes with 100% renewable fuels necessitates additional technologies for producing diverse feedstocks. Furthermore, when aircraft burn conventional jet fuel, they release stored underground carbon dioxide into the atmosphere. In contrast, eFuels are manufactured using carbon dioxide that is already above ground, marking a more environmentally sustainable approach.

Mr. Jaimeen Chhatrawala (M.Tech, Control and Automation)
Solution Analyst, Industrial Automation,
Honeywell, Optimized solutions Limited.



- Ms Megha Bhatt, an Alumni of the Civil Engineering Department and secretary of FSAI Gujarat Chapter, in collaboration with the organisation of Civil Engineering Students (ORCES), conducted a 'Blood Donation Camp' for the students of Nirma University on August 1, 2023.



- Mr.Yash Katrodiya of 2017 Batch,Founder at Recells Technology - The Future Batteries conducted lecture on "From Idea to Impact- A Roadmap to Entrepreneurial Success" on July 17, 2023.
- Mr. Palakkumar Mehta of 2009 Batch, Associate Environmental Engineer in Gujarat Pollution Control Board (GPCB) conducted lecture on "Cracking Competitive Exams" on July 17, 2023.
- Dr. Nilanjana Banerjee of 2005 Batch, Associate Professor and Head of the Chemical and Petroleum Engineering Department (Energy Cluster) at UPES, Dehradun conducted lecture on "Net Zero - Decarbonization of Energy and Chemical Industries" on July 18, 2023.
- Mr. Daksh Bajoria of 2006 Batch, A Plastic Specialist at Riviera conducted lecture on "· Growth in the core Manufacturing Sector" on July 18, 2023.
- Mr. Karan Shah of 2006 Batch, Partner at Krishna Enterprise, conducted lecture on "Options for Higher studies" on July 18, 2023.



- Mr. Parthiv Shah of 2006 Batch, Director @DoctorC, conducted lecture on "Management studies & wider corporate job market options" on July 18, 2023.
- Mr. Survashish Chattopadhyay of 2009 Batch, Associate Manager, Ops Consulting & Transformation, Accenture, conducted lecture on "Career paths after Engineering" on July 18, 2023.
- Mr. Anjani Sharma of 2014 Batch, scientists at ISRO, conducted lecture on "Scope of Chemical Engineering in Space Science and Technology" on August 28, 2023.
- Ms. Anuradha Tadeppali of 2003 Batch, Senior Manager of Deloitte Consultancy, USA, conducted lecture on "Interview preparations and soft skill development" on August 31, 2023
- Alumni members of B Tech Mechanical Engineering, Mr. Naman Kothari, and Mr. Kunj Dholiya of 2021 passout batch and Mr. Karnav Sagathiya of 2022 passout batch cracked Common Admission Test (CAT) with high percentile and secured admission into highly renowned Indian Institute of Management (IIM). Mr. Naman Kothari secured admission to IIM, Ahmedabad. Mr. Kunj Dholiya secured admission to IIM, Lucknow. Mr. Karnav Sagathiya secured admission to IIM, Calcutta.
- Alumni member of B Tech Mechanical Engineering, Mr. Sarvagya Sharma of 2021 passout batch cracked Graduate Aptitude Test in Engineering (GATE) with high percentile and secured admission into highly renowned Indian Institute of Science (IISc), Bangalore.



An expert talk on “Entrepreneurship vs Employment: Most of the Young Gen Dilemma” was conducted on 15 September, 2023 for interested students of the CSE Department. The talk was delivered by CSE alumnus Ms. Khushboo Solanki (2005 pass out IT batch), the founder of Zero Gravity Communications. The talk aimed to shed light on crucial entrepreneurial strategies and insights, making it an event of significant importance.



An expert talk on “Building effective presentations and storyboarding: A workshop” was conducted on 2 September, 23 for interested students of the CSE Department. The talk was delivered by alumnus Mr Shivang Bhagat (2015 pass out CE batch), [Senior Consultant, Healthark Insights.](#)





- Two expert sessions were conducted on “Entrepreneurship” on 14 September, 2023 and 22 September, 2023 by Mr. Pratik Patel at CSE Department. It was an enlightening session that offered valuable insights into the world of entrepreneurship.

- Mr. Samir Motwani (CEO of RapidOps Solutions Pvt. Ltd., Ahmedabad) offered insightful information on current market trends during orientation on 31 July, 2023 for students of BTech 3rd Sem CSE. This helped students gain a practical awareness of the demands and expectations of the computer science sector in the actual world.



- Parth Aggarwal (AI Product Manager at Cactus Labs in Mumbai) led a session at the BTech 3rd CSE orientation on 31 September 2023. He stressed on the critical contribution that programming knowledge makes to the advancement of modern technology. He emphasized on the critical importance of these abilities for students seeking computer science education and their applicability in the quickly changing technological environment of today.
- During one of his sessions at the BTech 3rd semester Orientation (31-7-23), Mr. Kumar Vidhani (Scientist and C.T.O. at TCS Research & Development) highlighted the vital subject of data privacy, bringing light on the imperative necessity to secure sensitive and personal information in the modern digital world.



- Tech Holding came for the first time for campus recruitment in September 2023. The founder is from the first batch of CE alumni Vimal Savaliya.



- Mr. Manal Ghadawala, an esteemed alumnus of Nirma University's IC Department and a current employee at Reliance delivered an expert lecture on July 17, 2023. His lecture mainly focused on career paths in Automation and also share valuable insights on preparing for a successful journey in the industry.
- Ms. Hetvi Vyas, a proud alumnus of Nirma University's IC Department, and current employee in Flipkart's supply chain management delivered an expert lecture on July 17, 2023. Her insightful presentation focused on preparing for the corporate world and provided invaluable guidance to the aspiring engineers.



Alumni Lecture series during September 2023

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ORGANIZING
ALUMNI
LECTURE SERIES
ON
ENTREPRENEURSHIP

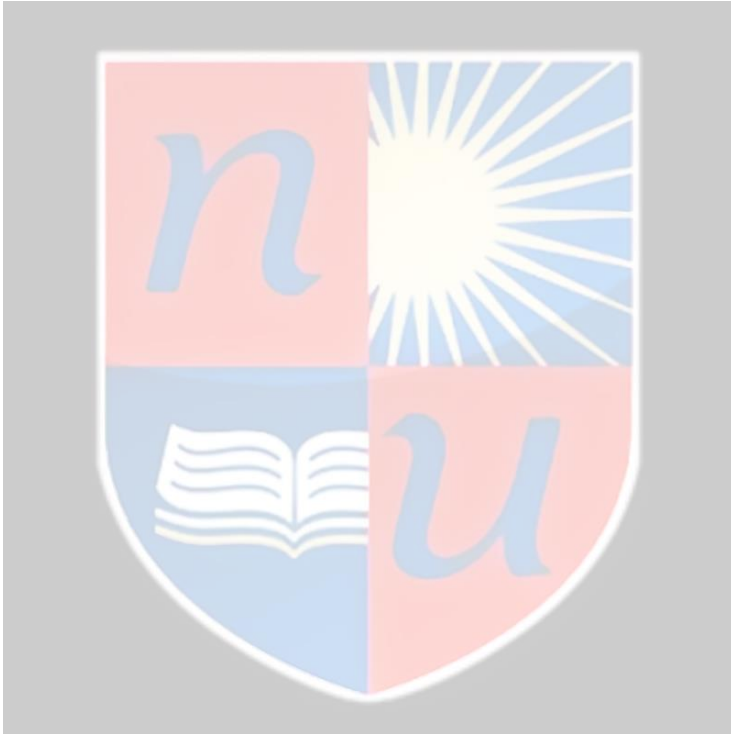
PRATIK PATEL
Managing Director
Yudiz Solutions Ltd.
Day 1
14-09-2023 (Thursday)
11:00 to 1:00

KHUSHBOO SOLANKI
Founder
Zero Gravity Communications
Day 2
15-09-2023 (Friday)
10:00 to 12:00

SHIVANG BHAGAT
Senior Consultant
Healthark Insights
Day 3
22-09-2023 (Friday)
11:00 to 1:00

Dr Tejal Upadhyay, Dr Parita Oza, and Dr Smita Agrawal
(NITAA Coordinators- CSE)
Dr. Madhuri Bhavsar
Professor & Head, CSE





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