

RESEARCH REPORT



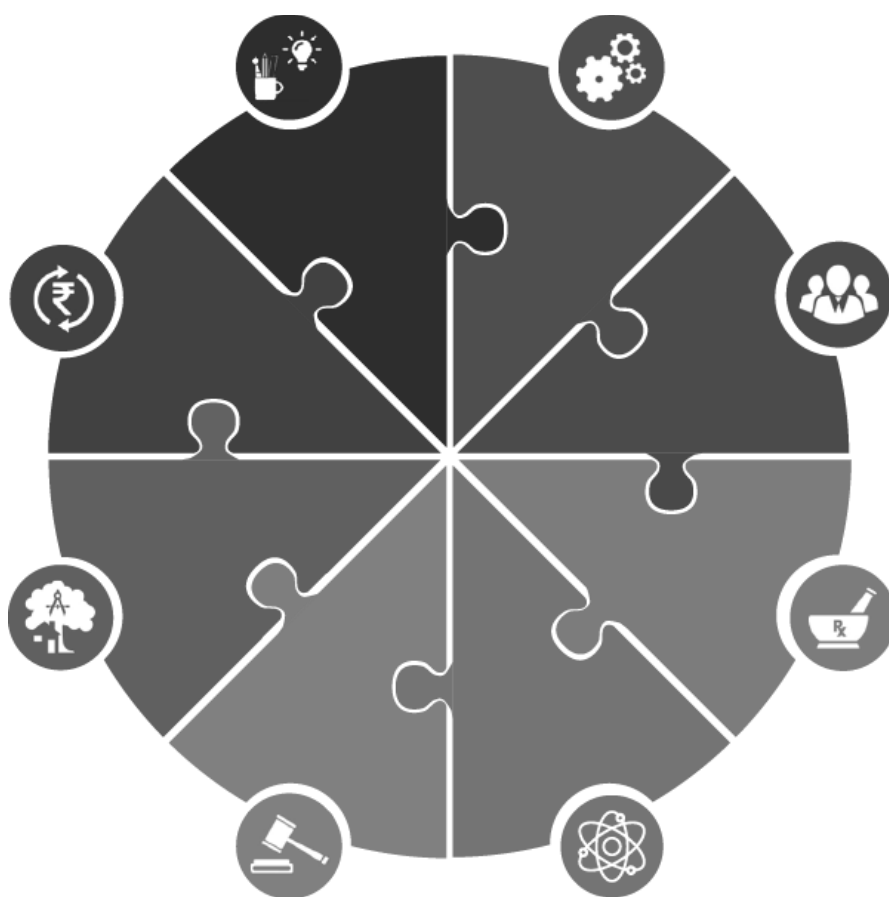
April 2020- March 2021

Concept Note:-

The design “**Unity**” represent loyalty and confidence in each field of study and research. The collection and interpretation of information together as a team in the university accentuates an overall growth for not only individual academicians but also the university as a whole as similar as the NU’s mission through better quality with scholarly excellence.



Annual Research Report (2020-21)



Nirma University
Sarkhej-Gandhinagar Highway, Ahmedabad- 382 481
Website: www.nirmauni.ac.in



Editorial Board

1. Dr. P. N. Tekwani Director, Research and Innovation,
Chairman – Editorial Board
2. Dr. R. N. Patel Director (i/c), Institute of Technology
3. Dr. Subir Verma Director, Institute of Management
4. Dr. Manjunath Ghate Director, Institute of Pharmacy
5. Dr. Sarat Dalai Director, Institute of Science
6. Dr. Madhuri Parikh Director (i/c), Institute of Law
7. Dr. Utpal Sharma Director, Institute of Architecture and Planning
8. Dr. Udai Paliwal Director, Institute of Commerce
9. Dr. Sangita Shroff Director, Institute of Design
10. Dr. Tejal Mehta Dy. Director, Centre for Quality Assurance & Academic
Development
11. Shri G. R. Nair Executive Registrar
12. Dr. Heena Dave Assistant Research Scientist,
Directorate of Research and Innovation
Member Secretary – Editorial Board
13. Ms. Ritu Agarwal Publication Officer



Message from the Vice President

Dear well-wisher of the Nirma University,

It gives me an immense pleasure to introduce yet another edition of our Research Report. This is the outcome of untiring research that is being carried out by our faculty members and students. Directorate of Research and Innovation of the University compiles and presents the research outcome in the form of a Research Report.

Nirma University, since its inception, has always strived for achieving highest standards of quality in all its endeavours and has taken several initiatives in its quest for excellence. It has advanced and arrayed strong systems and processes for continuous improvement of quality research amongst faculty members. Very conducive and structured environment is also offered to the student researchers for their outstanding research endeavours and achievements.

The research activities at the University get boost from successful practices for initiating and maintaining a culture of research. The University has also been involved in collaborating as well as partnering with not only national but also international institutes of repute in order to explore greater possibilities of research. Our efforts are to make the local research strong enough to make its mark globally and translate into a tangible reality.

The University has now put more emphasis on collaborative and interdisciplinary funded research projects, publications in reputed journals, patents, and design registrations. As we review on the progress of the University through the Annual Research Report of 2020-21, I would like to acknowledge the persistence and meticulousness of the researchers of the University who have made it attainable. It reflects commendable commitment of the faculty and students towards research. We keep up the determination to go forward to serve the humanity at large.

It is my sincere trust that this Research Report will serve as a useful reference for you.

K. K. Patel

Vice President

Nirma University

Nirma University Annual Research Report (April 2020 - March 2021)



Message from the Director General

Dear reader

Greetings!

The amount of knowledge that humankind generated in the twenty first century is much more than it had created till the twentieth century. This also implies that the pace of knowledge creation is accelerating significantly. Furthermore, the time lag between knowledge creation and its business application is reducing substantially. These two trends majorly affect the quality of human life and the progress of society. The current generation is much more prosperous and healthier as compared to the previous generations. Now we realise that as science progresses, society also develops. Science provides solutions to various societal problems – existing and unarticulated.

India has made important progress in the field of science and technology in last few decades. She established several research institutions and educational institutions that are research-focussed. Higher education system is now aware of its responsibility to generate knowledge and offer solutions that would help society become better. However, Indian society is far from becoming a knowledge society. Developed countries like the United States, the United Kingdom, Germany, France, etc. are far ahead in the scientific race. Even China is moving ahead with far greater speed. It is high time that higher education institutions (HEIs) embrace reforms to restructure themselves to move in the direction of research and innovation.

The first step in this direction is undergraduate research. The HEIs have to provide greater opportunities to their undergraduates to get engaged in research and innovation projects. By the same token, they must provide more financial support for undergraduate research. Experience has demonstrated that when undergraduates are properly trained, they can produce substantial research outcomes. We at Nirma University have taken undergraduate research with full sincerity. Each of our institutions has schemes and resources for undergraduate research. In addition, Nirma University Incubation Centre (NUIC) and Entrepreneurship Development Centre work hard to facilitate entrepreneurial and start-ups



ecosystem for our students. We are in the process of establishing a world class Tinkerers' Lab to support undergraduate research.

The second step is the promotion of robust doctoral research. We have increased the number of doctoral fellowships. Further, several doctoral students bring their own national fellowships. All institutions have identified their research thrust areas and their doctoral students pursue their dissertations in those areas. The number of doctoral students graduating from the portals of the University is on the rise. We are committed to enhance the quality of doctoral research over time and make it of the highest quality.

The third step is augmentation as well as creation of research labs and facilities. We are continuously revamping our existing labs. Simultaneously, we are creating new research facilities. Our new Central Library may be launched soon. It would help both faculty and students to get timely information and conduct in-depth research. In the same vein, we are boosting our ICT facilities on a continuous basis.

The fourth step is networking with sister research institutions and other HEIs for strengthening research efforts. Our faculty members are now better connected with other scholars both nationally and internationally. Faculty and student exchanges are on the increase.

This research report brings to you our research outcomes. Of course, these are humble contributions and we have to go miles and miles. We are laying a strong foundation of research and innovation on which we wish to make formidable research edifice.

Thanking you.

Anup K Singh, Ph.D.



Preface

This research report is a humble effort of Directorate of Research and Innovation (DRI) for systematically furnishing a brief account of research related activities carried out at Nirma University during April 01, 2020 to March 31, 2021. This is the 6th in row “Annual Research Report” published for the benefit of all the stakeholders of the university.

Nirma University thrives in enhancing research and innovation spirit in all its faculty members and students at various levels. The university is committed to its quality research outcome for the development of industry, society, nation and humankind. Faculty members and students of the university keenly contribute providing innovative solutions in their areas of expertise. Activities are being carried out at various fronts like; guiding research scholars under Ph.D. programmes, funded research projects, research publications in quality journals, patents, design registrations, writing books and book chapters, attending and presenting research papers in national and international conferences / seminars / workshops, attending research related training programmes and orientation programmes, Understanding its responsibility, the university also provides seed funds in the form of minor and major research projects, services of attorney for filing patents and designs, full financial support up to the grant of the patent, travel grants for presenting papers in international and national conferences, etc. As a result of motivation provided by the university, several faculty members bestowed their outstanding contributions in research, and are also recognized for their notable research outcomes by various agencies.

DRI at Nirma University works as facilitator and catalyst for research related activities at the University. Several Research Training Programmes, Research Orientation Programmes, Funding Opportunity Awareness Sessions, Patent Awareness Sessions, Ph.D. Students’ Poster Presentation, and other Research Related Seminars are regularly organized by DRI. Making effective use of Information and Communication Technology (ICT), the data for this Research Report were compiled through the tool developed in house.

I am very happy to share that recognising the efforts of the University and its faculty and student towards research, Department of Scientific and Industrial Research (DSIR), Ministry



of Science & Technology, Government of India has one more time renewed the Recognition of the University as Scientific and Industrial Research Organisation (SIRO) for the duration 2020-2023.

This has been a year of Pandemic. However, the commitment of the faculty members and students towards research was intact despite of testing times of COVID-19. During the financial year 2020-21, a total of eighteen major research projects worth Rs. 179 lakh, and two minor research projects worth Rs. 2.4 lakh are completed, which were funded by external agencies. Currently, other eighteen externally funded major research projects worth Rs. 556 lakhs are ongoing. Moreover, a total of nine new externally funded major research projects, worth Rs. 233 lakh were sanctioned in this financial year, whereas a total of three new minor research projects worth Rs. 7.3 lakh were sanctioned by external funding agencies.

To further strengthen research pipeline, Nirma University also provides seed money support for research. This year thirty seven minor research projects funded by Nirma University worth Rs. 35.6 lakh are also successfully completed. Furthermore, two major research project worth Rs. 60 lakh are currently ongoing, which are funded by the Nirma University. In addition to this, one major project worth Rs. 28.4 lakh is sanctioned by the university this year. This year a total of thirty three minor research projects were sanctioned by the University worth Rs. 29.7 lakh.

Only the quality papers published in Scopus / Web of Science / ABDC / EBSCO indexed journals are considered, and a list of 344 such papers is included in the Report. In addition to the journal papers, a total of 18 books, 83 book chapters, and 14 research papers in the conference proceedings. One patent is published, one is filed, and three patents are granted during the year 2020-21. A total of 52 doctoral students have received their degrees during this year, and 87 new doctoral students were admitted. It takes the count of ongoing Ph.D. students to 335. Apart from these, 4 faculty members received research awards in different categories. Several research conferences, seminars, and workshops on emerging trends being organized by the constituent institutes in diverse areas. Along with these, more than 220 on-line research talks and invited lectures of eminent speakers, have been arranged by all the constituent institutes to enhance the research awareness and upgrade the knowledge. A total of 15 international/national conferences were also organized on-line by the constituent institute of the university. However, listing of selected activities are presented in the report.



We are thankful to all the funding agencies for putting faith on our research capabilities and providing funds for research. The Management of Nirma University has always been very supportive for research drives. We sincerely thank the University Management, the Vice President, and the Director General, for their valuable guidance at different stages in the journey of DRI and publishing this report. Support extended by the Executive Registrar also deserves special mention here. We express our sense of gratitude to all the esteemed members of the Editorial Board and entire team of DRI for their critical inputs to further improve the quality of the Report. Our special thanks to Prof. Sangita Shroff, Director – Institute of Design for helping in getting the creative design of the front page. Thanks to Prof. Kanchan Gupta – Institute of Design who designed the wonderful front page of the Report and provided the concept note of “Unity” which reflects the collaborative and interdisciplinary research linkages for betterment of humankind. Finally, we thank all the Heads of the Institutes and Faculty Members of the University, who have put their untiring efforts to reach to a new milestone in this never ending yet ecstatic journey of research.

Prof. (Dr.) P. N. Tekwani

Director

Directorate of Research and Innovation (DRI) – Nirma University

Chairman – Editorial Board

Email: director.ri@nirmauni.ac.in



Contents

Sr. No.	Head	Page No.
1	Editorial Board	(i)
2	Message from the Vice President	(ii)
3	Message from the Director General	(iii)
4	Preface	(v)
5	University Research Statistics at a Glance	01
6	Research Report of Institute of Technology	03
7	Research Report of Institute of Management	59
8	Research Report of Institute of Pharmacy	72
9	Research Report of Institute of Science	89
10	Research Report of Institute of Law	96
11	Research Report of Institute of Architecture & Planning	103
12	Research Report of Institute of Commerce	111
13	Research Report of Institute of Design	117



University Research Statistics at a Glance



NIRMA UNIVERSITY

Research Statistics at a Glance

April 01, 2020 – March 31, 2021

Research Projects		
Major Research Projects		
	Number of Projects	Grant in Rupees (Rs.)
Completed Major Research Projects	18	1,79,63,310/=
Ongoing Major Research Projects	20	6,16,13,579/=
Sanctioned Major Research Projects	10	2,62,21,329/=
Minor Research Projects		
Completed Minor Research Projects	06	8,47,200/=
Sanctioned Minor Research Projects	03	7,38,000/=
Sanctioned, Ongoing and Completed Minor Research Projects during this Year	33	29,66,700/=
Research Publications		
Research Papers in Scopus / Web of Science / ABDC / EBSCO Listed Journals		344
Books Published		18
Book Chapters Published		83
Papers in Conference Proceedings		14
Patents		
Patents Published		01
Patents Filed		01
Patents Granted		03
Doctoral Research		
Ph.D. Degree Awarded		52
New Ph.D. Students Enrolled in this Year		87
Current Ph.D. Students		335
Current Ph.D. Guides		163
Research Awards		
Research Awards Received by the Faculty Members		04



Conferences / Seminars / Research Talks Organized by the Institute	
International / National Conferences / Symposium	15
Seminars / Workshops / Training Programmes	31
Research Talks / Lectures	105
Conclaves / Lecture series	09



Research Report of Institute of Technology



INSTITUTE OF TECHNOLOGY

Research Statistics at a Glance

April 01, 2020 – March 31, 2021

Research Projects		
Major Research Projects		
	Number of Projects	Grant in Rs.
Completed Major Research Projects	10	1,77,61,550/=
Ongoing Major Research Projects	06	1,70,14,700/=
Sanctioned Major Research Projects	05	1,34,60,200/=
Minor Research Projects		
Completed Minor Research Projects	01	1,32,200/=
Sanctioned Minor Research Projects	01	2,00,000/=
Sanctioned, Ongoing and Completed Minor Research Projects during this Year	17	15,60,500/=
Research Publications		
Research Papers in Scopus / Web of Science / ABDC / EBSCO Listed Journals		185
Books Published		10
Book Chapters Published		74
Papers in Conference Proceedings		09
Patents		
Patents Published		01
Doctoral Research		
Ph.D. Degree Awarded		15
New Ph. D. Students Enrolled in this Year		35
Current Ph.D. Students		142
Current Ph. D. Guides		45
Research Awards		
Research Awards Received by the Faculty Members		01
Conferences / Seminars / Research Talks Organized by the Institute		
International / National Conferences		02
Seminars / Workshops / Training Programmes		21
Research Talks / Lectures		28
Conclaves / Lecture series		06



Institute of Technology

Research Projects

Major Research Projects

Completed Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Identification of Perched Water Table Areas in Irrigated Tracks Using Airborne Sar Data (NISAR)	Prof. Parul Patel	Indian Space Research Organisation (ISRO)	20,67,000/-
2.	Identification of Material and Distress for Road Network of Ahmedabad City Using L and S Band Airborne Sar	Prof. Hemang Dalwadi, Prof. Parul Patel	Indian Space Research Organisation	19,56,000/-
3.	Identification of Existing Road Material, Condition and Potential Parking Area of Ahmedabad City Using AVIRIS Data and Updation Plan of Undeveloped Road	Prof. Parul Patel, Prof. Tanish Zaveri	Indian Space Research Organisation (ISRO)	17,00,000/-
4.	Algorithm for Water Pollutant Identification Due to Sewage and Industry Disposals for South Karnataka Coast, Mangalore Region	Prof. Pooja Shah	Indian Space Research Organisation (ISRO)	19,50,000/-
5.	SAR Polarimetry for Detecting Ocean Surface Targets	Prof. Alka Mahajan, Prof. Madhuri Bhavsar	Indian Space Research Organisation (ISRO)	18,52,000/-
6.	Mining Crop Cover, Crop Type and Crop Stages from L & S Band SAR	Prof. Madhuri Bhavsar, Prof. Vivek Kumar Sahdeo	Indian Space Research Organisation (ISRO)	14,28,000/-
7.	Development of Comprehensive Technique for Soil Moisture Estimation Using L&S Airborne Polarimetric Sar Data	Prof. Sanjay Garg, Prof. Priyank Thakkar	Indian Space Research Organisation (ISRO)	21,80,000/-
8.	Study and Development of Domain Adaptive Classification Algorithms for Advanced Earth Observation and Annotation System	Prof. Tanish Zaveri, Prof. Priyank Thakkar	Indian Space Research Organisation (ISRO)	17,00,000/-
9.	Development of Low-Cost Methodology for Surveying	Prof. Parul Patel, Prof. Hemang	Indian Space Research	17,05,000/-



	and Mapping with Indian Regional Navigation Satellite System (IRNSS-NAVIC)	Dalwadi	Organisation (ISRO)	
10.	Optimizing Parallelization of Legacy Code on Appropriate HPC Platform	Prof. Madhuri Bhavsar, Prof. Niraj Kumar Shah	Board of Research Nuclear Sciences (BRNS)	12,23,550/-
Total Grant				1,77,61,550/-

Ongoing Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Calibration and Validation of RISAT-1 SAR Sensor	Prof. Parul Patel	Indian Space Research Organisation (ISRO)	39,10,000/-
2.	Development of Advanced Algorithms for Land Use Land Cover Classification Using Deep Learning Techniques	Prof. Sanjay Garg, Prof. Swati Jain	Indian Space Research Organisation (ISRO)	20,91,600/-
3.	Design and Development of a Scalable Framework for Geospatial/Geoscience Data Ingestion, Ad-Hoc Queries, and Analysis on Big Data Environment	Prof. Sanjay Garg, Prof. Jayprakash Verma, Prof. Sapan Mankad	Indian Space Research Organisation (ISRO)	19,82,000/-
4.	Proactive Solutions for Achieving Trust in Cloud Computing Using Machine Learning Approach	Prof. Madhuri Bhavsar, Prof. Prasad Vivek Kumar Sahdeo	Department of Science & Technology (DST)	23,94,500/-
5.	Development of Integrated Wastewater Treatment Systems Using Alternative Innovative Approaches of Microbial Fuel Cells, Magnetic Nanoparticles and Vermicomposting with Water Hyacinth for Secondary Sludge Management	Prof. Chetna Chauhan, Prof. Manisha Shah, Prof. Nasreen Munshi. This project is of interdisciplinary nature and combined with Institute of Science, Nirma University and Veer Narmad South Gujarat University	Gujarat State Biotechnology Mission (GSBTM)	48,96,600/-



6.	Spectral Discrimination and Separability Analysis of Crops and Weeds using Deep Learning Techniques	Prof. Tarjni Vyas	AVIRIS-AO(ISRO)	17,40,000/-
Total Grant				1,70,14,700/-

Sanctioned Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Plasma Pyrolysis of Dry Municipal Solid Waste (Msw)/Refused Derived Fuel (Rdf) For Syngas and Electricity Generation	Prof. Sanjay Patel, Prof. Rajesh Patel	Gujarat Council on Science and Technology	45,23,200/-
2.	Torsional Behavior of Reinforced Concrete Elements Strengthened with Stainless Steel Wire Mesh	Prof. Sunil Raiyani, Prof. Paresh Patel	Science and Engineering Research Board	18,30,000/-
3.	Growth And Characteriation of Nano Structured Thin Films Of Magnetic Materials For High Speed Computer Memory Cell	Prof. Chetna Chauhan, Prof. Niranjana Devashrayee	Gujarat Council on Science and Technology	25,35,500/-
4.	Development of Autonomous Reconfigurable Load Carrier	Prof. Akash Mecwan, Prof. Mihir Chauhan, Prof. Bhupendra Fataniya, Prof. Dhaval Shah	Gujarat Council on Science and Technology	17,32,000/-
5.	Strengthening Precast Beam Column Connections Using Stainless Steel Wire Mesh (Sswm) - Experimental and Numerical Study	Prof. Paresh Patel, Prof. Digesh Joshi	Nirma University	28,39,500/-
Total Grant				1,34,60,200/-

Minor Research Projects

Completed Minor Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Synthesis and Characterization of Magnetically Hard/Soft - SRM/NI Ferrite Nano Composites	Prof. Chetna Chauhan, Prof. Tanuj Gupta	UGC-DAE	1,32,200/-
Total Grant				1,32,200/-



Sanctioned Minor Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Experimental Investigations on Rc Rc Girder Model of Bridges with Half-Joint and Retrofitting Strategies	Prof. Sharad Purohit	QR Global Challenges Research Funding (GCRF) at Liverpool John Moores University, UK	2,00,000/-
Total Grant				2,00,000/-

Sanctioned, Ongoing and Completed Minor Research Projects during the Year

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Sedimentation Study of Megnetorheological Fluids (MRFS)	Prof. Hiren Prajapati	Nirma University	1,00,000/-
2.	Design, fabrication and investigations of an improved biomass Cook stove for rural development	Prof. Darshit Upadhyay, Prof. Shebaz Memon	Nirma University	1,00,000/-
3.	Experimental Free Space Optical Communication Link	Prof. Hardik Joshi	Nirma University	92,500/-
4.	Study of Microcapsules for Self-Healing Concrete	Prof. Sonal Thakkar	Nirma University	1,00,000/-
5.	Feasibility Studies for the use of Recycled Concrete Aggregates and Manufactured Sand in Highway Concrete Pavements	Prof. Hemanth Kamplimath, Prof. Vineet Kothari	Nirma University	1,00,000/-
6.	Waste Water Treatment Using Membrane Bio-Reactor (MBR)	Prof. Hasan Rangawala, Prof. Karishma Hingnekar	Nirma University	1,00,000/-
7.	Number Plate and Seat Belt Detection in Car Surveillance Images Using Deep Learning	Prof. Rupal Kapdi, Prof. Pimal Khanpura	Nirma University	53,000/-
8.	Automatic Helmet Detection and Gate Opening for Nirma University	Prof. Vishal Parikh, Prof. Malaram Kumhar	Nirma University	49,500/-
9.	Development of eco- friendly green indicator for volumetric titration methods	Prof. Ankur Dwivedi, Prof. Amita Chaudhary	Nirma University	1,00,000/-
10.	Development of low-cost method for breaking kinetically	Prof. Amita Chaudhary, Prof.	Nirma University	1,00,000/-



	stable emulsions	Ankur Dwivedi		
11.	IoT based Pest Control System	Prof. Smita Agrawal, Prof. Preeti Kathiria	Nirma University	99,500/-
12.	Predictive model for depression level detection in youngsters	Prof. Jigna Patel, Prof. Jitali Patel	Nirma University	52,000/-
13.	Automatic Student Attendance System Using Face Recognition	Prof. Bhavin Kakani, Prof. Rutul Patel	Nirma University	59,000/-
14.	Machine Learning Approach for Source Separation in Hearing AIDS	Prof. Manish Patel	Nirma University	1,00,000/-
15.	Automated Marksheet Generation Through Handwritten Character Recognition	Prof. Rutul Patel, Prof. Bhavin Kakani	Nirma University	57,000/-
16.	Design of walking mechanism for a multi-legged robot	Prof. Jatin Dave, Prof. Akash Meckwan	Nirma University	1,00,000/-
17.	Tool wearing monitoring using computer vision techniques	Prof. Prashant Bagga, Prof. Mayur Makhseena	Nirma University	1,98,000/-
Total Grant				15,60,500/-

Research Publications

Research Papers in Scopus/Web of Science/ABDC/EBSCO Listed Journals

1. Neha Patni, Shibu G. Pillai, "Optimization of the Doping of Polyaniline via Response Surface Method to Prepare Polymer Electrolytes for Dye Sensitized Solar Cells". Journal of Environmental Chemical Engineering. 8(2) (2020): 01-07.
2. Nikita Chokshi, Jayesh Ruparelia, "Catalytic Ozonation of Reactive Black 5 Over Silver Cobalt Composite Oxide Catalyst". Journal of the Institution of Engineers (India): Series A. 101(3) (2020): 433-443.
3. Shailaja Sadhu, Jayesh Ruparelia, Upendra Patel, "Homogeneous Photocatalytic Degradation of Azo Dye Reactive Black 5 Using Fe(III) Ions Under Visible Light". Environmental Technology. (2020): 44214.
4. Milind Joshipura, Nimish Shah, Sudhir Dabke, "New Generalization of Cohesion Factor Model for Polar Compounds: Peng-Robinson Equation of State". Physical Chemistry Research. 8(2) (2020): 355-364.
5. Neha Patni, Shibu G. Pillai, Pranjal Sharma, "Effect of Using Betalain, Anthocyanin and Chlorophyll Dyes together as a Sensitizer on Enhancing the Efficiency of Dye-Sensitized Solar Cell". International Journal of Energy Research. 44(13) (2020): 10846-10859.
6. Bhavna Soni, Upendra Patel, Abinash Agrawal, Jayesh Ruparelia, "A Comparative Study for Degradation of Rb5 Dye Using Ti/Ir_{0.15}Ru_{0.15}Sn_{0.6}Sb_{0.1} Electrodes



- Fabricated by Employing Two Different Thermal Decomposition Methods". *Sn Applied Sciences*. 2(11) (2020): 1853.
7. Samik Mapara, Upendra Patel, Keen Olya, Jayesh Ruparelia, "Significant Improvement in Biodegradability of a Real Optical Brightening Agent (Oba) Wastewater Using Small Doses of Fenton Reagent". *Environmental Technology*. 42(13) (2021): 2112-2121.
 8. Snehal Popli, Preyasi Patel, Manali Date, Jayesh Ruparelia, Upendra Patel, "Rapid Electro-Catalytic Reduction of Azo Dyes and Phenolic Compounds In the Presence of Metallic Palladium". *Separation and Purification Technology*. 254(.) (2021): 117-658.
 9. Ankur Dwivedi, Nimish Shah, "Wonder of Chemistry: Ionic Liquids". *Annals of the Romanian Society for Cell Biology*. 25(6) (2021): 3215-3220.
 10. Guncha Munjal, Ashok N Bhaskarwar, Amita Chaudhary, "Kinetic-Invariant Analysis of Dye Degradation in an Annular Slurry Bubble-Column Photo Reactor". *Int. J. Chem. React. Eng.* 19(8) (2021): 839–849.
 11. Mamta Saiyad, Niranjana Devashrayee, "Lifetime Estimation of Epoxy Based Composite Materials on Irradiating with Gamma Radiation for Shielding Applications". *Polymer Testing*. 93(93C) (2021): 106-929.
 12. Amit Kumar, Gargi Das, Subhabrata Ray, Jai Mant Jha, Amit Kumar Thakur and Swapnarekha Panda, "Gas-Liquid Downward Flow through Narrow Vertical Conduits: Effect of Angle of Entry and Tube-Diameter". *International Journal of Chemical Reactor Engineering*. (2021):
 13. Rajeev Singh, Sudeep Tanwar, P Sharma, "Utilization of Blockchain for Mitigating the Distributed Denial of Service Attacks". *Security and Privacy Journal, Wiley*. 1(5) (2020): 01-13.
 14. Shaik V. Akram, Praveen K. Malik, Rajesh Singh, "Adoption of Blockchain Technology in Various Realms: Opportunities and Challenges". *Security and Privacy Journal, Wiley*. 3(5) (2020): 01-17.
 15. Sudeep Tanwar, Aarti Popat, Pronaya Bhattacharya, "A Taxonomy of Energy Optimization Techniques for Smart Cities: Architecture and Future Directions". *Expert Systems*. (2021): 01-28.
 16. Aaditya Srivastava, Jaiprakash Verma, Swati Jain, "A Deep Learning based Approach for Trajectory Estimation Using Geographically Clustered Data". *Sn Applied Science, Springer*. 3(2021-3) (2021): 597.
 17. Pooja Khese, Rohit Patil, Jani Swapnil Nalinkumar, "Force Calculation by Reluctance Method in Triangular Air-Gap Magnetic System". *International Journal of Engineering and Advanced Technology (IJEAT)*. 9(3) (2020): 2171-2174.
 18. Mehta Sandip Anilbhai, Dipak M Adhyaru, "Fractional Order Control Methodology for Self Balance Robot". *International Journal of Engineering and Advanced Technology*. 9(4) (2020): 276-281.
 19. Nital Sanjay, Patel Jayesh Ruparelia, Jayesh Barve, "Multivariate Statistics for Softsensing Primary Clarifier Effluent Quality in Industrial Wastewater Treatment Plant". *International Journal of Chemtech Research*. 14(1) (2021): 249-258.
 20. Bharatkumar Amrutlal Modi, Ramchandran M, "Stress Concentration Factor for Jute Fibre Reinforced Pla Composite Plate with Circular Cut-Out and its Effect on Coconut Shell Powder". *Iop Conference Series: Materials Science and Engineering*. 810(1) (2020): 12082.
 21. Gajjar Nagendra Prakashbhai, Bhavesh Jaiswal, "Dnn Based Pet Identification for Heterogeneous Edge Devices". *International Journal of Advanced Research in Engineering and Technology*. 11(8) (2020): 500-508.



22. Patel Jayeshkumar Jashvantbhai, Naik Amisha, "A Low Voltage High Speed Segmented Current Steering Dac for Neural Stimulation Application". *International Journal of Recent Technology and Engineering*. 8(5) (2020): 427-4274.
23. Darshan Vekaria, Aparna Kumari, Sudeep Tanwar, "Boost: An Ai-Based Data Analytics Scheme for Covid-19 Prediction and Economy Boosting". *Internet of Things Journal*. (2020): 1-3.
24. Aditya Bakshi, Sunanda Gupta, Akhil Gupta, "3T-Fasdm: Linear Discriminant Analysis-Based Three-Tier Face Anti-Spoofing Detection Model Using Support Vector Machine". *International Journal of Communication Systems*. 33(6) (2020): 1099-1131.
25. Rajesh Gupta, Dakshita Reebadiya, Sudeep Tanwar, "6G-Enabled Edge Intelligence for Ultra -Reliable Low Latency Applications: Vision And Mission". *Computer Standards & Interfaces*. 77(77) (2021): 01-14.
26. Kuntal Bhattacharjee, Nitish Patel, "A Comparative Study of Economic Load Dispatch with Complex Non-Linear Constraints Using Salp Swarm Algorithm". *Scientia Iranica*. (2020):
27. Shebaz A Memon, Darshit S Upadhyay, "A Comprehensive Review and a Systematic Approach to Enhance the Performance of Improved Cookstove (Ics)". *Journal of Thermal Analysis and Calorimetry*. 141(0) (2020): 2253-2263.
28. Thakkar Ankitkumar Rajeshkumar, Kinjal Chaudhari, "A Comprehensive Survey on Deep Neural Networks for Stock Market: the Need, Challenges, and Future Directions". *Expert Systems with Applications*. 177(C) (2021): 1-17.
29. Thakkar Ankitkumar Rajeshkumar, Kinjal Chaudhari, "A Comprehensive Survey on Portfolio Optimization, Stock Price and Trend Prediction Using Particle Swarm Optimization". *Archives of Computational Methods in Engineering*. (2020): 1-32.
30. Mohil Maheshkumar Patel, Sudeep Tanwar, Rajesh Gupta, "A Deep Learning-Based Cryptocurrency Price Prediction Scheme for Financial Institutions". *Journal of Information Security and Applications*. 55(-) (2020): 102583.
31. Chudasama Vipul Hasmukhlal, Madhuri Bhavsar, "A Dynamic Prediction for Elastic Resource Allocation in Hybrid Cloud Environment". *Scalable Computing: Practice and Experience*. 21(4) (2020): 661-672.
32. Ukani Vijaykumar, Thakkar Priyank, "A Hybrid Video Based IOT Framework for Military Surveillance". *Design Engineering*. 2021(5) (2021): 2050-2060.
33. Naik Amisha Parimal, Adesara Ankit, "A Low Noise Low Power Chopper Stabilized Bio Potencial Amplfier for Bio Medical Applications". *International Journal of Computing and Digital Systems*. 9(1) (2021): 1-10.
34. Niraj Kumar Dewangan, Tarun Kumar Tailor, Rekha Agrawal, "A Multilevel Inverter Structure with Open Circuit Fault-Tolerant Capability". *Electrical Engineering*. 103(3) (2021): 1613 - 1628.
35. Prashant J. Bagga, Mayur A. Makhesana, Kaushik M. Patel, "A Novel Approach of Combined Edge Detection and Segmentation for Tool Wear Measurement in Machining". *Production Engineering Research and Development*. 15(44289) (2021): 519-533.
36. Joo Ba Gomes, Joel Jpc Rodrigues, Ricardo Al Rabêlo, "A Novel Internet of Things-Based Plug-and-Play Multigas Sensor for Environmental Monitoring". *Transactions on Emerging Telecommunications Technologies*. 31(4) (2020): E3967.
37. Dipali Pandya, Amarish Badgujar, Nilesh Ghetiya, "A Novel Perception Toward Welding of Stainless Steel by Activated Tig Welding: A Review". *Materials and Manufacturing Processes*. 36(8) (2020): 877-903.



38. Siddharthsingh K. Chauhan, Rajendrasinh Jadeja, Amit Ved, "A Random Carrier Frequency Pwm Technique with a Narrowband for a Grid-Connected Solar Inverter". Electrical Engineering Springer. (2020): 1-24.
39. Thakkar Ankitkumar Rajeshkumar, Ritika Lohiya, "A Review on Machine Learning and Deep Learning Perspectives of Ids for Iot: Recent Updates, Security Issues, and Challenges". Archives of Computational Methods in Engineering. 28(NA) (2020): 3211-3243.
40. Shalok Bharti, Nilesh Ghetiya, Kaushik Patel, "A Review on Manufacturing the Surface Composites by Friction Stir Processing". Materials and Manufacturing Processes. 36(2) (2020): 135-170.
41. Aparna Kumari, Sudeep Tanwar, "A Secure Data Analytics Scheme for Multimedia Communication in a Decentralized Smart Grid". Multimedia Tools and Applications (2021). 108(108) (2021): 1-26.
42. Dewangan Ram Kishan, Anupam Shukla, W. Wilfred Godfrey, "A Solution for Priority-Based Multi-Robot Path Planning Problem with Obstacles Using Ant Lion Optimization". Modern Physics Letters-B. 34(13) (2020): 1-20.
43. Roshankumar R. Tandel, Sahil Shah, Siddharth Tripathi, "A State-of-Art Review on Bladeless Wind Turbine". Journal of Physics: Conference Series. 1950(1) (2021): 1-19.
44. Kapdi Rupal Amit, Mehul S. Raval, "A Survey and Analysis on Automated Glioma Brain Tumor Segmentation and Overall Patient Survival Prediction". Archives of Computational Methods in Engineering. 28(5) (2021): 4117-4152.
45. Kshama Parikh, Priyanki Vyas, Saurin Parikh, "A Survey on Reading Habit of Libr Y on Reading Habit of Library Users During Co Y Users during Covid-19 Lockdown". Library Philosophy and Practice. 1(1) (2020): 1-6.
46. Preksha Pareek, Thakkar Ankitkumar Rajeshkumar, "A Survey on Video-Based Human Action Recognition: Recent Updates, Datasets, Challenges, and Applications". Artificial Intelligence Review. 54(NA) (2020): 2259-2322.
47. Karan Sheth, Keyur Patel, Het Shah, "A Taxonomy of AI Techniques for 6G Communication Networks". Computer Communications. 161(-) (2020): 279-303.
48. Rajesh Gupta, Aparna Kumari, Sudeep Tanwar, "A Taxonomy of Blockchain Envisioned Edge-as-a-Connected Autonomous Vehicles: Risk Assessment and Framework". Transactions on Emerging Telecommunications Technologies. (2020): 1-23.
49. Aparna Kumari, Rajesh Gupta, Sudeep Tanwar, "A Taxonomy of Blockchain-Enabled Softwarization for Secure UAV Network". Computer Communications. 161(-) (2020): 304-323.
50. Kamplimath Hemanth K G Mallikarjuna Swamy, Sheth Shivam, Shubh Goenka, "A User Opinion Survey on the Probable Impact of Covid-19 on Long-Distance Travel in India". Transportation Letters. 13(44352) (2021): 388-394.
51. Rajesh N. Patel, Darshit S. Upadhyay, Krunal R. Panchal, "Air-Steam Gasification of Lignite in a Fixed Bed Gasifier: Influence of Steam to Lignite Ratio on Performance of Downdraft Gasifier". Journal - Energy, Publisher - Elsevier. 211(1) (2020): 118-187.
52. Aparna Kumari, Rajesh Gupta, Sudeep Tanwar, "Amalgamation of Blockchain and Iot for Smart Cities Underlying 6G Communication: A Comprehensive Review". Computer Communications. 172(172) (2021): 102-118.
53. Shreya Talati, Darshan Vekaria, Aparna Kumari, "An Ai-Driven Object Segmentation and Speed Control Scheme for Autonomous Moving Platforms". Computer Networks. 186(186) (2020): 1-12.



54. Chintan D. Patel, Tarun Kumar Tailor, Samyak S. Shah, "An Approach for Economic Design of Wide Area Monitoring System by Co-Optimizing Phasor Measurement Unit Placement and Associated Communication Infrastructure". *International Transactions on Electrical Energy Systems*. 31(8) (2021):
55. Divya Prerna, Rajkumar Tekchandani, Neeraj Kumar, "An Energy Efficient Scheme for Wpcn-Noma Based Device-to-Device Communication". *IEEE Internet of Things Journal*. 8(6) (2020): 4816 - 4829.
56. Ishan Budhiraja, Neeraj Kumar, Sudhanshu Tyagi, "An Energy-Efficient Resource Allocation Scheme for Swipt-Noma Based Femtocells Users with Imperfect CSI". *IEEE Transactions on Vehicular Technology*. 69(7) (2020): 7790 - 7805.
57. Jyotin Kateshia, Vikas J. Lakhera, "Analysis of Solar Still Integrated with Phase Change Material and Pin Fins as Absorbing Material". *Journal of Energy Storage*. 35(0) (2021):
58. Ritika Lohiya, Thakkar Ankitkumar Rajeshkumar, "Application Domains, Evaluation Data Sets, and Research Challenges of IOT: A Systematic Review". *IEEE Internet of Things Journal*. 8(11) (2020): 8774 - 8798.
59. Mishra Richa Patanjali, "Are We Doing Enough? A Bibliometric Analysis of Hate Speech Research in the Selected Database of Scopus". *Library Philosophy and Practice (E-Journal)*. (0) (2021): 1-13.
60. Thakkar Ankitkumar Rajeshkumar, Ritika Lohiya, "Attack Classification Using Feature Selection Techniques: A Comparative Study". *Journal of Ambient Intelligence and Humanized Computing*. (2020): 1-18.
61. Pandya Ankur Arvindbhai, Keyur Sangani, Prafulla K Jha, "Band Gap Determination of Nanoribbons of Graphene, H- Boron Nitride, Phosphorene, Silicene, Stanene, and Germanene". *Journal of Physics D: Applied Physics*. 53(41) (2020): 415103.
62. Rajesh Gupta, Arpit Shukla, Sudeep Tanwar, "Bats: a Blockchain and AI-Empowered Drone-Assisted Telesurgery System towards 6G". *IEEE Transactions on Network Science and Engineering*. (2020): 1-10.
63. Chintan D. Patel, Tarun Kumar Tailor, Samyak Shah, "Binary Dragonfly Algorithm Based Optimal Pmu Placement Considering Contingency Constraints". *International Journal of Advanced Research in Engineering & Technology*. 11(4) (2020): 34-43.
64. Aparna Kumari, Rajesh Gupta, Sudeep Tanwar, "Blockchain and AI Amalgamation for Energy Cloud Management: Challenges, Solutions, and Future Directions". *Journal of Parallel and Distributed Computing*. 143(-) (2020): 148-166.
65. Shubhani Aggarwal, Neeraj Kumar, Sudeep Tanwar, "Blockchain Envisioned Uav Communication Using 6G Networks: Open Issues, Use Cases, and Future Directions". *IEEE Internet of Things Journal*. 8(7) (2020): 5416 - 5441.
66. Umesh Bodkhe, Sudeep Tanwar, Karan Parekh, "Blockchain for Industry 4.0: A Comprehensive Review". *IEEE Access*. 8(-) (2020): 1-34.
67. Bodkhe Umesh Sakham, Sudeep Tanwar, Pronaya Bhattacharya, "Blockchain for Precision Irrigation: Opportunities and Challenges". *Transactions on Emerging Telecommunications Technologies*. 1(1) (2020): 23.
68. Rajesh Gupta, Anuja R. Nair, Sudeep Tanwar, "Blockchain-Assisted Secure Uav Communication in 6G Environment: Architecture, Opportunities, and Challenges". *Iet Communications*. 15(10) (2020): 1352-1367.
69. Aparna Kumari, Sudeep Tanwar, Sudhanshu Tyagi, "Blockchain-Based Massive Data Dissemination Handling in Iiot Environment". *IEEE Network*. 35(1) (2020): 318 - 325.
70. Dakshita Reebadiya, Tejal Rathod, Rajesh Gupta, "Blockchain-Based Secure and Intelligent Sensing Scheme for Autonomous Vehicles Activity Tracking Beyond 5G Networks". *Peer-to-Peer Networking and Applications*. 316(316) (2021): 1-18.



71. Rajesh Gupta, Aparna Kumari, Sudeep Tanwar, "Blockchain-Envisioned Softwarized Multi-Swarming Uavs to Tackle Covid-19 Situations". IEEE Network. 35(2) (2020): 160 - 167.
72. Mishra Richa Patanjali, Kartikeya, "Bringing Dynamism and Engagement in Classroom through Whatsapp". Journal of Engineering Education Transformations. 34(2) (2020): 5.
73. Tushar Gajjar, Dhaval B. Shah, Shashikant Joshi, "Carbon Fiber Permeability Characterization Using Vartm Process". Materials Today Proceedings. 44(1) (2021): 1560-1563.
74. Parikh Vishal Umeshkumar, Jay Mehta, Saumyaa Shah, "Comparative Analysis of Keyframe Extraction Techniques for Video Summarization". Recent Advances in Computer Science and Communications. 14(9) (2021): 2753-2763.
75. Patel Jayeshkumar Jashvantbhai, Naik Amisha Parimal, "Comparative Study of Current Steering Dac Based on Implementation Using Various Types of Switches". International Journal of Advanced Research in Engineering and Technology. 11(4) (2020): 452-460.
76. Trivedi Yogesh Nagarlal, Tanish Zaveri, Dharambhai Shah, "Convex Polygon Maximization Based Hyperspectral Endmember Extraction Algorithm". Journal of the Indian Society of Remote Sensing, Springer. 48(11) (2020): 1-13.
77. Tanuj Jhankal, Amit N. Patel, "Core Edge Inset Radius Variation Technique to Reduce Cogging Torque of Interior Permanent Magnet Synchronous Motors". International Journal of Scientific & Technology Research. 9(2) (2020): 6042-6048.
78. Anand S. Patel, Kaushik M. Patel, "Critical Review of Literature on Lean Six Sigma Methodology". International Journal of Lean Six Sigma. 12(3) (2021): 627-674.
79. Verma Jaiprakash Vinodkumar, Sudeep Tanwar, Sanjay Garg, "Crowdsourced Social Media Reaction Analysis for Recommendation". International Journal of Knowledge and Systems Science (Ijks). 12(1) (2020): 1-19.
80. Preksha Jain, Akhil Gupta, Sudeep Tanwar, "Customized Noma and Sector Model for Battery Efficient Beyond 5G Green Networks". IEEE Network. 34(6) (2020): 281 - 287.
81. Bhattacharya Pronaya, Arunendra Singh, Amod Kumar Tiwari, "Dbobs: Dual Buffered Switch for Variable Optical Bursts in Future Datacenters". Optical and Quantum Electronics. 53(235) (2021): 1-23.
82. Sharma Priyanka Rahul, Sonawane Bhakti, "Deep Learning Based Approach of Emotion Detection and Grading System". Pattern Recognition and Image Analysis. 30(4) (2021): 726-740.
83. Gajjar Sachin Harishbhai, Ayushee Samridhi, Bhavin Patel, "Design and Development of Flash Rescue: Emergency Rescue System for the Road Accidents". Grenze International Journal of Engineering and Technology. 6(2) (2020): 159-166.
84. Patel Jayeshkumar Jashvantbhai, Naik Amisha Parimal, "Design and Implementation of 4 Bit Binary Weighted Current Steering Dac". International Journal of Electrical and Computer Engineering (IJECE). 10(6) (2020): 5642-5649.
85. Patel Jayeshkumar Jashvantbhai, Naik Amisha Parimal, "Design for Improving Non Linearity Error of Current Steering Dac for Bio Medical Applications". International Journal of Advance Science and Technology. 29(9) (2020): 2434-2440.
86. Khetrpal Pavan, "Distributed Generation: A Critical Review of Technologies, Grid Integration Issues, Growth Drivers and Potential Benefits". International Journal of Renewable Energy Development. 9(2) (2020): 189 - 205.
87. Khetrpal Pavan, "Distribution Network Reconfiguration of Radial Distribution Systems for Power Loss Minimization Using Improved Harmony Search Algorithm".



- International Journal on Electrical Engineering and Informatics. 12(2) (2020): 341 - 358.
88. Arpit Shukla, Pronaya Bhattacharya, Sudeep Tanwar, "Dwara: A Deep Learning-Based Dynamic Toll Pricing Scheme for Intelligent Transportation Systems". IEEE Transactions on Vehicular Technology. 69(11) (2020): 12510 - 12520.
 89. Saumil Desai, Ankur A. Pandya, Mitesh B. Panchal, "Effect of Built-In Tension Due to Variation in Temperature on Natural Frequency of Graphene Nano Ribbon Resonator". Materials Today: Proceedings. -(2021): -.
 90. Panigrahi Motilal, Hinal Suthar, Shivani P Patel, "Effect of Calcium Chloride and Gallic Acid Combination on the Extension of Postharvest Life of Lagenaria Siceraria, a Vegetable with Medicinal Importance". Medicinal Plants - International Journal of Phytomedicines and Related Industries. 13(1) (2021): 110-119.
 91. Rudreshkumar D. Makwana, Bharatkumar Modi, Kaushik Patel, "Effect of Feed and Step Depth in Hole Flanging Using Single Point Incremental Forming". Journal of Physics: Conference Series. 1706(1) (2020): 12177.
 92. Raiyani Sunil Dineshbhai, Paresh V Patel, Sagar D Vora, "Effectiveness of Stainless Steel Wire Mesh in Shear Strengthening of Reinforced Concrete Flanged Beam". International Journal of Structural Engineering. 10(3) (2020): 195-216.
 93. Sudeep Tanwar, Shriya Kaneriyaa, Neeraj Kumar, "Electroblocks: A Blockchain-Based Energy Trading Scheme for Smart Grid Systems". International Journal of Communication System. 33(15) (2020): 1-12.
 94. Dharambhai Shah, Tanish Zaveri, Trivedi Yogesh N, "Entropy Based Convex Set Optimization for Spatial-Spectral Endmember Extraction from Hyperspectral Images". IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing. 13(7) (2020): 4200-4213.
 95. Thakkar Sonal Pragnesh, Urmil Dave, Jay Patel, "Experimental Investigation of High Temperature Effect on Slag Based Alkali Activated Concrete and Ordinary Concrete". Electronic Journal of Structural Engineering. 20(1) (2020): 22-29.
 96. Arvind M Sankhla, Kaushik M Patel, "Experimental Investigations on Effect of Surface Treatment of Aluminum Based Metal Matrix Composites Using Laser". Journal of Physics: Conference Series. 1921(1) (2021): 1-10.
 97. Ashutosh Tiwari, Mayur A. Makhesana, Kaushik M.Patel, "Experimental Investigations on the Applicability of Solid Lubricants in Processing of Aisi 4140 Steel". Materialstoday: Proceedings. 26(2) (2020): 2921-2925.
 98. Shruti C. Bhatt, Shivansh Suthar, Drhuv Mistry, "Experimental Study on Effect of Susceptor and Separator Materials on Microwave Melting of Lead Metal". Materials Today: Proceedings. 26(2) (2020): 3000-3002.
 99. Shruti C. Bhatt, Shivansh Suthar, Drhuv Mistry, "Experimental Study on Microwave Ex-Situ Casting of Aa 6061". Materials Today: Proceedings. 44(1) (2020): 1312-1315.
 100. Yadav Vijay Kumar, Vijay K Shukla, Subir Das, "Exponential Synchronization of Fractional-Order Complex Chaotic Systems and its Application". Chaos, Solitons And Fractals. 147(1) (2021): 110937.
 101. Keyur Patel, Dev Mehta, Chinmay Mistry, "Facial Sentiment Analysis Using AI Techniques: State-of-the-Art, Taxonomies, and Challenges". IEEE Access. 8(-) (2020): 90495-90519.
 102. Shruti C. Bhatt, Shivansh Suthar, Drhuv Mistry, "Feasibility Study on Microwave Melting of Lead Metal Using 2.45 Ghz Microwave Frequency". Aip Conference Proceedings. 2235(1) (2020): 020004-1.
 103. Bhavsar Madhuri Dashrath, Alka Mahajan,, "Feature Combination of Pauli and H/A/Alpha Decomposition for Improved Oil Spill Detection Using Sar". Recent



- Trends in Image Processing and Pattern Recognition: Third International Conference, Rtip2R 2020, Aurangabad, India, January 3-4, 2020, Revised Selected Papers, Part I. 1380(1) (2021): 134-148.
104. Parikh Saurin Sharad, Hari Kalva, "Feature Weighted Linguistics Classifier for Predicting Learning Difficulty Using Eye Tracking". *Acm Transactions on Applied Perception*. 17(2) (2020): 1-25.
 105. Yadav Vijay Kumar, Subir Das, Amit K. Mishra, "Finite-Time Synchronization of Multi-Scroll Chaotic Systems with Sigmoid Non-Linearity and Uncertain Terms". *Chinese Journal of Physics*. NA(NA) (2020): NA.
 106. Hitensinh Vaghela, Biswanath Sarkar, Vikas J. Lakhera, "Forced Flow Cryogenic Cooling in Fusion Devices: A Review". *Heliyon*. 7(1) (2021): 1 to 7.
 107. Thakkar Ankitkumar Rajeshkumar, Kinjal Chaudhari, "Fusion in Stock Market Prediction: A Decade Survey on the Necessity, Recent Developments, and Potential Future Directions". *Information Fusion*. 65(C) (2020): 95-107.
 108. Verma Jaiprakash Vinodkumar, Sapan H Mankad, Sanjay Garg, "Geohash Tag Based Mobility Detection and Prediction for Traffic Management". *Sn Applied Sciences*. 2(8) (2020): 1-13.
 109. Yadav Vijay Kumar, Ankit Kumar, Subir Das, "Global Exponential Stability of Takagi-Sugeno Fuzzy Cohen-Grossberg Neural Network with Time-Varying Delays". *IEEE Control Systems Letters*. 6(1) (2021): 325-330.
 110. Rao Ratna, "Graphic Novels as Learning Tools". *International Journal of Psychosocial Rehabilitation*. 24(8) (2020): 9502-9511.
 111. Soni Sneha Kalpeshkumar, "Greenhouse Monitor and Control with Labview". *International Journal of Advanced Research Engineering and Technology*. 11(10) (2020): 230-234.
 112. Ravi Gandhi, Dipak M Adhyaru, "Hybrid Extended State Observer Based Control for Systems with Matched and Mismatched Disturbances". *Isa Transactions*. 106(-) (2020): 61-73.
 113. Bhojawala Vipulkumar Manharlal, Dhaval V Patel, Kaushik M Patel, "Identification of Fault Size of Rolling Element Bearing on Outer Race from Vibration Signature Analysis". *Journal of Physics: Conference Series*. 1921(1) (2021): 12087.
 114. Nivedita Patel, Shireen Patel, Mankad Sapan H, "Impact of Autoencoder Based Compact Representation on Emotion Detection from Audio". *Journal of Ambient Intelligence and Humanized Computing*. NA(NA) (2021): NA.
 115. Prashant J. Bagga, Mayur A. Makhesana, Haresh D. Patel, "Indirect Method of Tool Wear Measurement and Prediction Using Ann Network in Machining Process". *Materials Today: Proceedings*. 44(1) (2021): 1549-1554.
 116. Shalok Bharti, Varun Datta, Sanjay Sharma, "Investigating the Effect of Tool Speed on the Mechanical Properties of A15052 Processed by Friction Stir Processing". *Materials Today: Proceedings*. 33(-) (2020): 1605-1609.
 117. Dhwanil Sheth, Shashikant Joshi, Dhaval B. Shah, "Investigation on Design Methods for Cable Mesh Configuration of Deployable Space Antenna Reflector". *International Journal of Space Structures*. 34(4) (2020): 126-134.
 118. Vipulkumar M. Bhojawala, Dipakkumar P. Vakharia, "Investigation on Pull-In Voltage, Frequency Tuning and Frequency Stability of Mems Devices Incorporating Casimir Force with Correction for Finite Conductivity". *Journal of Vibration Engineering & Technology*. 8(6) (2020): 959-975.
 119. Tanuj Gupta, Chetna C. Chauhan, Amrin R. Kagdi, Sher Singh Meena, Rajshree B. Jotania, Charanjeet Singh C.B. Basak, "Investigation on Structural, Hysteresis, Mossbauer Properties and Electrical Parameters of Lightly Erbium Substituted X-



- Type Ba₂Co₂Er_xFe_{28-x}O₄₆ Hexaferrites". *Ceramics International*. 46(6) (2020): 8209-8226.
120. Mayur A. Makhesana, Kaushik M. Patel, "Investigations on Machinability Aspects of Aisi 52100 with Minimum Quantity Solid Lubrication". *Procedia Manufacturing*. 48(1) (2020): 11-17.
 121. Prashant J. Bagga, Mayur A. Makhesana, Anand S. Patel, "Investigative Study of Cutting Parameters During Turning Hardened Steel with Carbide Inserts". *International Journal of Mechatronics and Manufacturing Systems*. 14(1) (2021): 39-54.
 122. Rajesh Gupta, Aparna Kumari, Sudeep Tanwar, "IOT Enabled Real-Time Urban Transport Management System". *Computers & Electrical Engineering*. 86(-) (2020): 1-19.
 123. Shivani Bharatbhai Patel, Pronaya Bhattacharya, Sudeep Tanwar, "Kirti: A Blockchain-Based Credit Recommender System for Financial Institutions". *IEEE Transactions on Network Science and Engineering*. 8(2) (2020): 1044 - 1054.
 124. Patel Anant Darshanbhai, Pruthi Patel, "Low Cost Model for Desalination of Water Using Solar Energy to Overcome Water Scarcity in India". *Materials Today: Proceedings*. 47(7) (2021): 1409-1415.
 125. Sahil Khatri, Hrishikesh Vachhani, Shalin Shah, "Machine Learning Models and Techniques for Vanet Based Traffic Management: Implementation Issues and Challenges". *Peer-to-Peer Networking and Applications*. 14(-) (2020): 1778-1805.
 126. Sankhla Arvind M, Kushik M Patel, "Metal Matrix Composites Fabricated by Stir Casting Process a Review". *Advances in Materials and Processing Technologies, T&F*. -(-) (2021): 1-23.
 127. Shalok Bharti, Nilesh Ghetiya, Kaushik Patel, "Micro-Hardness and Wear Behavior of Aa2014/Al₂O₃ Surface Composite Produced by Friction Stir Processing". *S N Applied Science*. 2(-) (2020): 1760-1775.
 128. Prasad Vivek Kumar Sahdeo, Madhuri D Bhavsar, "Monitoring and Prediction of Sla for IOT Based Cloud". *Scpe*. 21(3) (2020): 349-357.
 129. Prasad Vivek Kumar Sahdeo, Madhuri D Bhavsar, "Monitoring Iaas Cloud for Healthcare Systems: Healthcare Information Management and Cloud Resources Utilization". *International Journal of E-Health and Medical Communications (IJEHMC)*. 11(3) (2020): 54-70.
 130. Sapan H Mankad, Sanjay Garg, "On the Performance of Empirical Mode Decomposition-Based Replay Spoofing Detection in Speaker Verification Systems". *Progress in Artificial Intelligence*. NA(NA) (2020): NA.
 131. Patel Jigna Ashish, Dr. Priyanka Sharma, "Online Analytical Processing for Business Intelligence in Big Data". *Big Data*. 8(6) (2020): 501-518.
 132. Bhattacharya Pronaya, Amod Kumar Tiwari, Rajiv Srivastava, "Optical Data Centers Router Design with Fiber Delay Lines and Negative Acknowledgement". *Journal of Engineering Research*. 8(2) (2020): 165-176.
 133. Nita H Shah, Yeolekar Bijal Mahesh, Zalak A Patel, "Optimal Control Model for Blindness Due to Deficiency of Vitamin-A". *Dynamics of Continuous, Discrete and Impulsive Systems Series B: Applications & Algorithms*. 28(2021) (2021): 279-291.
 134. Chintan D. Patel, Tarun Kumar Tailor, Samyak S Shah, "Optimal Load Shedding Model Based on Sensitivity Analysis for Line Overload Mitigation Using Sine Cosine Algorithm". *International Journal on Emerging Technologies*. 3(11) (2020): 247-252.
 135. Bimalkumar Mawandiya, Jitendrakumar K. Jha, Jitesh J. Thakkar, "Optimal Production-Inventory Policy for Closed-Loop Supply Chain with Remanufacturing Under Random Demand and Return". *Operational Research*. 20(3) (2020): 1623-1664.



136. Bharatkumar Modi, Ramchandran Manickam, "Optimization of Molding Process Parameter for Jute Reinforced Poly Lactic Acid Composite". *Journal of Advanced Research in Fluid Mechanics and Thermal Sciences*. 71(1) (2020): 117-124.
137. Amit N. Patel, Bhavik N. Suthar, "Optimization of Specific Power of Surface Mounted Axial Flux Permanent Magnet Brushless Dc Motor for Electrical Vehicle Application". *Iranian Journal of Electrical and Electronic Engineering*. 16(3) (2020): 363-370.
138. Vineet Kumar, Sanjay V. Jain, Yash Shah, "Parametric Studies on Interacting Parameters Influencing Heat Pipe Performance". *Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy*. 235(3) (2020): 594-607.
139. Gajjar Nagendra Prakashbhai, Bhavesh Jaiswal, "Performance Analysis of Deep Neural Network Based on Transfer Learning for Pet Classification". *International Journal of Advanced Computer Science and Applications (IJACSA)*. 12(3) (2021): 80-85.
140. Trivedi Yogesh Nagarlal, Rachna Sharma, "Performance Analysis of Dual-Hop Underwater Visible Light Communication System with Receiver Diversity". *Optical Engineering, Spie*. 60(3) (2021): 1-15.
141. Ujas Patel, Sudeep Tanwar, Anuja R. Nair, "Performance Analysis of Video on-Demand and Live Video Streaming Using Cloud Based Services". *Scalable Computing: Practice and Experience*. 21(3) (2020): 479-496.
142. Chandraketu P. Khunt, Mayur A. Makhesana, Kaushik M. Patel, "Performance Assessment of Vegetable Oil-Based Minimum Quantity Lubrication (Mql) in Drilling". *Materialstoday: Proceedings*. 44(1) (2021): 341-345.
143. Mayur A. Makhesana, Kaushik M. Patel, "Performance of Pvd and Cvd Coated Cutting Tool Inserts in Machining under Mql-Mqsl Environment". *International Journal of Mechatronics and Manufacturing Systems*. 13(3) (2020): 210-229.
144. Thakkar Ankitkumar Rajeshkumar, Kinjal Chaudhari, "Predicting Stock Trend Using an Integrated Term Frequency Inverse Document Frequency-Based Feature Weight Matrix with Neural Networks". *Applied Soft Computing*. 96(C) (2020): 1-13.
145. Jain Swati Manish, "Prediction of Mental Illness on Heart Disease Patients: Association of Comorbidities, Dietary Supplements, and Antibiotics as Risk Factors". *Journal of Personalized Medicine*. 10(4) (2020): 214.
146. Nital Sanjay Patel, Jayesh Ruparelia, "Prediction of total Suspended Solids Present in Effluent of Primary Clarifier of Industrial Common Effluent Treatment Plant: Mechanistic and Fuzzy Approach". *Journal of Water Process Engineering*. 34(-) (2020): 101-146.
147. Vivek K Prasad, Bhavsar Madhuri Dashrath, "Preserving Sla Parameters for Trusted IaaS Cloud: An Intelligent Monitoring Approach". *Recent Patents on Engineering*. 14(4) (2020): 530-540.
148. Pujara Dhaval Amrutbhai, Jay Gupta, "Profiled Horn Antenna with Wideband Capability Targeting Sub-Thz Applications". *Electronics*. 10(4) (2021): 1-15.
149. Khushbu Joshi, Patel Manish Ishwarlal, "Recent Advances in Local Feature Detector and Descriptor: A Literature Survey". *International Journal of Multimedia Information Retrieval*. 9(4) (2020): 231-247.
150. Balkrushna A. Shah, Shivam Dwivedi, "Review and Experimental Study on Performance Improvement of Split Air Conditioner by Reducing Inlet Air Temperature to the ODU". *Journal of Physics: Conference Series*. 1706(1) (2020): 1-16.
151. Sharma Priyanka Rahul, Bhakti Sonawane, "Review of Automated Motion-Based Quantification of Facial Expression in Parkinson Patients". *The Visual Computer, Springer*. 30(1) (2020): 1-17.



152. Bharatkumar Modi, Ashish Gohil, "Review of the Effect of Process Parameters on Performance Measures in the Incremental Sheet Forming Process". *Proceedings of The Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*. 235(3) (2020): 300-332.
153. Gajendra Kumar Gaurav, Tariq Mehmood, Manoj Kumar, Amit Kumar, "Review on Polycyclic Aromatic Hydrocarbons (Pahs) Migration from Wastewater". *Journal of Contaminant Hydrology*. 236(103715) (2021): .
154. Tejas M. Vala, Vipul N. Rajput, Zong Woo Geem, "Revisiting the Performance of Evolutionary Algorithms". *Expert Systems with Applications*. 175(10) (2021): 245-255.
155. Agrawal Smita Sureshkumar, Atul Patel, "Sag Cluster: An Unsupervised Graph Clustering Based on Collaborative Similarity for Community Detection in Complex Networks". *Physica A: Statistical Mechanics and its Applications*. 563(-) (2021): 125459.
156. Bhavsar Madhuri Dashrath, Jitendra Bhatia, Parth Kakadia, "Sdn-Enabled Network Coding-Based Secure Data Dissemination in Vanet Environment". *IEEE Internet of Things Journal*. 7(7) (2020): 6078-6087.
157. Aparni Kumari, Sudeep Tanwar, "Secure Data Analytics for Smart Grid Systems in a Sustainable Smart City: Challenges, Solutions, and Future Directions". *Sustainable Computing: Informatics and Systems*. 28(-) (2020): 100427.
158. Bodkhe Umesh Sakham, Sudeep Tanwar, "Secure Data Dissemination Techniques for IOT Applications: Research Challenges and Opportunities". *Software: Practice and Experience*. 1(1) (2020): 1-23.
159. Poojaben S Patel, Swapnil N Jani, Dharm M Panchal, "Short Circuit Analysis of Air Circuit Breaker". *International Journal of Advanced Research in Engineering and Technology*. 11(6) (2020): 494.
160. Rutul Patel, Vishvijit Thakar, Rutvij Joshi, "Single Image Super-Resolution through Sparse Representation via Coupled Dictionary Learning". *International Journal of Electronics and Telecommunications*. 66(2) (2020): 347-353.
161. Prasad Vivek Kumar Sahdeo, Madhuri Bhavsar, "Slammp Framework for Cloud Resource Management and its Impact on Healthcare Computational Techniques". *International Journal of E-Health and Medical Communications (IJEHMC)*. 12(2) (2021): 1-31.
162. Patel Anant Darshanbhai, Sonal Thakkar, C Divya, "Slu-Brick - An Innovative Sustainable Solution for Solid Waste Management". *Materials Today: Proceedings*. 43(2) (2020): 1398-1403.
163. Yadav Vijay Kumar, Vijay K. Shukla, Mayank Srivastava, "Stability Analysis, Control of Simple Chaotic System and its Hybrid Projective Synchronization with Fractional Lu System". *Journal of Applied Nonlinear Dynamics*. 9(1) (2020): 93-107.
164. Yeolekar Bijal Maheshbhai, Yeolekar Mahesh A, "Stability of Limit Cycles of Passive Dynamic Kneed Biped". *Structural Integrity and Life*. 20(-) (2020): SP S11-S17.
165. Patel Jay, Vasu Kalariya, Pushpendra Parmar, "Stochastic Neural Networks for Cryptocurrency Price Prediction". *IEEE Access*. 8(-) (2020): 82804-82818.
166. Gaurang H Ban, Jayesh Ruparelia, "Studies on Measurement of Pm2.5 and Pm10 Employing Online Method: A Case of Coal Fired Boiler Stack". *Research Journal of Chemistry and Environment*. 25(5) (2021): 16-20.
167. Upadhyay Tejal Unmesh, Dr Samir Patel, "Study and Analysis of Gene Expression Clustering with Gaussian Mixed Effects Models and Smoothing". *International Journal of Computer Science and Network Security*. 20(5) (2020): 76-82.



168. Patel Anant Darshanbhai, Anu Shah, "Sustainable Solution for Lake Water Purification in Rural and Urban Areas". *Materials Today: Proceedings*. 32(4) (2020): 740-745.
169. Nikita Chokshi, Jayesh Ruparelia, "Synthesis of Nano Ag-La-Co Composite Metal Oxide for Degradation of Rb 5 Dye Using Catalytic Ozonation Process". *Ozone: Science & Engineering*. 0(0) (2021): 1-14.
170. Umesh Bodkhe, Sudeep Tanwar, "Taxonomy of Secure Data Dissemination Techniques for IOT Environment". *IET Software*. 14(6) (2020): 563-571.
171. Sajan Chourasia, Absar M. Lakdawala, Rajesh Patel, "The Examination, Evaluation and Comparison of Corrosion Effect on Different Metal Surface by Various Crops Based Biodiesel". *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering*. 0(0) (2020): 1-6.
172. Sanjay V. Jain, Vikas Lakhera, Yash Patel, "Thermo-Hydraulic Performance Analysis of a Solar Air Heater Roughened with Discrete Reverse Naca Profile Ribs". *International Journal of Thermal Sciences*. 167(NA) (2021): 107026.
173. Yogesh M. Patel, Sanjay V. Jain, Vikas J. Lakhera, "Thermo-Hydraulic Performance Analysis of a Solar Air Heater Roughened with Reverse Naca Profile Ribs". *Applied Thermal Engineering*. 170(1) (2020): 114940.
174. Bharatkumar Modi, Vishwa Pujara, Megha Thaker, "Three Dimensional Analysis of Mechanical Behavior of Lumbar Vertebra under Impact Load and its Biomechanical Importance". *Materials Today: Proceedings*. 38(1) (2021): 402-406.
175. Prashant J. Bagga, Mayur A. Makhesana, Kavan Patel, "Tool Wear Monitoring in Turning Using Image Processing Techniques". *Materials Today: Proceedings*. 44(1) (2021): 771-775.
176. Chintan R. Mehta, Santosh C. Vora, "Transient Stability Enhancement of Multi-Machine Hybrid Power System Employing Modified Series Resonance Type Fault Current Limiter". *International Journal on Emerging Technologies*. 11(3) (2020): 858-866.
177. Ashish M. Gohil, Bharatkumar Modi, "Ultrasonic Vibration-Assisted Single Point Incremental Forming of Hemispherical Shape Using Multi-Stage Forming Strategy". *International Journal of Mechatronics and Manufacturing Systems*. 13(3) (2020): 247-265.
178. Ishan Budhiraja, Neeraj Kumar, Sudhanshu Tyagi, "Urja: Usage Jammer as a Resource Allocation for Secure Transmission in Cr-Noma Based 5G Femtocells". *IEEE Systems Journal*. -(-) (2020): 1-10.
179. Desai Saumil Hirenabhai, Ankur Pandya, Mitesh B Panchal, "Vibration Characteristics of Graphene Nano Resonator as Mass Sensor". *Journal of Physics: Conference Series*. 1854(1) (2021): 1-10.
180. Sanjay Garg, Sapan H Mankad, "Voice Liveness Detection under Feature Fusion and Cross-Environment Scenario". *Multimedia Tools and Applications*. NA(NA) (2020): 1-17.
181. Manisha. T. Shah, Siddharthsingh K. Chauhan, Pragnesh N. Tekwani, "Analysis of Multiaxis Current Controller for Power System Friendly Front-End Converter Employing Two-Level and Three-Level Topologies". *IEEE Transcation on Industrial Electronics*. 68(1) (2021): 586-597.
182. Pavan Khetrapal, Jafarullakhan Pathan, Shivam Shrivastava, "Power Loss Minimization in Radial Distribution Systems with Simultaneous Placement and Sizing of Different Types of Distribution Generation Units Using Improved Artificial Bee Colony Algorithm". *International Journal on Electrical Engineering and Informatics*. 12(3) (2020): 686-707.



183. Gulshan Sharma, Akhilesh Panwar, Yogendra Arya, Manoj Kumavat, "Integrating Layered Recurrent ANN with Robust Control Strategy for Diverse Operating Conditions of AGC of the Power System". IET Generation, Transmission & Distribution. 14(8) (2020): 3886-3895.
184. Manisha T. Shah, Siddharth Singh K. Chauhan, Pragnesh N. Tekwani, "Fractal Approach Based Simplified and Generalized Sector Detection in Current Error Space Phasor based Hysteresis Controller Applied to Multi-level Front-end Converters". IEEE Transactions on Power Electronics. 35(10) (2020): 11082-11095.
185. Darshna Joshi, Patel Jignesh Baldevbhai, Hardik Bhatt, "In Silico Study to Quantify the Effect of Exercise on Surface GLUT4 Translocation in Diabetes Management". Network Modeling Analysis in Health Informatics and Bio-informatics. 10(1) (2021): 215-223.

Books Published

Sr. No.	Name of the Faculty	Name of the Book	Name of Publishing House	ISBN	Year of Publication
1.	Pradeep Kumar Singh	Proceedings of First International Conference on Computing, Communications, and Cyber-Security (Ic4S 2019)	Springer Singapore	978-981-15-3369-3	2020
2.	Sudeep Tanwar	Fog Computing for Healthcare 4.0 Environments: Technical, Societal, and Future Implications	Springer International Publishing	1860-4862	2020
3.	Sudeep Tanwar	Fog Data Analytics for Iot Applications - Next Generation Process Model with State-of-the-Art Technologies	Springer International Publishing	2197-6503	2020
4.	Yeolekar Bijal Maheshbhai	Fundamentals of Engineering Mathematics	Aib Saliha publication	978-81-977377-8-8	2020
5.	Parul R. Patel	Technologies for Sustainable Development	Crc Press	978-0-36-733737-7	2020
6.	Rao Ratna	History of English Language Teaching	Aib Publications	978-81-946014-4-9	2020
7.	Vellala Paramasivan Sivasooriyan	Inclusive Growth: an Indian Perspective	Bookwell Publications	978-81-945269-0-2	2020
8.	Pandit Dhiren Dipakkumar	Cryptography and Network Security	Bpb Publication	978-93-893286-6-0	2020
9.	Yeolekar Bijal Mahesh	Fundamentals of Engineering Mathematics-II	Aib Saliha publication	978-81-948141-0-8	2020
10.	Pradeep	Evolving Technologies for	Springer	978-981-	2020



	Kumar Singh	Computing, Communication and Smart World	Singapore	15-7804-5	
--	-------------	--	-----------	-----------	--

Book Chapters Published

Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
1.	Milind Joshipura, Tushar Perkar, Naitik Chokshi	Comparison of Three Solvents for Extractive Distillation of Ethanol and Water System	Technologies for Sustainable Development: Proceedings of The 7 th Nirma University International Conference on Engineering (Nuicone-2019)	Crc Press	978-0-367-33737-7	2020
2.	Jayato Nayak, Sampriti Nayak, Sankha Chakraborty	Aerobic Synthesis of Value-Added Organic Acid: Routes Towards Sustainable Industrialization	Green Innovation, Sustainable Development, and Circular Economy	Crc Press	978-0-367-44174-6	2020
3.	Sankha Chakraborty, Jayato Nayak, Shirsendu Banerjee	Green Synthesis of Food Flavoring Agents	Green Innovation, Sustainable Development, and Circular Economy	Crc Press	978-0-367-44174-6	2020
4.	Rashi Sultania, Jayesh Ruparelia	Synthesis of Silver Nanoparticles by Using Soluble Starch and its Application in Removal of Metal Ions from Wastewater	Technologies for Sustainable Development	Taylor And Francis	978-0-367-33737-7	2020



Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
5.	Nimish Shah, Ankur Dwivedi	Analysis of Swelling and De-Swelling Kinetics and Water Absorbency in Ionic Medium for Poly (Acrylamide-Co-Acrylic Acid) Hydrogel	Technologies for Sustainable Development	Taylor & Francis Group	978-0-367-33737-7	2020
6.	Nikita Chokshi, Meet Kundariya, Jay Patel, Jayesh Ruparelia	Co ₃ O ₄ /Y-Al ₂ O ₃ as a Heterogeneous Catalyst for Ozonation of Dye Wastewater	Technologies for Sustainable Development	Taylor And Francis	978-0-367-33737-7	2020
7.	Amita Chaudhary, Ankur Dwivedi, Sreedevi Upadhyayula	Supercritical Fluids: Green Solvents	Handbook of Greener Synthesis of Nano Materials and Compounds	Elsevier	978-0-12-821938-6	2021
8.	Amita Chaudhary, Bajinath, Prism Bharadwaj, Pawan Kumar, Ashok N Bhaskarwar	Bimetallics and Mixture of Metal (Core-Shell Microspheres)	Reference Module in Biomedical Sciences	Elsevier	978-0-12-801238-3	2021
9.	Dhwanil Gharekhan, Bhattacharya B K, Rahul Nigam, Parul R. Patel	Modelling of Incoming Longwave Radiation under Foggy Sky Over Multiple Agro-Climate Settings of India	Bangalore Humanitarian Technology Conference (B-Htc), Ieee	Ieee Explorer	978-1-7281-8794-5	2020



Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
10.	Sonal P. Thakkar	Engineering Properties of Fly Ash and Rice Husk Ash-Based Geopolymer Concrete	Lecture Notes in Civil Engineering	Springer	2366-2557	2020
11.	Viraj M. Parekh, Sagar Jotani, Jay Patel	Application of Six Sigma on Rmc Plant	Advances in Civil Engineering and Infrastructural Development	Springer Nature Pte Ltd.	978-981-15-6462-8	2020
12.	Hiral S. Modha, Nerit Sharma, Hina Chavda	Shear Strength Parameters of Soil and Banana Fiber Mix	Technologies for Sustainable Development: Proceedings of the 7 th Nirma University International Conference on Engineering (Nuicone 2019)	Crc Press	978-0367337377	2020
13.	Vineet G. Kothari, Hemanth M. Kamplimath	Effect of Surface Corrosion of Steel Reinforcement on Bond Strength Characteristics of Concrete	Lecture Notes on Multidisciplinary Industrial Engineering	Springer, Singapore	978-981-15-3254-2	2020
14.	Sharadkumar P. Purohit, Rutvi Ashokbhai Jogani	Implication of Effective Length Factor on Multi-Storied Reinforced Concrete Building Design	Technologies for Sustainable Development	Taylor And Francis	978-0-367-33737-7	2020
15.	Sharadkumar P. Purohit, Utsav K. Koshti, Anukant Jadeja	Characterization of Air Based Pneumatic Damper for Seismic Response Control	Technologies for Sustainable Development	Taylor And Francis	978-0-367-33737-7	2020



Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
16.	Parul R. Patel, Dhwanilnath Gharekhana, Bimal K Bhattacharya	Modelling of Daytime Incoming Longwave Radiation under Cloudy Sky Over a Semi-Arid Agro-Climatic Zone of India	Technologies for Sustainable Development	Crc Press	9780367337377	2020
17.	Parul R. Patel, Fatima Electricwala	Accessibility of Brts Station in Ahmedabad City Using Gis: A Case Study	Technologies for Sustainable Development	Crc Press	9780367337377	2020
18.	Anant D. Patel	Rainfall-Runoff Modelling and Simulation Using Remote Sensing and Hydrological Model for Banas River, Gujarat, India	Advances in Water Resources Engineering and Management	Springer	978-981-13-8180-5	2020
19.	Jahanvi M. Suthar, Sharadkumar P. Purohit	Effect of Ductility on Performance of Reinforced Concrete Portal Frame Loaded with Lateral Load	Ewshm: European Workshop on Structural Health Monitoring	Springer Nature	978-3-030-64593-9	2021
20.	Hiral S. Modha, Hasan M. Rangwala	Feasibility of Geopolymer Grout for Granular Soil	Ground Improvement Techniques	Springer	978-981-15-9987-3	2021
21.	Tejas M. Joshi, Urmil V. Dave, Aum Karkar	Shape-Based Study on Properties of Pervious Concrete Paver Blocks	Advances in Sustainable Construction Materials,	Spinger	978-981-33-4590-4	2021



Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
22.	Prakrut Chauhan, Jaiprakash Verma, Swati Jain	Blockchain Based Framework for Document Authentication and Management of Daily Business Records	Blockchain for 5G-Enabled Iot	Springer	978-3-030-67490-8	2020
23.	Shivani Desai, Tarjni Vyas, Vishakha Jambekar	Security and Privacy Issues in Fog Computing for Healthcare 4.0	Fog Computing for Healthcare 4.0 Environments	Springer	978-3-030-46197-3	2020
24.	Tarjni Vyas, Shivani Desai, Anand Ruparelia	Fog Data Processing and Analytics for Healthcare Based Iot Applications	Fog Data Analytics for Iot Applications	Springer	978-981-15-6044-6	2020
25.	Akshay Mewada, Bhavsar Madhuri Dashrath, Reetu Gujarani	Establishing Trust in the Cloud Using Machine Learning Methods	Proceedings of First International Conference on Computing, Communications, and Cyber-Security (Ic4S 2019)	Springer, Singapore	2367-3370	2020
26.	Vivek Kumar Prasad, Sudeep Tanwar, Madhuri D. Bhavsar	Advance Cloud Data Analytics for 5G Enabled Iot	Blockchain for 5G-Enabled Iot the New Wave for Industrial Automation	Springer, Cham	978-3-030-67490-8	2020
27.	Khanpara Pimal Shantilal, Sudeep Tanwar	Additive Manufacturing: Concepts and Technologies	A Roadmap to Industry 4.0: Smart Production, Sharp Business and Sustainable Development	Springer	978-3-030-14544-6	2020
28.	Vyas Tarjni Ketanbhai, Shivani Desai, Anand	Fog Data Processing and Analytics for Health Care-Based Iot	Fog Data Analytics for Iot Applications	Springer, Singapore	978-981-15-6043-9	2020



Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
	Ruparelia	Applications				
29.	Kavita Tewani	Sarcasm Detection Using Multiple Occurrences of Emojis and Hashtagged Words	Advances in Computational Intelligence and Informatics	Springer, Singapore	978-981-15-3337-2	2020
30.	Mankad Sapan Haresh, Sanjay Garg, Nikunj Dalsaniya	Development of a Novel Database in Gujarati Language for Spoken Digits Classification	Advances in Signal Processing and Intelligent Recognition Systems	Springer	978-981-15-4828-4	2020
31.	Sumit Kumar Gupta, Sachin Kumar, Sudhanshu Tyagi	Energy Efficient Routing Protocols For Wireless Sensor Network	Handbook of Wireless Sensor Networks: Issues and Challenges in Current Scenario's	Springer International Publishing	978-3-030-40304-1	2020
32.	Umesh Bodkhe, Jay Chaklasiya, Pooja Shah	Markov Model for Password Attack Prevention	Proceedings of First International Conference on Computing, Communications , and Cyber-Security (Ic4S 2019)	Springer, Singapore	978-981-15-3369-3	2020
33.	Anuja R. Nair, Sudeep Tanwar,	Fog Computing Architectures and Frameworks for Healthcare 4.0	Fog Computing for Healthcare 4.0 Environments Technical, Societal, and Future Implications	Springer, Cham	978-3-030-46197-3	2020
34.	Kapdi Rupal Amit, Mehul S. Raval	Brain Tumor Segmentation and Survival Prediction	Lecture Notes in Computer Science	Springer	978-3-030-46640-4	2020



Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
35.	Verma Ashwin, Pronoya Bhattacharya, Umesh Bodkhe	Dams: Dynamic Association for View Materialization Based on Rule Mining Scheme	Recent Innovations in Computing	Springer	978-981-15-8297-4	2021
36.	Verma Jaiprakash Vinodkumar, Sudeep Tanwar	Predictive Analysis for User Mobility Using Geospatial Data	Recent Innovations in Computing	Springer	18761119	2021
37.	Smita Chormunge, Mehta Rachana	Comparison Analysis of Extracting Frequent Itemsets Algorithms Using Mapreduce	Lecture Notes on Data Engineering and Communications Technologies	Springer	23674512	2021
38.	Bhavsar Madhuri Dashrath, Tejal Rathod, Monika Shah	On Performance Enhancement of Molecular Dynamics Simulation Using Hpc Systems	Proceedings of Second International Conference on Computing, Communications, and Cyber-Security	Springer, Singapore	978-981-16-0733-2	2021
39.	Vivek Kumar Prasad, Sudeep Tanwar, Madhuri Bhavsar	C2B-Schms: Cloud Computing And Bots Security for Covid-19 Data and Healthcare Management Systems	Proceedings of Second International Conference on Computing, Communications, and Cyber-Security	Springer, Singapore	978--981-16-0733-2	2021
40.	Kumhar Malaram Kuparam, Jitendra Bhatia	Emerging Communication Technologies for 5G-Enabled Internet of Things Applications	Blockchain for 5G-Enabled Iot	Springer	978-3-030-67489-2	2021



Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
41.	Trivedi Yogesh Nagarlal, Dhaval Upadhyay, S C Bera	Performance Evaluation of Mimo Under Time Varying and Spatially Correlated Channels with Feedback Delay.	Technology for Sustainable Development	Crc Press	978-0-367-33737-7	2020
42.	Varun Kumar, Mangal Singh, Sarat Kumar Patra	Hybrid Cr Network: an Approach Based on Interweave- and Underlay-Type Cr Network	Lecture Notes in Electrical Engineering, Electronic Systems and Intelligent Computing	Springer Nature	978-981-15-7031-5	2020
43.	Harikrishna Parmar, Usha Mehta	Test Time Reduction Using Power-Aware Dynamic Clock Allocation to Scan Vectors	Advances in Vlsi and Embedded Systems	Springer	978-981-15-6228-0	2021
44.	Trivedi Yogesh Nagarlal, Khushboo Sinha	Cooperative Spectrum Sensing with Improved Absolute Value Cumulation Detection Based on Additive Laplacian Noise in Cognitive Radio	Electronic Systems and Intelligent Computing	Springer	978-981-15-7030-8	2021
45.	Trivedi Yogesh Nagarlal, Rachna Sharma	Impact of Imperfect Csi on the Performance of Inhomogeneous Underwater Vlc System	Algorithms for Intelligent Systems	Springer	2524-7565	2021
46.	Harsh Jigneshkumar Patel, Jai Prakash Verma, Atul Patel	Unsupervised Learning-Based Sentiment Analysis with Reviewer's Emotion	Evolving Technologies for Computing, Communication and Smart World	Springer	1876-1100	2020



Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
47.	Jay Pareshkumar Patel, Nikunj Dilipkumar Gondha, Jai Prakash Verma	Event-Triggered Share Price Prediction	Evolving Technologies for Computing, Communication and Smart World	Springer	1876-1100	2020
48.	Hamza Abubakar Kheruwala, Jimeet Viren Shah, Jai Prakash Verma	Comparative Study of Sentiment Analysis and Text Summarization for Commercial Social Networks	Communications in Computer and Information Science	Springer	18650929	2020
49.	Akhilesh Ladha, Bhattacharya Pronaya, Nirbhay Chaube	Egypt: Iot-Based Framework for Intelligent Green Public Transportation System	Lecture Notes in Networks and Systems	Springer, Cham	978-981-15-3369-3	2020
50.	Karansingh Chauhan, Hrishikesh Patel, Ridham Dave	Advances in Single Image Super-Resolution: a Deep Learning Perspective	Lecture Notes in Networks and Systems	Springer	978-981-15-3368-6	2020
51.	Kewal Parmar, Jay Desai, Jatin Patel	Powertrain Modelling and Range Analysis for all Terrain Vehicles	Technologies for Sustainable Development	Taylor And Francis	9780429321573	2020
52.	Mehta Sandip Anilbhai, Akshat Bhutiani	Smart Irrigation System through Mobile App	Technologies for Sustainable Development	Crc Press	9780429321573	2020
53.	Soni Sneha Kalpeshkumar, Umang Prajapati, Rushabh Gandhi	Multifunctional Load Cell and Rfid with Stock Management	Advances in Automation, Signal Processing, Instrumentation, and Control	Springer (International Publisher)	978-981-15-8220-2	2021



Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
54.	Kartik Gajera, Kushal Adeshara, Soni Sneha Kalpeshkumar	Efficient and Economically Optimized Way to Limit Inrush Current in an Induction Motor Using Solid State Devices	Advances in Automation, Signal Processing, Instrumentation, and Control	Springer (International Publisher)	978-981-15-8220-2	2021
55.	Banerjee R, Kathirya P, Shukla D	Recommendation Systems Based on Collaborative Filtering Using Autoencoders: Issues and Opportunities	Recent Innovations in Computing	Springer	978-981158296-7	2021
56.	Joshi Akash Nayan	Interview Skills	Commercial Communication III	Dr. Baba Saheb Ambedkar Open University	978-81938282-9-8	2020
57.	Yeolekar Bijal Maheshbhai, Nita H Shah, Zalak Ashvinkumar Patel	Mathematical Model to Analyze Effect of Demonetization	Mathematical Models of Infectious Diseases and Social Issues	Igi Global	9781799837411	2020
58.	Yeolekar Bijal Mahesh, Nita H Shah,	Transmission Dynamics of Covid-19 from Environment with Red Zone, Orange Zone, Green Zone Using Mathematical Modelling	Mathematical Analysis for Transmission of Covid-19	Springer	978-981-336-264-2	2021
59.	Pratik Patel, Dhaval B. Shah, Shashikant Joshi	Numerical Study of Resin Flow in Vartm Composite Manufacturing Process	Technologies for Sustainable Development	Crc Press	978-0-429-32157-3	2020



Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
60.	Paras Savnani, Mihir M. Chauhan, Akash Mecwan	Double Inverted Pendulum	Technologies for Sustainable Development	Crc Press	978-0-367-33737-7	2020
61.	Jatin Panchal, Bimalkumar Mawandiya, Dhaval B. Shah	Design of Trolley Attaching Mechanism for Unit Load Automated Guided Vehicle System	Technologies for Sustainable Development	Crc Press	978-0-429-32157-3	2020
62.	Umang Prajapati, Bimalkumar Mawandiya, Kaushik Patel	Process Capability Analysis of Worm Gearbox Manufacturing	Technologies for Sustainable Development	Crc Press	978-0-429-32157-3	2020
63.	Vaibhav Suthar, Bimalkumar Mawandiya, Kaushik Patel	Design and Development of Quality System for Gear Case Casting	Technologies for Sustainable Development	Crc Press	978-0-429-32157-3	2020
64.	Hiren M. Prajapati, Absar Lakdawala	Synthesis, Characterization and Applications of Magnetorheological Fluid	Technologies for Sustainable Development	Taylor & Francis, London	978-0-367-3737-7	2020
65.	Rudreshkumar D. Makwana, Bharat Modi, Kaushik Patel	Experimental Study on Effect of Tool Diameter on Thickness, Height and Geometrical Accuracy of Flange in Hole Flanging Using Single Point Incremental Forming	Technologies for Sustainable Development	Taylor & Francis Group	978-0-367-33737-7	2020



Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
66.	Nishant Vyas, Bimalkumar Mawandiya, Mayur A. Makhesana	Design of Automatic Vertical Storage System	Technologies for Sustainable Development	Crc Press, Taylor & Francis Group	9780367337377	2020
67.	Balkrushna A. Shah, Vikas Lakhera, Naseem Q. Mohommed	Experimental Investigation of Nucleate Boiling over a Smooth and Micro-Grooved Cylindrical Surfaces	Technologies for Sustainable Development	Crc Press Taylor And Francis Group	9780429321573	2020
68.	Sajan Chourasia, Absar M. Lakdawala, Rajesh Patel	Tribological Analysis of Automotive Material Under Wet Lubrication Condition Using Diesel	Materials Science and Engineering	Iop Conf. Series: Materials Science And Engineering	1757-899X	2021
69.	Sajan Chourasia, Rajesh Patel, Absar M. Lakdawala	Selection of Optimum Castor Rapeseed Emulsified Fuel Based on Engine Performance, Combustion and Emission Analysis	Recent Advances in Mechanical Infrastructure: Lecture Notes in Intelligent Transportation and Infrastructure	Springer, Singapore	978-981-33-4176-0	2021
70.	Vyom Shah, Darshita J. Shah, Dhaval B. Shah	Thermo-Mechanical Analysis of Functionally Graded Material for Cylindrical Shell Subjected to Internal Pressure for Varying Volume Gradation	Advances in Engineering Design	Springer	978-981-334-683-3	2021



Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
71.	Paresh Vardhmandas Patel, Shubham Patel	Generation of Wind Time History Data for Nonlinear Wind Analysis	Technologies for Sustainable Developmente	Crc Press, Taylor And Francis Group	978-0-367-33737-7	2020
72.	Jatinkumar M. Dave, Dishant Kavathiya	Kinematic Modeling of Walking Mechanism	Lecture Notes in Mechanical Engineering	Mechanisms And Machine Science, Springer	2195-4356	2020
73.	Prasad Yeole, Mitesh B. Panchal, Reena R. Trivedi	Vibro-Acoustic Analysis of Simple Vehicle Cabin Using Finite Element Method Mb Panchal, P Yeole, R Trivedi	Advances in Engineering Design	Springer	978-981-33-4684-0	2021
74.	Deep Shukla, Saurabh Modi, Reena R. Trivedi	Development of Tractor Seat Suspension System for Improving the Ride Comfort	Advances in Engineering Design	Springer	978-981-33-4684-0	2021

Papers in Conference Proceedings

Sr. No.	Name of the Faculty	Paper Title and Proceedings	Name of Publishing House	ISBN	Year of Publication
1.	Keyur Sangani, Ankur Dwivedi, Ankur Pandya, Praffula K. Jha, Shibu Pillai	Electronic Properties Of Mn Doped Graphene	ELSEVIER	2214-7853	2021
2.	Hitesh Patel, Vikas J. Lakhera, Biswanath Sarkar	Design And Analysis Of A Radial Centrifugal Pump For Cryogenic Helium Based Application, Iop Conference Series: Materials Science And Engineering, Volume 1070, International	IOP Publishing Ltd	1757-8981	2020



Sr. No.	Name of the Faculty	Paper Title and Proceedings	Name of Publishing House	ISBN	Year of Publication
		Conference On Recent Innovations In Engineering And Technology (Iciet 2020)			
3.	Hitensinh Vaghela, Biswanath Sarkar, Vikas J. Lakhera	Thermal-Hydraulic Analysis Of Cable-In-Conduit Superconductor:A Cfd Approach, Iop Conference Series: Materials Science And Engineering, Volume 1070, International Conference On Recent Innovations In Engineering And Technology (Iciet 2020)	IOP Publishing Ltd	1757-8981	2020
4.	Anand S. Patel , Kaushik M. Patel	Prioritization of Lean Six Sigma Success Factors Using Pareto Analysis, Iop Conference Series Materials Science And Engineering	IOP Publishing Ltd	1757-8981	2020
5.	Reena R. Trivedi , Dharmendra S. Sharma	Novel Design for Electrostatic Cantilever Microactuator For Travel Range Enhancement, Journal Of Physics Conference Series	IOP Publishing Ltd	1757-8981	2021
6.	Jatinkumar M. Dave , Purna Patel	Design And Dynamic Modelling of Quadrotor Vtol Aircraft, 2020 4Th International Conference On Electronics, Communication And Aerospace Technology (Iceca)	IEEE	978-1-7281-6387-1	2020
7.	Vipulkumar M. Bhojawala , Dhaval V. Patel, Kaushik M. Patel	Size Identification on Inner Race Spall In Rolling Element Bearing Operating Under Combined Load Using Vibration Signature Analysis, First International Conference On Advances In Smart Sensor, Signal Processing And	IOP Publishing Ltd	1742-6596	2021



Sr. No.	Name of the Faculty	Paper Title and Proceedings	Name of Publishing House	ISBN	Year of Publication
		Communication Technology (Icassct 2021)			
8.	Darshit S. Upadhyay , Kinnari Modi	Experimental Investigations And Thermal Analysis Of A Natural Draft Improved Biomass Cookstove With Different Air Conditions, Advances In Thermal-Fluids Engineering (Atfe 2021)	IOP Publishing Ltd	1757-899X	2021
9.	H.K.Kapadia	Review Of In-Line Water Quality Measurement Systems	11th International Joint Conference on Advances in Engineering and Technology, AET 2020	-	2020

Patents Published

Sr. No.	Name of the Inventors	Title of the Patent	Year	Status
1.	Prof. Kunal Ghosh, Prof. Mihir Chauhan	An Improved Antimine Vehicle with Vertical Blast Ventilation	2020	Published

Ph.D. Awarded

Sr. No.	Name of the Student	Name of the Guide / Supervisor	Title of Thesis
1.	Narasimha Reddy Ravuru	Dr. S. S. Patel	Hydrogen Production via Catalytic Glycerol Reforming
2.	Priya Parag Saxena	Dr. J. P. Ruparelia	Studies on Electrochemical Degradation of Reactive Black-5 Dye and Urea Solutions using Indigenously Developed and Commercial Electrodes
3.	Shailendra Singh	Dr. S. C. Bera	Design and Development of Higher Order Sub-Harmonic Mixers
4.	Parag Anilkishore	Dr. M. H.	Studies on Some Properties of Biodiesel



Sr. No.	Name of the Student	Name of the Guide / Supervisor	Title of Thesis
	Saxena	Joshiyura	and Biodiesel-Diesel-Butanol Blends
5.	Tushar Hematlal Bhoraniya	Dr. Sharad Purohit	Damping Evaluation Studies and Its Impact on Reinforced Concrete Structures
6.	Gadhavi Lataben Jasvantdanji	Dr. Madhuri Bhavsar	Performance Analysis of Adaptive Cloud through Workload Prediction Supporting Resource Provisioning
7.	Sonal Shankerlal Kotak	Dr. Urmil Dave	Mechanical and Durability Studies of Ambient Cured Alkali Activated Concrete with Various Source Materials
8.	Parmar Harikrushna Chandubhai	Dr. Usha Mehta	Power Aware Test Architecture for System- On-Chip
9.	Joshi Tejas Mukundbhai	Dr. Urmil Dave	Development of Pervious Concrete for Pavement Applications
10.	Makhesana Mayurkumar Ashwinbhai	Dr. K. M. Patel	Performance Assessment of Solid Lubricants and Minimum Quantity Lubrication in Machining
11.	Ashokkumar A. Tiware	Dr. Urmil Dave	Rheological Investigations on Cement Paste and Concrete using Fly ash and Ground Granulated Blast Furnace Slag
12.	Upadhyay Darshit Shaileshkumar	Dr. R. N. Patel	Investigations on Influence of Steam Injection and Catalyst on Producer Gas Quality in Fixed Bed Gasifier with Lignite as Feedstock
13.	Shah Dhaval Bipinchandra	Dr. K. M. Patel	Experimental and Numerical Investigations on Minimization of Spring- back Deformation in CFRP Parabolic Antenna Reflector Used for Space Applications
14.	Trivedi Kedar Niranjanbhai	Dr. Dhaval Pujara	Bandwidth Enhancement of Dielectric Resonator Antennas Using Stacked and Fractal Geometries
15.	Gandhi Ravi Vikramkumar	Dr. D. M. Adhyaru	Design and Implementation of Controller for Electromagnetic Levitation System in the Presence of Disturbances

Research Awards

Sr. No.	Name of the Faculty Awardee	Recognition / Honor / Award	Name of the Organization / Event	Award Category
1.	Dr. Makhesana Mayurkumar Ashwinbhai	Summer Faculty Research Fellowship	Indian Institute of Technology, Delhi	Fellowship



Conferences / Seminars / Workshops / Training Programmes Organized by the Institute

National Conference on “Advancement in Communication, Electronics, Computers, and Automation Technology”

The Department of Electronics and Communication Engineering, Institute of Technology, Nirma University has organised a national conference on, “Advancement in Communication, Electronics, Computers, and Automation Technology” during February 12–13, 2021. The conference was exclusively for the students of UG and PG courses from the disciplines of Electronics & Communication, Instrumentation and Control, Computer Science and Engineering, and Electrical Engineering. The conference was sponsored by the GUJCOST, Department of Science and Technology, Government of Gujarat. The IETE, Gujarat, and IEEE, Antenna Section, Gujarat were the technical collaborators of the conference.

The alumni members of the department were involved in the various organizing aspects of the conference. There were 62 papers from more than 90 authors were received across the country. After the similarity check and twofold reviews, 36 papers were selected for the oral presentation. Total 54 authors have registered for the paper presentation and 236 students have registered as participants for the conference.

Shri Rajeev Jyoti, Dy Director, MRAS, SAC, ISRO, Ahmedabad inaugurated the conference as the Chief Guest. Mr Ramji Makwana, Chairman, IETE, Ahmedabad was a Guest of Honor in the valedictory function of the conference on February 13, 2021. Total prizes worth Rs 37000/- were awarded to the winners in the conference. Student participants appreciated the organisation of the conference and requested to continue with the future versions of the event on a large scale.

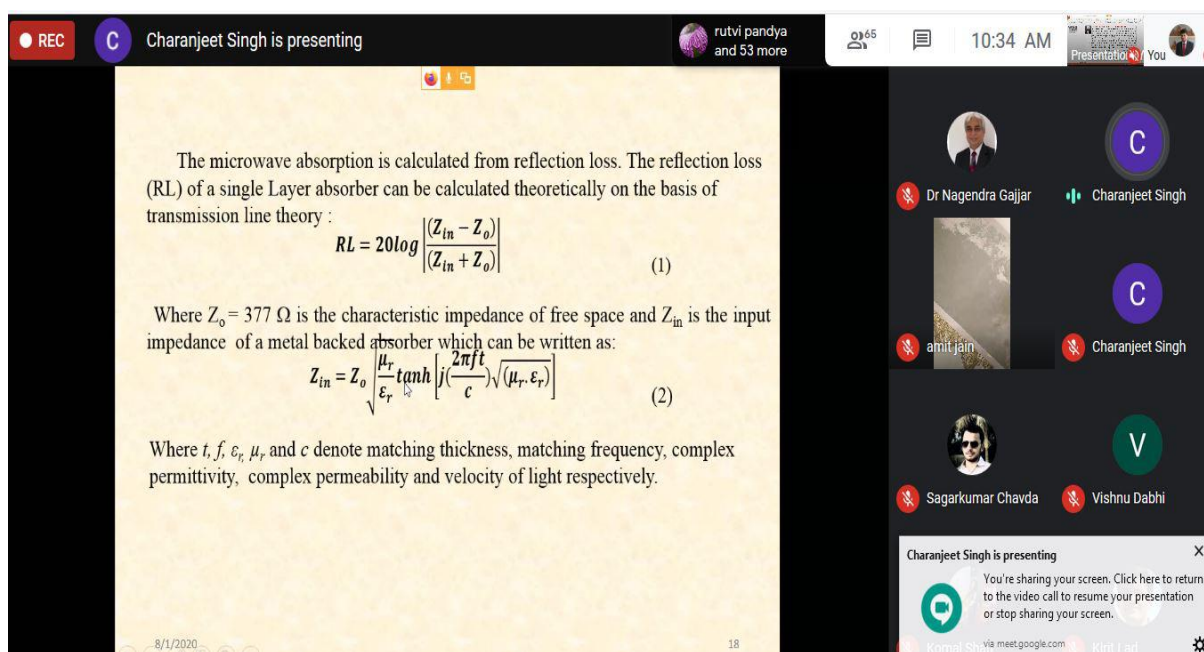
The screenshot displays a Cisco Webex Meeting interface. The main window shows a presentation titled "COVID 19 Diagnosis Methods". The presentation content includes a flowchart for "COVID Diagnosis" which branches into "Non-Invasive Methods" and "Invasive Methods". Under "Non-Invasive Methods", there are four categories: "Chest CT-Scans", "Chest X-Rays", "Thermal Screening", and "Tonsillitis Detection". Under "Invasive Methods", there are three categories: "RT-PCR Test", "Antibody Test", and "CBC Test". The interface also shows a list of participants (150) on the right side, including names like HARDIK JOSHI, AKASH MECWAN, Chirag Paunwala, RUCHI GAJJAR, and VAISHALI DHARE. A chat window is visible at the bottom right, showing a message from Ketan Patel: "Pl. Put your MIC OFF." The bottom of the screen shows the Windows taskbar with various application icons.

Plenary talk by Dr Chirag Paunwala

National Conference on “Recent Advancements in Materials science And Nanotechnology (RAMAN)-2020”

Nanotechnology is one of the emerging technologies of the world that approaches many frontiers of human lives nowadays. There is ample scope for improvement in the current techniques and technologies of Nanotechnology. The materials science nanoscale is going to

revolutionise the current electronics, machines, and their designs, optical and mechanical sensors, chemical and their reactions, etc. Considering the importance of this technology, during the Silver Jubilee Year of the Institute of Technology, the National Conference on ‘Recent Advancements in Materials science and Nanotechnology (RAMAN)-2020’ was organised from July 30- August 01, 2020. Organizers received support from various national agencies such as the GUJCOST, and DRDO for its execution. Dr Suddhasatwa Basu (Director, IMMT (Bhubaneswar)) was the Chief Guest of the event. Approximately 145 abstracts of research were received out of which with after 40% rejection ratio, 88 abstracts were selected for the presentations. The invited talks were delivered by prominent academicians and scientists abroad and in India. During the conference, various eminent professors delivered their invited talks including Prof Robert Pullar (University of Aveiro, Portugal), Prof Nandu Chaure (Pune University), and scientists Dr Brahmananda Chakraborty (BARC, Trombay) and Dr Sudhindra Rayaprol (UGC-CSR, BARC). The participants of the conference belonged to various reputed institutes of the nation including IIT (Delhi), IISc Bangalore, NIT Arunachal Pradesh, SVNIT (Surat), PDPU (Gandhinagar), etc. RAMAN-2020 has publication MoU with Materials Today Proceedings: Elsevier and the selected manuscripts after the peer review process will be recommended for publication.

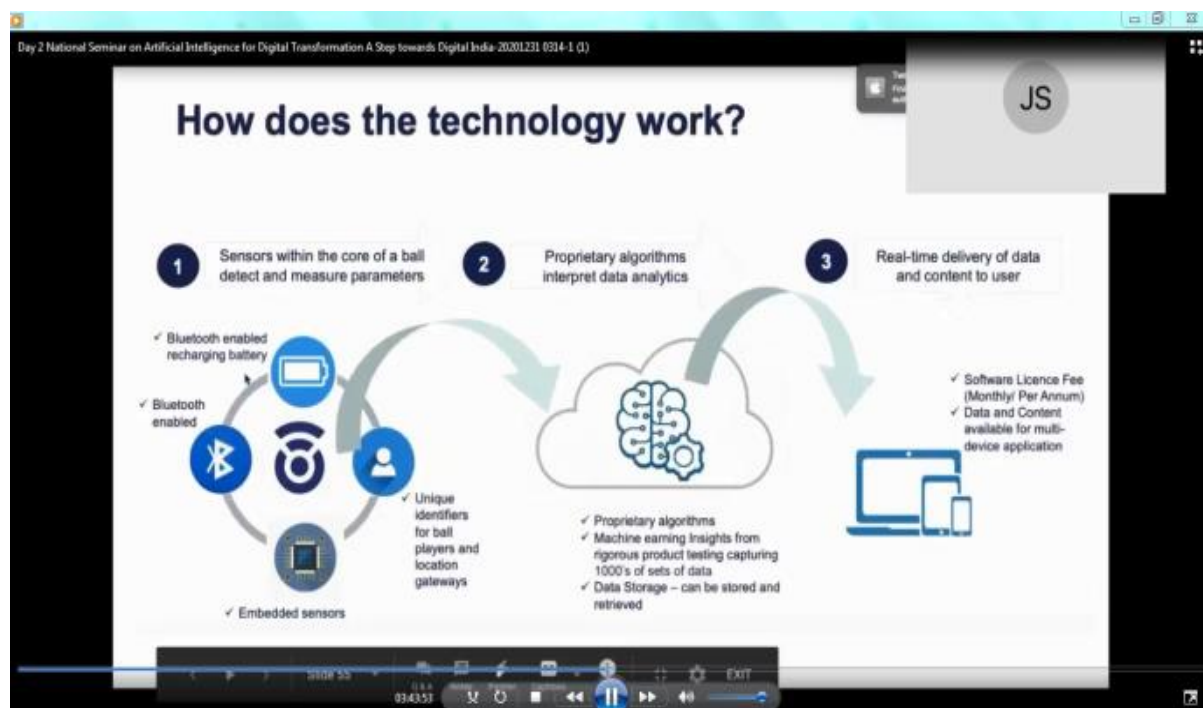


Presentation by the participant

National Seminar on Artificial Intelligence for Digital Transformation: A Step Towards Digital India

A National Seminar on Artificial Intelligence for Digital Transformation: A Step Towards Digital India was organized by Centre of Excellence in Data Science, CSE Dept., Institute of Technology on 30th & 31st December, 2020. The seminar was sponsored by Gujarat Council on Science & Technology, Department of Science & Technology. Total more than 140 participants participated in the seminar. Experienced senior members and resource persons of eminent organizations presented their expertise in the allied fields of AI like Machine Learning (ML), Deep Learning (DL), and Natural Language Processing (NLP). Mr. Manoj Parmar, Sr. Innovation Expert from Bosch Engg. and Business Solutions delivered a talk on “Accelerating Digital Transformation Journey with AIOT Solutions”. Mr. Himajit Aithal, AI Architect also from Bosch Engg. And Business Solutions shared his views on “Artificial

Decision Making – How do machine take decisions?”. Dr. Dinesh Garg, Senior Researcher, IBM Bangalore shared his expertise through a talk titled “Semi supervised Learning – Tale of Two Industrial Applications. The second day started with a talk titled “Deploying Machine Learning Models” delivered by Mr. Rocky Jagtiani, Industry Mentor and Technology Trainer from Suven Consultants & Tech Pvt. Ltd. Mumbai. Mr. Jay Shah, Principal Consultant from IndiaNIC Infotech Ltd. Ahmedabad, shared his views in a session “AIoT: Artificial Intelligence meets Internet of Things”. The last session of the seminar was addressed by Dr. Manjunath Joshi, Professor from DAICT Gandhinagar. The title of the session was “Adversarial Machine Learning: An Overview”. Two days were full of interesting sessions related to the theme of the seminar and participants benefited from the same.



A slide from the session of Mr. Jay Shah

GUJCOST Sponsored One Day Online National Workshop on “Linux Shell Scripting”

A One-Day National Workshop on “Linux Shell Scripting” was organised on March 20, 2021. This workshop was partially funded by the Gujarat Council on Science and Technology (GUJCOST). More than 75 participants from different regions have participated in this National level workshop. The prime objective of this workshop was to provide an introduction and have hands-on experience of the Linux basics, terminologies, commands, and shell scripting through interaction with academicians and industry experts.

The content covered in the workshop was as follows: Introduction to Linux and its Installation, Linux Commands, Linux Shell Scripting, Application of Linux Shell Scripting, Demonstration of Real-Time Application.

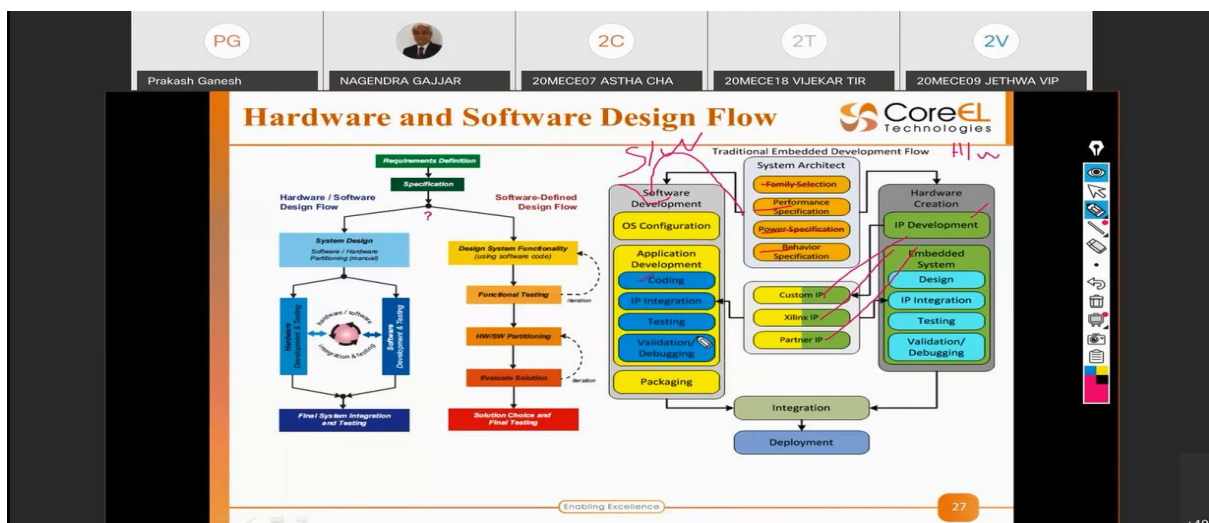
Dr Vaishali Dhare conducted a session on Linux Commands, Installation of Linux with different methods, and execution of commands through an online platform. The pre and post-lunch sessions were conducted by Mr Rahul Mehta, Physical Design Engineer, eInfochips, Ahmedabad. The advance Linux commands were demonstrated to the students, which are commonly used in the industry. Also, the industry applications of shell scripts were explained and demonstrated.



Inaugural session of Linux Shell Scripting

GUJCOST sponsored One-Week National Level STTP on “System on Chip Design: Trends and Tools”

One-Week National Level Short Term Training Program (STTP) on “System on Chip Design: Trends and Tools” organised during January 4-8, 2021. This STTP was sponsored by Gujarat Council on Science and Technology (GUJCOST) and was conducted online mode. The objective of the STTP was to provide a comprehensive overview of the design criteria, methodology, skills, and knowledge that are needed for an SoC designer. Along with the theory sessions, hands-on sessions, and recent trends in SoC designing and the related tools were the key focus of the STTP. The feedback received from the participants was overwhelming. Certificates were issued to all the participants who attended the sessions.

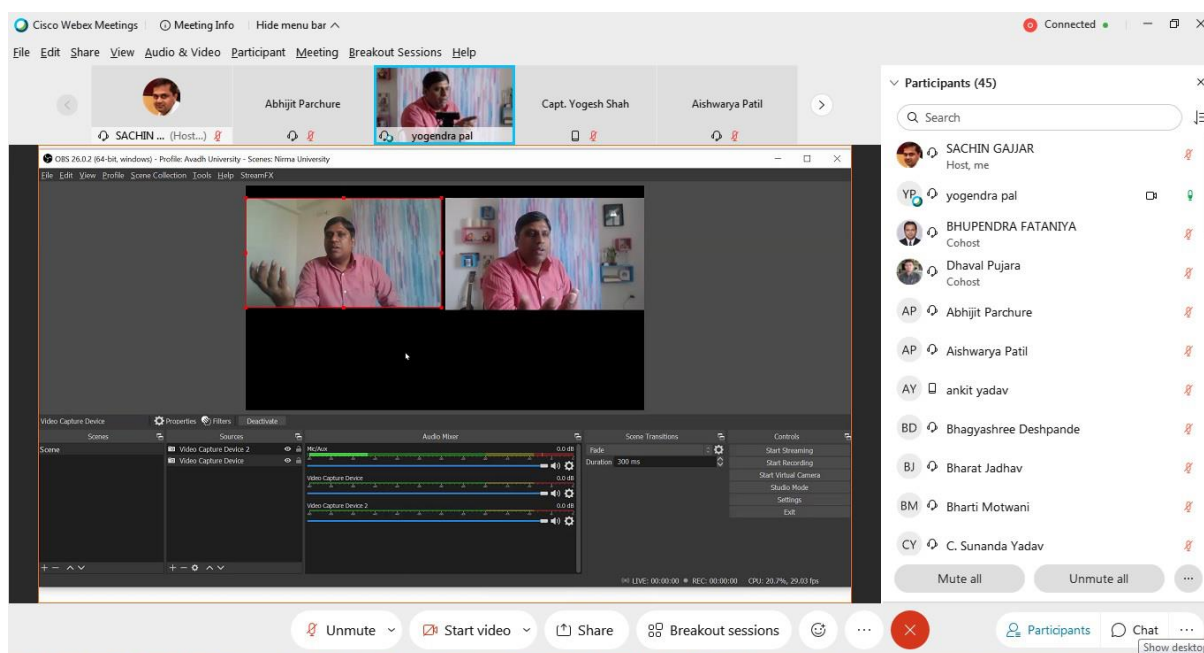


Expert session by Mr Prakash Ganesh, Coreel Technology

GUJCOST sponsored Online Short Term Training Programme (STTP) on “Digital Era Tools for Teaching, Learning, and Research”

The Department of Electronics & Communication Engineering, Institute of Technology, Nirma University organised an online Short Term Training Programme (STTP) on “Digital Era Tools for Teaching, Learning and Research” during November 23-27, 2020. The Gujarat Council on Science & Technology (GUJCOST) sponsored the five-day online STTP. The experts from the reputed Academic Institutes and Research Organisations conducted all the sessions in this program. During the program, apart from the lectures by the experts, there were hands-on sessions on various ICT tools on teaching, learning, and research.

The objective of the workshop was to provide an introduction to the Information and Communication Technology (ICT) tools that can be integrated into teaching-learning and research for faculty of higher education. The key focus of this program was to familiarize the participants with the ICT that help them: (i) design and present effective course material and plan classroom and laboratory activities, (ii) create a 24×7 participative learning environment for students, (iii) create an independent, self-paced, student-centric learning environment, (iv) effectively manage and enhance research productivity. Importantly, the hands-on session on latex and developing virtual laboratory were conducted interactively to give a start to participants in the field of creating virtual laboratory and creating documentation and presentations using Latex. Formal and informal feedback taken at the end of the workshop got a positive response.



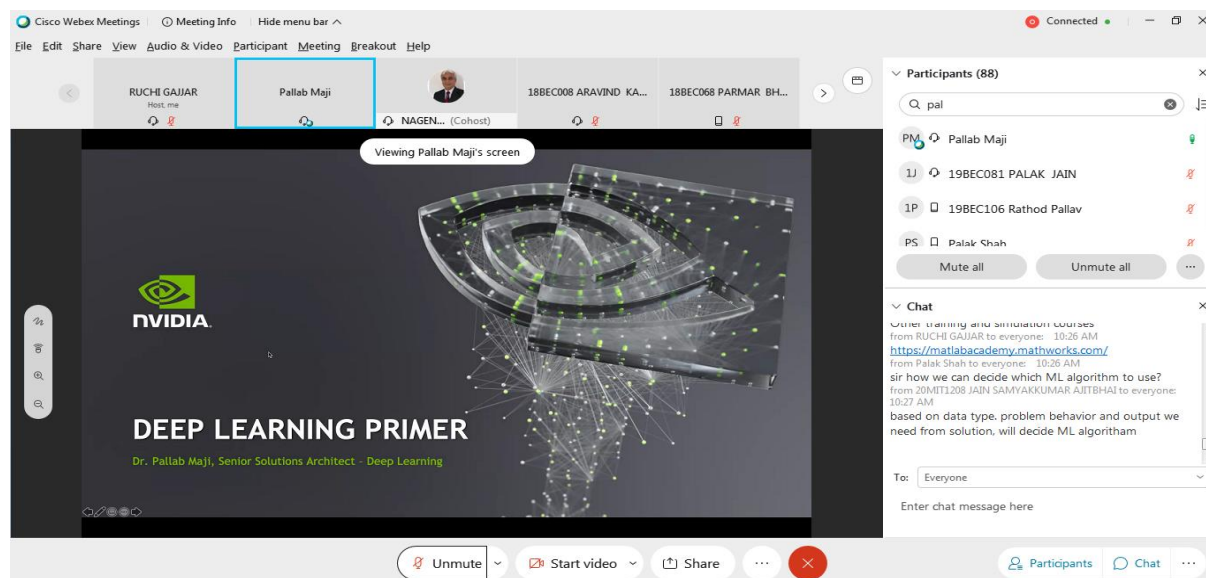
Expert session by Dr Yogendra Pal Founder, ETmantra eLearning Solutions, India

GUJCOST Sponsored National Workshop on “Machine Learning using MATLAB”

A National workshop on “Machine Learning using MATLAB” was organised on Nov 07, 2020. This one-day workshop was sponsored by GUJCOST and was conducted online mode. All the sessions in this workshop were conducted by experts from Industry and Academic Institutes. The objective of the workshop was to provide an introduction of Machine Learning

Nirma University Annual Research Report (April 2020 - March 2021)

approaches, their current applications, and the implementation of various Machine Learning approaches using MATLAB. The key focus of this workshop was to familiarize the participants with machine learning and its applications in the current scenario through interaction with industry experts and some academicians. Importantly, the hands-on session on MATLAB was conducted interactively to give a start to the participants in the field of machine learning and provide them with a platform of design and deployment of their machine learning architectures. Around 100 students had registered for the workshop and 90 participants had attended the workshop. Formal and informal feedback was taken at the end of the workshop and the participants gave a very good response.



Expert session by Dr Pallab Maji, Sr Solution Architect – Deep Learning, NVIDIA Graphics Pvt Ltd, India

Webinar Series on AI and Data Science

Centre of Excellence (CoE) in Data Science, CSE Dept., Institute of Technology organized a webinar series on AI and Data Science between 6th to 10th July, 2020. Registered participants were the students of M.Tech. 3rd and B.Tech. 5th Sem. of the CSE Department. It was conducted through online mode. Dr. Suman Mitra, Professor, DA-IICT Gandhinagar addressed the participants through a lecture titled “Statistics and Inference of Data Science”. Dr. Mitra explained the importance of statistical inferences from a data science problem in a very simple and demonstrative manner through various examples. “AI for Industry” was the title of the talk of Dr. Shirish Shivade, Associate Professor, IISc Bangalore. Dr. Shivade made awareness amongst the participants regarding the usage of AI in the industry. Dr. Beena Rai, Principal Scientist and Head Physical Sciences- Research Area, TCS Research & Innovation Gandhinagar explored the industrial use-cases of AI in the material design domain during her talk titled, “AI and ML in Materials Design, Discovery and Deployment”. She also shed light on the deployment part. Prof. Yong Wang, Assistant Professor, Systems Science and Industrial Engineering, Binghamton University, USA discussed Autonomous Vehicle Navigation along with the practical demonstration during his session “Autonomous Vehicles”. Participants were taken into step-by-step understanding of the research project, right from the product design till the actual deployment. “Machine Reasoning” was the title of the talk of Dr. Dinesh Garg, Senior researcher from IBM Bangalore. An amazing talk by Dr. Garg took the participants through a few real-time use cases of AI and a brief introduction to the future of AI.

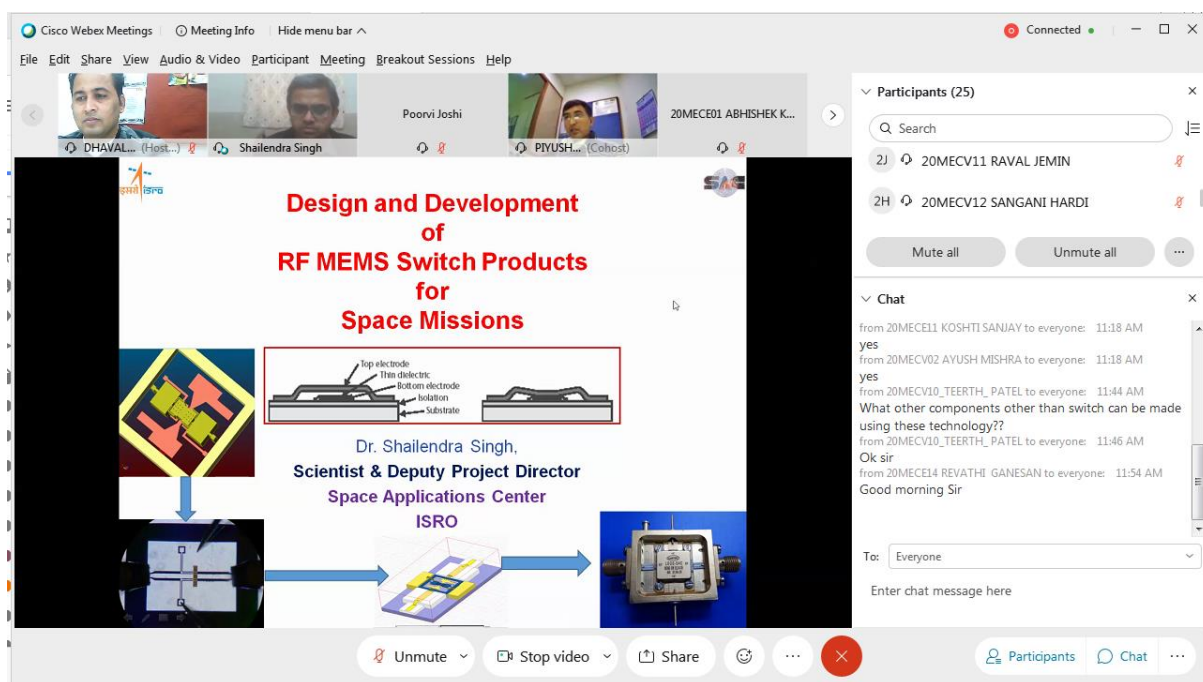
NU-BU Seminar Series

Under the activity of MOU with Binghamton University and Centre of Excellence, Department of CSE organized online lecture series. The seminar series started from July 10, 2020 and was successfully scheduled till December 4, 2020. The medium of the series was online where faculties and students from Nirma University were invited along with the staff of Binghamton University. The speakers from both the Universities delivered the sessions on alternate Fridays on the topics inclined towards “Data Science”. On an average more than 150 participants attended each lecture. The series started with the session of Dr. Yong Wang, Assistant Professor, Binghamton University. The topic of the session was “Computer Vision Aided Autonomous Navigation System Using Overhead Cameras and a Raspberry Pi”. The speaker discussed the case study of a computer vision-based autonomous vehicle system for warehouse materials distribution. In this study, an attempt is made to develop a system that integrates overhead cameras and a Raspberry Pi for the autonomous distribution of materials in a warehouse. Dr. Priyank Thakkar, Associate Professor, Institute of Technology, Nirma University, delivered a talk on “Stock Market Prediction using Machine Learning and Deep Learning”. Dr. Thakkar briefed two interesting proposals (i) trend deterministic data preparation and (ii) a two-stage fusion approach for predicting future trend and price of stocks. Both the proposals model the stock market prediction problem as the learning problem. The next session speaker was Dr. Daehan Won, Assistant Professor from Binghamton University. Topic of the session was “Machine Learning-based School Attendance Prediction and Causal Mining among Students with Autism”. In this talk, the speaker introduced the data-driven approaches based on the machine learning techniques to provide insightful information for educators in special education for an autism spectrum disorder (ASD) children based on the predictive performance framework. Dr Zunnun Narmawala, Associate Professor, Institute of Technology, Nirma University delivered his talk on “Distributed Overlapping Community Detection in Mobile Social Network (MSN)”. Dr. Jia Deng, Assistant Professor, Binghamton University discussed “Vibration and Heat Assisted Atomic Force Microscope Based Nanomachining”. The next session in the series was addressed by Dr Madhuri Bhavsar, Professor, Institute of Technology, Nirma University on “Establishing Trust and Reputation in Cloud”. The talk focused on analysis of the Trust Model in the cloud computing. A trust model tests the strength of protection and calculates a confidence value. “Design of Threshold Based Energy Storage Control Policy Based on Rule-Constrained Two-Stage Stochastic Program” was the title of the talk of Dr Soongeol Kwon, Assistant Professor from Binghamton University. The talk focused on developing a proper control policy for energy storage operations to minimize consumer electricity cost. Dr Ankit Thakkar, Associate Professor, Institute of Technology, Nirma University delivered his insights on “Energy Optimization of Sensor Networks using Clustering Techniques”. The primary focus of the discussion was to elaborate the significance of cluster formation and cluster head election approaches. Dr. Haifeng Wang, Assistant Professor, Mississippi State University’s session titled “Toward Smart Agriculture: An Attention Based Neural Network for Rice Disease Detection” shared a deep learning model - an attention-based depth wise separable neural network with Bayesian optimization (ADSNN-BO), to achieve AI-assisted rapid and accurate disease and pest detection. “Video Surveillance Framework using Wireless Sensor Networks/IoT” was the title of the last session in the series which was delivered by Dr Vijay Ukani, Associate Professor, Institute of Technology, Nirma University. The talk briefly described the technologies available for the design of a video surveillance framework while summarizing their challenges.



GUJCOST sponsored Two-Day National Webinar on “Micro-Electro-Mechanical System (MEMS) Design”

A Two-Day National Webinar on “Micro-Electro-Mechanical System (MEMS) Design” was organised during November 28-29, 2020. This webinar was partially funded by the Gujarat Council on Science and Technology (GUJCOST). All the sessions in this webinar were conducted by renowned experts from Industry and Academic Institutes. The registration of the webinar was open for engineering students of UG, PG, and PhD programs, faculty members, and industry personnel across the nation. More than 30 participants from different regions participated in this National level seminar. The objective of the webinar was to provide an introduction to MEMS Switches, their current applications, and the design of MEMS switches in the software (CoventorWare and HFSS) which is used by the Industry for the design of MEMS switches. The key focus of this webinar was to familiarize the participants with the application of MEMS switches in the current scenario through interaction with renowned academicians, scientists, and experts who are working on it. Importantly, the demonstration of MEMS switch design in the Industry accepted software was conducted interactively to give a start to participants in the field of MEMS design and provide them with a platform to learn the design of MEMS switches. Formal and informal feedback was taken at the end of the webinar which was very positive. Certificates were issued to all participants who had registered and attended all the sessions.

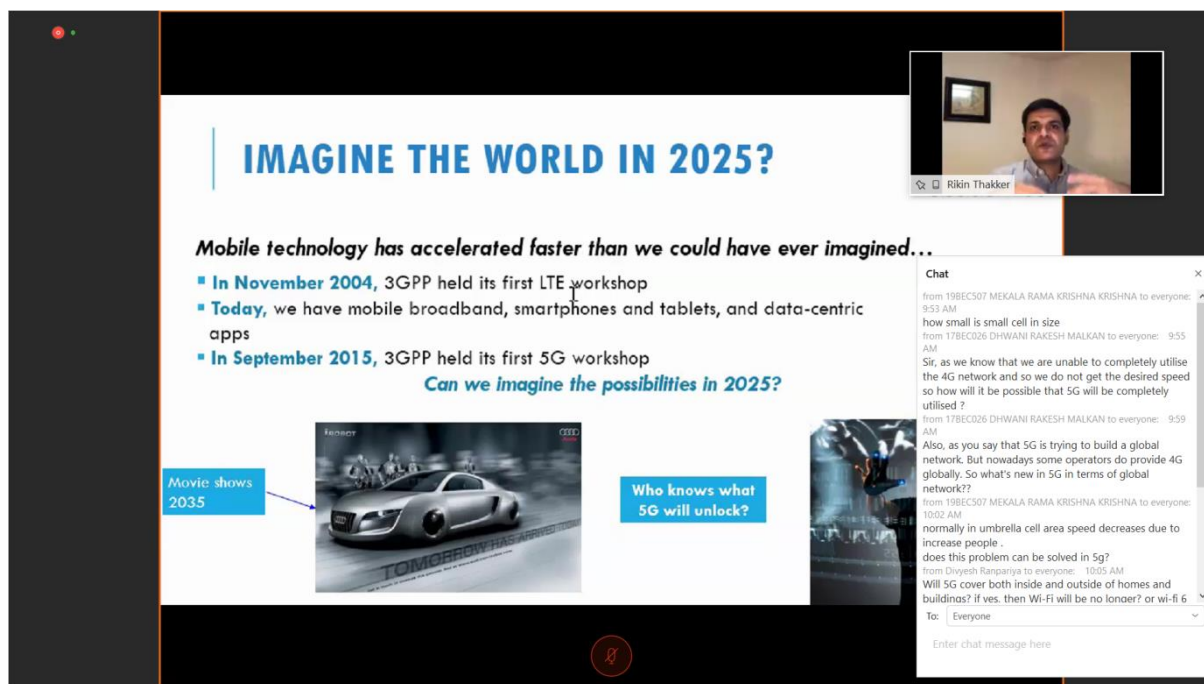


Expert session by Dr Shailendra Singh, SAC-ISRO

Webinar on “Why 5G matters for your career”

The Department of Electronics & Communication Engineering organised a webinar on “Why 5G matters for your career?” by Dr Rikin Thakker, Faculty at ECE Department, University of Maryland, USA. Dr Rikin is also an alumnus of the Department of Electronics and Communication Engineering, Institute of Technology, Nirma University. He is considered to be the world’s top 5G expert and has nearly 20 years of experience in the field of cellular and wireless communications. A total of 135 students and faculty members participated. The session was mainly focused on the currently evolving 5G technology. The speaker covered

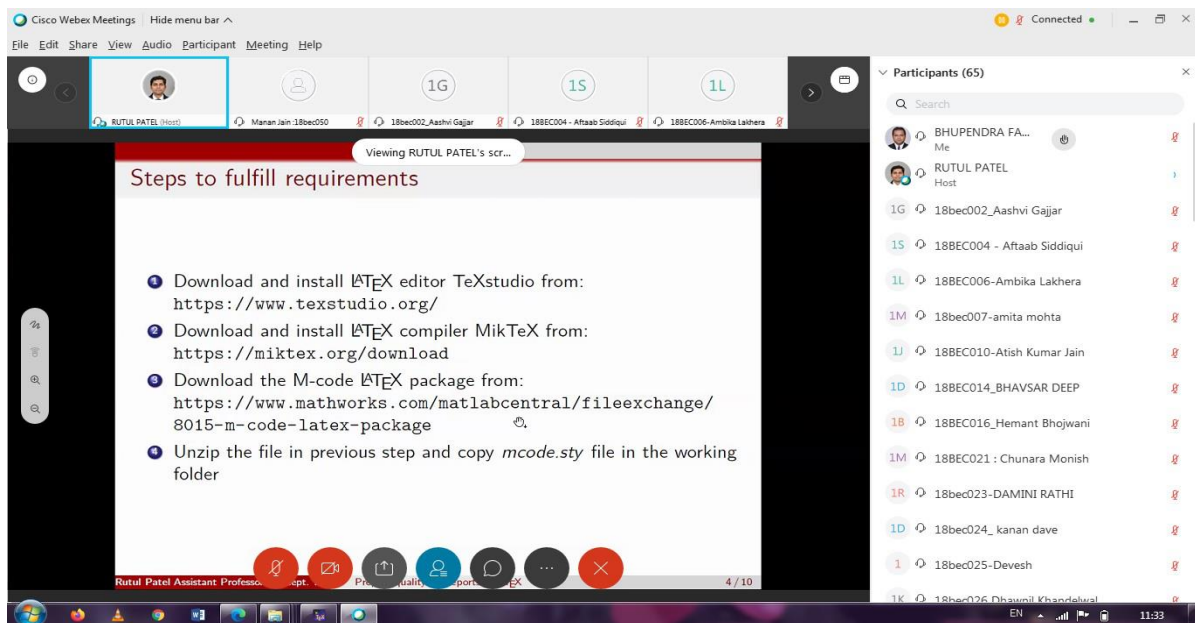
topics like the need for a 5G network in the industries, drawbacks of 4G LTE, interesting statistics highlighting the opportunities for EC engineers in 5G technology, the basics of 5G and 4G LTE, the speed and features of 5G, the data rate from 2G to 5G evolution, the international standardization regarding wireless communication, which is decided by ITU (International Telecom Union) like IMT-2000 (ITU's umbrella name for 3G), IMT-Advanced (LTE), IMT-2020 (Pathway for 5G). After the presentation, the expert opened the session for Q and A and some interesting questions were asked by the students and faculty members. The students asked questions related to small-cell theory and concept, infrastructure for 5G, limitations of 5G, 5G in terms of a global network, the difference between wi-fi and 5G, etc.



Future perspective of 5G by Dr Rikin Thakker, USA

Webinar on “Preparing Technical Reports with LATEX”

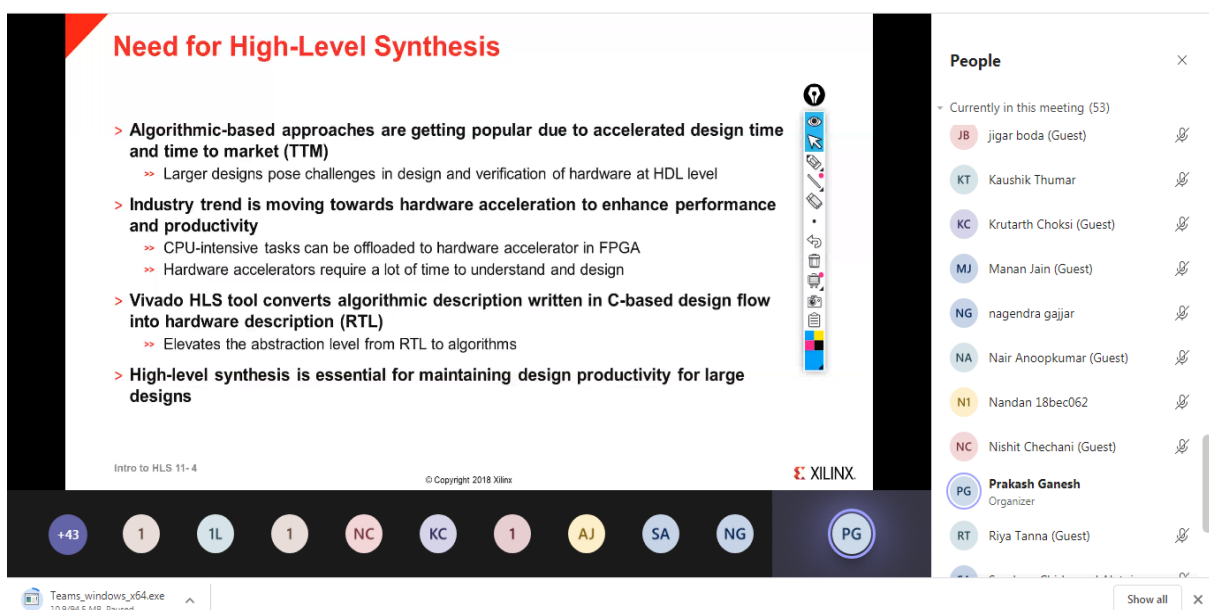
The Department of Electronics & Communication Engineering organised a webinar on “Preparing Technical Reports with LATEX”. The session was held on August 01, 2020, for the BTech EC, Semester V students. Approximately 70 students participated in the webinar. The necessary guidelines were shared with the students before the session. The session was divided into two parts, in which the first part was a demonstration and the other had hands-on exercises. The demonstration was shown by Prof Rutul Patel, which covered inserting symbols, equations, figures, tables, and MATLAB codes in a technical report. During the demonstration, the queries of the students were responded to by Prof Hardik Joshi. In the hands-on session, students were asked to implement a piece of a document having symbols and mathematical expressions. This exercise created interest among the students. The queries were satisfactorily answered by the faculty members. The feedback from the participants was overwhelming.



A guide to using LaTeX by Prof Rutul Patel

Webinar on “System Design Flow on Pynq-Z2 Board using Vivado High-Level Synthesis”

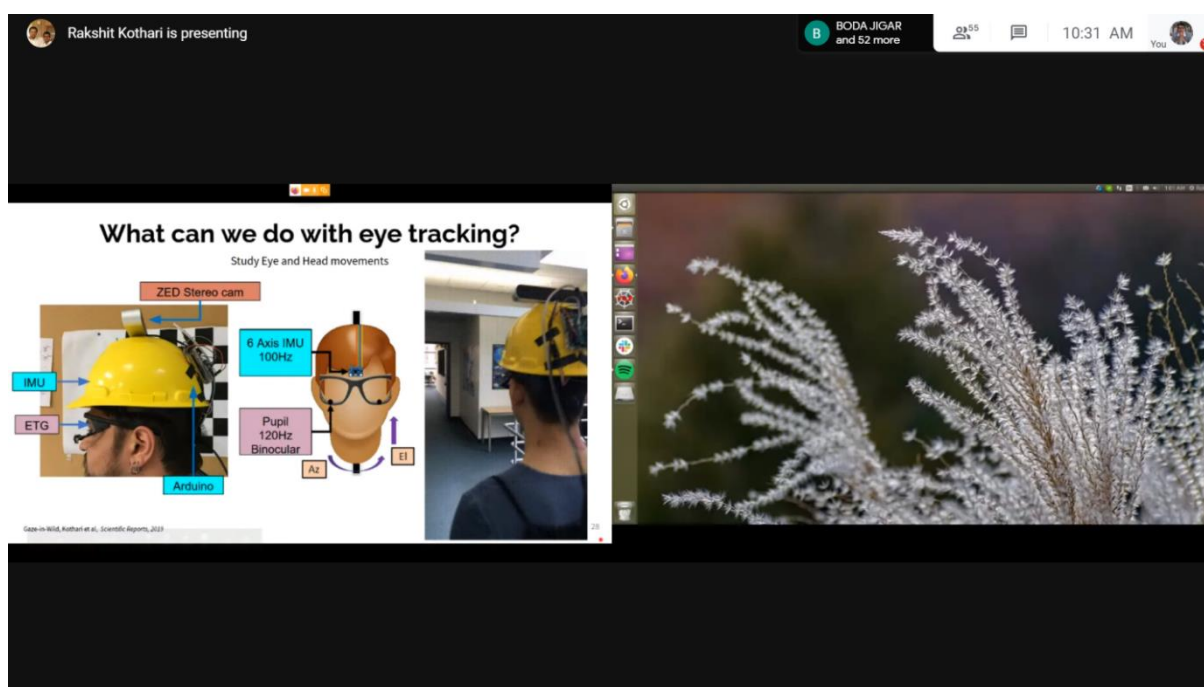
The Department of Electronics & Communication Engineering organised a webinar on, “System Design Flow on Pynq-Z2 Board using Vivado High-Level Synthesis” on July 30, 2020. The experts Mr Prakash Ganesh, Mr Sandeep Chidanand, and Mr Hemant Kumar from Coreel Technologies, Bangalore delivered this webinar. In this webinar tools related to the new elective course, ‘System on Chip Design’ was explained by the experts. The topics covered in the session were: High-Level Synthesis (HLS) and Integration, Python Productivity for Zynq (PYNQ), PYNQ Framework, Jupyter Notebook Interface, Demonstration of ML-based Applications using PYNQ, etc. This webinar being very specific, 53 students and faculty members have attended.



Expert session by Mr Prakash Ganesh

Webinar on “Eye-tracking – An Application of Computer Vision and Machine Learning”

The Department of Electronics & Communication Engineering organised a webinar on the topic, ‘Eye-tracking – An Application of Computer Vision and Machine Learning’ on July 26, 2020, by Mr Rakshit Kothari, the alumnus of the Department of ECE who has done his Master’s degree in Electrical Engineering from the Rochester Institute of Technology, NY. Mr Rakshit Kothari is a computer vision and eye tracking researcher and is pursuing a doctorate at the Rochester Institute of Technology (RIT). The webinar was attended by approximately 55 students and faculty members. Mr Rakshit discussed his research activities and presented the results of his research work on Eye-tracking using Machine Learning. He also discussed the database which he used and gave directions on how the techniques can be explored for further research and applications. Apart from his research, he also shared his experiences and a few tips on Higher Education abroad. In the question-answer session, many students expressed their curiosity on the topic and Mr Rakshit supported his answers with enough technical details.

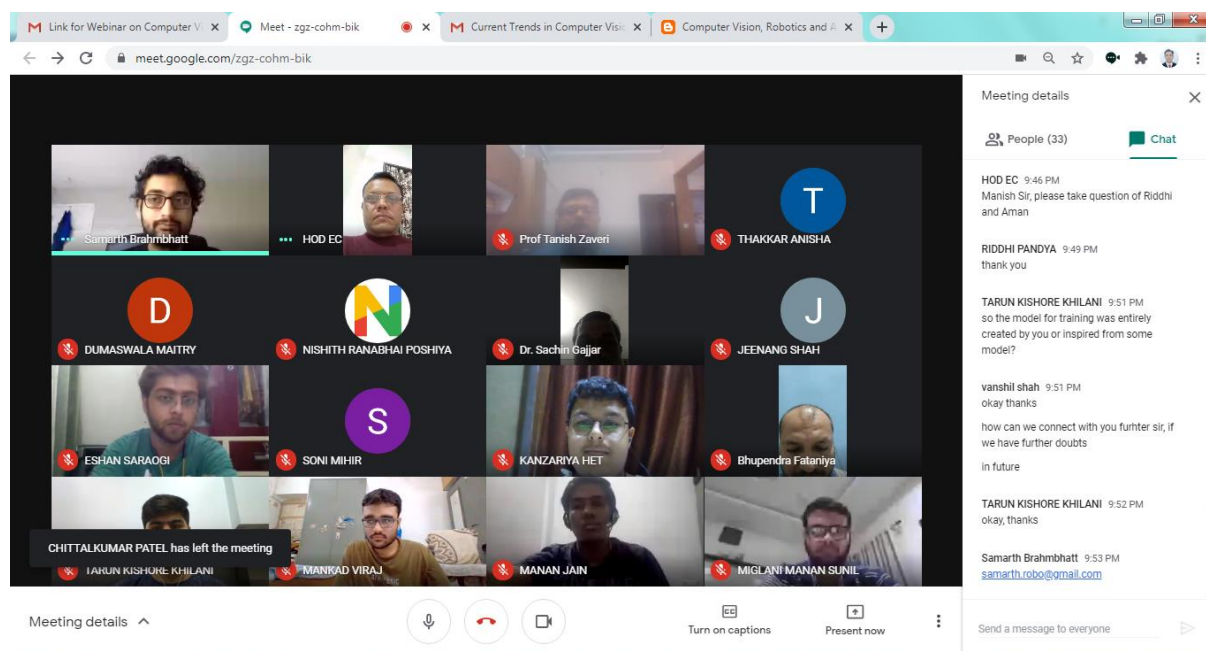


Expert Session by Mr Rakshit Kothari

Webinar on “Computer Vision Research: From Undergraduate to PhD”

The Department of Electronics & Communication Engineering organised a webinar on the topic, ‘Computer Vision Research: From Undergraduate to PhD’ on June 27, 2020. Mr Samarth Brahmbhatt, the alumnus of the Department of ECE, delivered a talk. Mr Samarth Brahmbhatt is a computer vision and robotics researcher, and a postdoc at the Intel Intelligent Systems Lab. In this webinar, approximately 80 students and faculty members participated. Mr Samarth discussed his research activities. He presented the results of his research work on Thermal Image Processing for observing hand-object contact during the grasping of household devices. Samarth has also discussed the database which he used and gave directions on how the techniques can be explored in this pandemic for further research. Apart from his research, he also shared his experiences and shared a few tips on higher education in

the USA. In the question-answer session, many students expressed their curiosity on the topic and Samarth answered with enough supporting technical details, which is the true success of the webinar.



A talk on Computer Vision Research: From Undergraduate to PhD by Samarth Brahmabhatt

Webinar on “Introduction to Machine Learning using MATLAB”

A webinar on “Introduction to Machine Learning using MATLAB” was organised on June 24-26, 2020. Each session was conducted for 2 hours and the whole programme was for 6 hours duration. The objective of the webinar was to spread awareness about Machine Learning among the students of Technology and Engineering, to enable the students to understand the basics of Machine Learning and Deep Learning fundamentals, and enable hands-on with MATLAB Software through the use of a University-wide MATLAB license. The programme helped the students learn the concepts and understand the application of machine learning and deep learning in their domain of technology fields. Total 590 students registered for the webinar and finally, 300 participants completed the webinar who were evaluated on attendance, continuous evaluation through Quizzes and Assignments. The content covered in the webinar was as follows:

1. Machine Learning (ML) using MATLAB: Basics, Processes, and Example with demo
2. Deep Learning (DL) using MATLAB: Basics, Processes, and Example with demo
3. Applications and Case Studies of ML and DL

Online Training Programme on “Analysis and Design of Building Using STAAD Pro”

Department of Civil Engineering has completed a 7 days online Training program " Analysis and Design of Building Using STAAD Pro." for the students of B.Tech. semester V, VII and passing-out batch of 2020 from the duration of July 4-11, 2020. Total 70 participants have successfully completed program. Students learnt the basic and advanced concept of Structural Design of the building through STAAD pro. Students have undergone two hours online training and practice for seven days for STAAD Pro. software.

Webinar Session on “Advanced Construction Technologies”

Civil Engineering Department, School of Engineering, Institute of Technology, Nirma University has successfully conducted a webinar on Advanced Construction Technologies for four days. The first lecture Challenges for Construction of Motera Stadium, Ahmedabad was delivered by Mr.Subrata Dutta, Project Director, L&T Construction, on June 27, 2020. The second lecture Overview of Advanced Construction Technologies was delivered by Prof.Kumar Neeraj Jha, Professor, IIT-Delhi, on June 29, 2020. The third lecture Box Pushing Technique was delivered by Prof. Parul Patel, Professor, Nirma University, on July 9, 2020. The fourth lecture Tunnel Construction using Tunnel Boring Machine was delivered by Mr.Sunil Dubey, Deputy Project Manager, L&T Construction, on July 10, 2020. Total around 100 students have participated in this webinar and were benefited from the knowledge shared by expert speakers.

Online Training session on “3D Modelling of Residential Building Using Revit”

The 3 days training session on “3D Modelling of Residential Building Using Revit” was conducted during July 1-3, 2020. The students of B.Tech. Semester II, V and VII showed interest and took part. Around 130 registrations of the students were done. The training was given regarding the basic commands of Revit software and creation of a 3D residential model of building. The students gave positive feedback about the programme.

Professional Development Course on Building Engineering

The Civil Engineering Department has organized a Professional Development Course on Building Engineering – Construction, Waterproofing, Maintenance and Repairs for managers of Pidilite Industries Ltd, Mumbai. This training programme is divided into two modules. Module 1 consists of Construction and Waterproofing for new buildings and Module 2 consists of Maintenance, Remedial Water proofing and Repair of old Structures. Module 1 was scheduled between October 14, 2020 to December 4, 2020 and was completed successfully. A total of 21 participants has participated in Module 1. 20 sessions of 1.5 hours each were conducted for Module 1. For module 1 experts were invited for conduction of session from industry and sessions were conducted by department faculty members. Module 2 started from January 5, 2021 to April 16, 2021. Total 16 participants have participated in it. Module 2 consisted of topics related to repair and rehabilitation of old structures and hence various experts from civil engineering domain and industry as well as department faculties shared their knowledge with participants.

Online STTP on “Fostering Instrumental Techniques”

Department of Chemical Engineering conducted a National level online Short Term Training Programme on “Fostering Instrumental Techniques” for Effective Research” on Cisco WebEx platform. The event was organised under Centre for Continuing Education, Nirma University during October 27-31, 2020 with an aim to provide an inter-disciplinary forum for engineers, researchers and student technocrats to discuss and promote research & technology transfer of characterisation techniques in Science & Technology. E-certificate was provided to all the participants after conducting the online examination. The inauguration was graced by Dr. Y.N. Trivedi (Head CCE), Dr. Sanjay Patel (HoD, Chemical Engineering Department) and Dr. Rajesh N. Patel (Incharge-Director, Institute of Technology). The STTP was



successfully coordinated by Dr. Neha Patni and Dr. Amita Chaudhary with around 100 registrations across the country. The participants were from prestigious institutes, including, IITs, NITs, BITS Pilani, Central universities, and research organizations. Panel of Speakers included Dr. Ramesh Gardas (Professor, Chemistry, IIT Madras), Dr. Narayanan D. Kurur (Professor, Department of Chemistry, IIT Delhi), Dr. Sudhanshu Sharma (Assistant Professor, Department of Chemistry, IIT, Gandhinagar), Dr. A. Ramanan (Professor, Department of Chemistry, IIT Delhi), Mr. A. Satyaprasad (Scientific Officer-E, Institute for Plasma Research, Gandhinagar), and Dr. Debashis Ray (Professor and Head, Department of Chemistry, IIT Kharagpur). Sessions on Acoustic, Volumetric, Transport and Refractive Properties, Ultraviolet Spectroscopy, NMR Spectroscopy, Infra-Red Spectroscopy, Electrochemical Techniques, X-Ray Diffraction Analysis, SEM and TEM Analysis for Surface Morphology, Thermal Analysis Techniques and Importance of Instrumental Techniques in Research were conducted successfully.

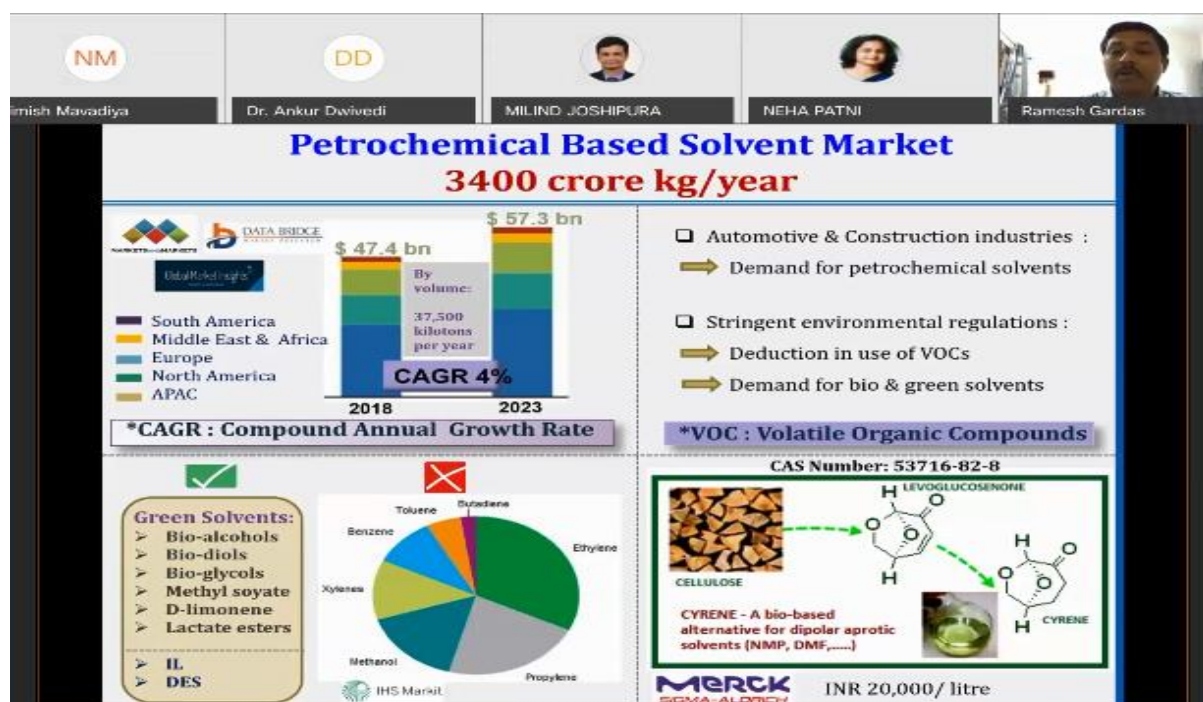


Presentation by the participant

National Webinar on “Role of Chemical Analytical Techniques in Research-2020”

Department of Chemical Engineering organized a National Webinar on “ROLE OF CHEMICAL ANALYTICAL TECHNIQUES IN RESEARCH-2020” on Cisco WebEX platform. The event was scheduled on Friday, August 28, 2020 with an aim to provide an interdisciplinary forum for engineers, researchers and student technocrats to discuss and promote research & technology transfer of advances materials in Science & Technology. Free registrations and E-certificate was provided to all the participants. The patron of the conference were Dr. Sanjay Patel (HoD, Chemical Engineering Department) and Dr. Rajesh N. Patel (Director, Institute of Technology). The webinar was successfully coordinated by Dr. Neha Patni and Dr. Amita Chaudhary with more than 500 registrations across the country. The participants were from prestigious institutes, including, IITs, BITS Pilani, Central universities, and research organizations. Panel of Speakers included Dr. Ramesh Gardas (Professor, Chemistry, IIT Madras), Dr. Rekha Nair (Professor, Incharge Vice Principal,

Dean, Poornima College of Engineering, Jaipur) and Mr. Suresh Babu Muttana (Scientist, DST, GoI, India).



Expert lecture by Dr. Ramesh Gardas (Professor, Chemistry, IIT Madras)

International Webinar on “Advance Materials in Science and Technology-2020”

Department of Chemical Engineering organized an International Webinar on “Advance Materials in Science and Technology-2020” on Cisco WebEX platform. The event was scheduled on Friday, September 11, 2020 with an aim to provide an interdisciplinary forum for engineers, researchers and student technocrats to discuss and promote research & technology transfer of advances materials in Science & Technology. With free registrations and E-certificate was provided to all the participants. The patron of the conference were Dr. Sanjay Patel (HoD, Chemical Engineering Department) and Dr. Rajesh N. Patel (Incharge Director, Institute of Technology). The webinar was successfully coordinated by Dr. Neha Patni and Dr. Amita Chaudhary with more than 500 registrations across the country and few from other countries like US, UK, Qatar, Hungary, Saudi Arab, etc. The participants were from prestigious institutes, including, IITs, BITS Pilani, Central universities, and research organizations. Panel of Speakers included Dr. Mahendra Sunkara (Director, Advanced Energy Materials, Conn Center for Renewable Energy Research, University of Louisville, Kentucky, US.), Dr. Vijay Kumar Thakur (Professor, Biorefining and Advanced Materials Research, Centre @ SRUC, Edinburgh, UK and School of Aerospace Transport & Manufacturing, Cranfield University, UK), Dr. Sanjay Patel (Professor and Head ,Chemical Engineering Department, School of Engineering, Institute of Technology, Nirma University, Gujarat, INDIA) and Dr. Shashikant Joshi (Professor, Mechanical Engineering Department, School of Engineering, Institute of Technology, Nirma University, Gujarat, INDIA).



Expert lecture by Dr. Mahendra Sunkara (Director, Advanced Energy Materials, Conn Center for Renewable Energy Research, University of Louisville, Kentucky, US).

Research Talks / Lectures Organized by the Institute

1. Current Trends in Industry Research, Expert Name: Kiran Potnuru, Association of lecturer: Practice Leader- Information Security at Intel, Branch and Semester: CSE 5th Semester Date: 16th July 2020, Description: In this lecture, the speaker discusses several types of research conducted by industries using cutting-edge technologies such as Deep Learning, Artificial Intelligence, Internet of Things, Block Chains, and Cloud Computing. The speaker shared an example of real-world applications in which these technologies can bring revolution and benefit a large number of people.
2. Current Trends in Machine Learning and Computer Vision technologies, Expert Name: Ms Dhara Bagadia, Association of lecturer: Technical Lead at eInfochips, Ahmedabad. Branch and Semester: CSE 7th Semester, Date: 16th July 2020, Description: Machine learning is a branch of artificial intelligence (AI) and computer science which focuses on the use of data and algorithms to imitate the way that humans learn, gradually improving its accuracy. Computer vision is a field of artificial intelligence (AI) that enables computers and systems to derive meaningful information from digital images, videos and other visual inputs and take actions or make recommendations based on that information. Speaker discuss the various real world applications (Such as object and activity recognition) where Machine Learning and Computer Vision technologies are used.
3. Image Segmentation Techniques, Expert Name: Dr. Mehul Raval, Association of lecturer: Professor, School of Engineering and Applied Science, Ahmedabad University, Branch and Semester: B. Tech – CSE, Date: 19th September 2020, 26th September 2020, 3rd October 2020, Description: The expert topic included various image processing fundamentals which includes image, its representation in digital form. The topic also included various filters to enhance the quality of the images. The filter includes blurring, sharpening, denoising effects on the images. Such filters help to identify the object boundaries. In addition, following segmentation techniques were covered in the session: Thresholding Segmentation: Such techniques works with image intensities. Threshold intensity is selected for segmenting the images in no of parts. Edge-Based Segmentation:

Segmentation is performed based on the edges of the images. Various edge detection techniques are Sobel, Laplacian, LoG, etc Region-Based Segmentation: Segmentation of the images is performed based on the texture of the image and similar image region properties. Various other segmentation techniques include Watershed Segmentation, Clustering-Based Segmentation Algorithms, Neural Networks for Segmentation. The advanced segmentation approach like Neural Network based methods and Convolution Neural Network based methods were covered in the sessions along with its implementation details. All the techniques were followed by its application area. In addition, all the topics are followed by the practical implementation of the same. Students were given exercises related to the topics covered.

4. Challenges and Opportunities in Medical Image Analysis, Expert Name: Dr. Mehul Raval
Association of lecturer: Associate Dean and Professor, School of Engineering and Applied Science, Ahmedabad University, Branch and Semester: B. Tech – CSE & IT, M. Tech. and MCA, Date: 29th September 2020, Description: Dr. Raval spoke about challenges general to the domain of Medical Image analysis and specific to the area of “Brain Tumour Segmentation”. He discussed the way these challenges can pave the way to various research opportunities in the field. He also addressed the questions raised by the audience.
5. Mr. Raghunath Patil, AGM & Mr. Sumit Gupta State Marketing Manager, NUVOCO Vistas Pvt. Ltd. delivered expert talk on ‘Advanced Concrete Products and Challenging Project Case Studies (Online Webinar)’ on May 6, 2020 to B. Tech (Sem-IV & VI) students
6. Dr Irudayaraj Devotta, DGM, and Dr Amol, Manager R&D Centre, Faridabad at Indian Oil Corporation delivered expert talk on ‘Road Construction Technology’ on June 15, 2020 to B. Tech (Sem-IV & VI) students
7. Prof. P. K. Garg, Professor, IIT Roorkee delivered expert talk on ‘Advances and Opportunities in Surveying’ on August 26, 2020 to B. Tech (Sem-III) students
8. Mr. Arun Sankhat, Director of Engineering and Design at Post Tension Service India (PTSI) pvt. ltd. delivered expert talk on ‘Basic and Advances of Prestressed Concrete - Practical Cases’ on August 28, 2020 and September 4, 2020 to B. Tech (Sem VII) students
9. Mr. Himanshu Patel, AGM, NuVOCO Vistas Crop. Ltd delivered expert talk on ‘Advancement in Cement and Special Concretes’ on August 31, 2020 & September 1, 2020 to B. Tech., Sem-III, V & VII students
10. Mr Pavan Sethi, Zonal Head, JK White cement. delivered expert talk on ‘Special Concrete’ on 29/09/20 to B. Tech (Sem-V) students
11. Mr. Ashish Pandya, Project Manager for sustainable spaces, ideaship Inc, Hondo-eho, Midori-ku, Chiba, Japan delivered expert talk on ‘Advancement in Sustainable Technologies’ on September 30, 2020 to B. Tech., Sem-V students
12. Mr. Bhavin Shah, Founder & CEO, SQVe Consultant, Ahmedabad delivered expert talk on ‘Structural Engineering - Beyond the Mathematics’ on October 6, 2020 to M. Tech. Sem-I Orientation Programme students
13. Mr. Raghunath Patil, AGM NUVOCO Vistas Pvt. Ltd. delivered expert talk on ‘Advanced Concrete Technology’ on January 11, 2021 to M. Tech. Sem-I students
14. Dr. Srinivas Arkatkar, Associate Professor, SVNIT Surat. delivered expert talk on ‘New Technologies in Road Safety’ on January 26, 2021 to B. Tech., Sem-VI (TERS Course) students
15. Tanuj Mishra, BASF Construction Chemicals) delivered expert talk on ‘Construction Chemicals used for Structural Repairs’ on March 18, 2021 to M. Tech. and B. Tech. Students students



16. Mr. Rishabh Kapil & Mr. Deval Kshatriya (Hilti India Pvt. Ltd.) delivered expert talk on 'Anchors and Rebars used for Structural Repairs.' on March 25, 2021 to M. Tech. Sem-II and B. Tech., Sem-VI students
17. Prof Amit Agrawal, Professor, Mech Engg Dept, IIT Bombay delivered expert talk on 'Basics of Microfluidics and Its Application to Biomedical Device' on June 26, 2020.
18. Prof Rajneesh Bhardwaj, Associate Professor, Mech Engg Dept, IIT Bombay delivered expert talk on 'Droplet Deposition on Solid Surface: Applications in understanding survival of coronavirus on a surface' on June 26, 2020.
19. Prof Suman Chakraborty, Professor, Mech Engg Dept., IIT Kharagpur delivered expert talk on 'Paper based Microfluidics and It's Application for Diseases Diagnosis' on June 26, 2020.
20. Mr. Kashyap Ramaiya, Design Engineer, Mascot Robotics & Automation, Rajkot delivered expert talk on 'Automation and Industry 4.0' on July 17, 2020.
21. Prof. Jitesh Thakkar, Professor, National Rail and Transportation Institute (NRTI), Vadodara delivered expert talk on 'System Engineering' on August 29, 2020.
22. Dr M. Ramgopal, Professor, Mechanical Engineering Department, IIT, Kharagpur delivered expert talk on 'Human Thermal Comforts and its Standard' on September 25, 2020.
23. Mr. Gaurang Patel, HVAC Consultant, Ahmedabad delivered expert talk on 'Air Conditioning System Selection' on November 5, 2020.
24. Mr Darshil Patel State University of New York, Buffalo & Clemson University, USA delivered expert talk on 'Significance of Inverse Design Methods and Artificial Intelligence (AI) techniques to improve traditional Design Approaches' on March 1, 2020
25. "Future Perspectives of Solar Energy" by Mr. Prafulla Pathak, President, Solar Energy Society of India, New Delhi on September 14, 2020
26. "Time & Frequency domain analysis of differential equations" by Dr. Ragavan K, Associate Professor, EE department, IIT Gandhinagar on November 04, 2020
27. "Commissioning of Electrical Systems in Nuclear Power Plant" by Mr. Samir Pathan, Scientific Officer, Kakrapar Atomic Power Station, Kakrapar on February 05, 2021
28. "Distribution Power System, it's challenges and recent trends" by Mr. Jatin Upadhyay, Executive Engineer -GUVNL on March 30, 2021.

Conclaves / Lecture Series

Lecture Series in Water Resources and Irrigation

An Expert Lecture Series in Water Resources Irrigation Engineering course was organized for the Civil Engineering Students especially for Semester-VI students. The sessions were delivered by Dr. Ramesh Teegavarapu, Professor and graduate program director & coordinator in the Department of Civil, Environmental and Geomatics department at Florida Atlantic University (FAU), Boca Raton, Florida. Dr. Teegavarapu is a founder and leader of the Hydro systems Research Laboratory in the department, a Fulbright Scholar and also a Fulbright Specialist. He has over 15 years of experience in hydrological modeling and water resources systems area. Dr. Teegavarapu has delivered total 5 Sessions of 02 hours each starting between February 23, 2021 to March 10, 2021. More than 100 students of the B. Tech Civil Engineering have attended the lecture series. The main topics covered were Unit Hydrograph theory, Basics of River Engineering, Water Requirements of Crops and Irrigation Engineering.

Lecture Series in Transportation Engineering



A Lecture Series in Transportation Engineering was organized for the Civil Engineering Students especially for Semester-IV students. The sessions were delivered by Dr. Neeraj Buch, Professor and Chairperson of Civil and Environmental Engineering Department, Michigan State University. Dr. Buch has over 25 years of experience in the area of Transportation Engineering. He is the honorary member of International Society for Concrete Pavements, which is the highest level of membership. He is a Fellow at American Concrete Institute. He also served as the president of International Society for Concrete Pavements. Dr. Neeraj has delivered total 5 Session of 02 hours each, starting from March 2, 2021 to March 16, 2021. More than 100 students of the B. Tech Civil Engineering have attended the lecture series. The main topics of the sessions are Overview of Pavements and its types, Factors affecting performance of pavements, Stresses in Pavements, Design of Flexible and Rigid Pavements.

Expert Lecture Series in Geotechnical Engineering

An Expert Lecture Series in Geotechnical Engineering for the Civil Engineering Students especially for Semester-IV. The sessions were delivered by Dr. Sanjay Kumar Shukla, Associate Professor Civil Engineering Department, Edith Cowan University, Perth, Australia and Adjunct Professor, Civil Engineering Department, SoE, IT-NU. Dr. Shukla is Founding Editor-in-Chief, International Journal of Geosynthetics and Ground Engineering, Founding Research Group Leader (Geotechnical and Geoenvironmental Engineering), School of Engineering, Edith Cowan University, Perth, Australia. He has over 24 years of experience in teaching, research and consultancy in the field of Civil (Geotechnical) Engineering. He collaborates with several world-class universities, research institutions, industries and individuals on academic and field projects. Dr. Shukla has delivered five 02-hour session on from March 23, 2021 to April 27, 2021. More than 100 students of the B. Tech Civil Engineering branch have attended the lecture series. The main topics to be covered in the sessions were permeability of soil, laboratory measurement, flow net, Shear strength of the soil and laboratory tests for shear strength evaluation.

Expert Lecture Series in Construction Project Management

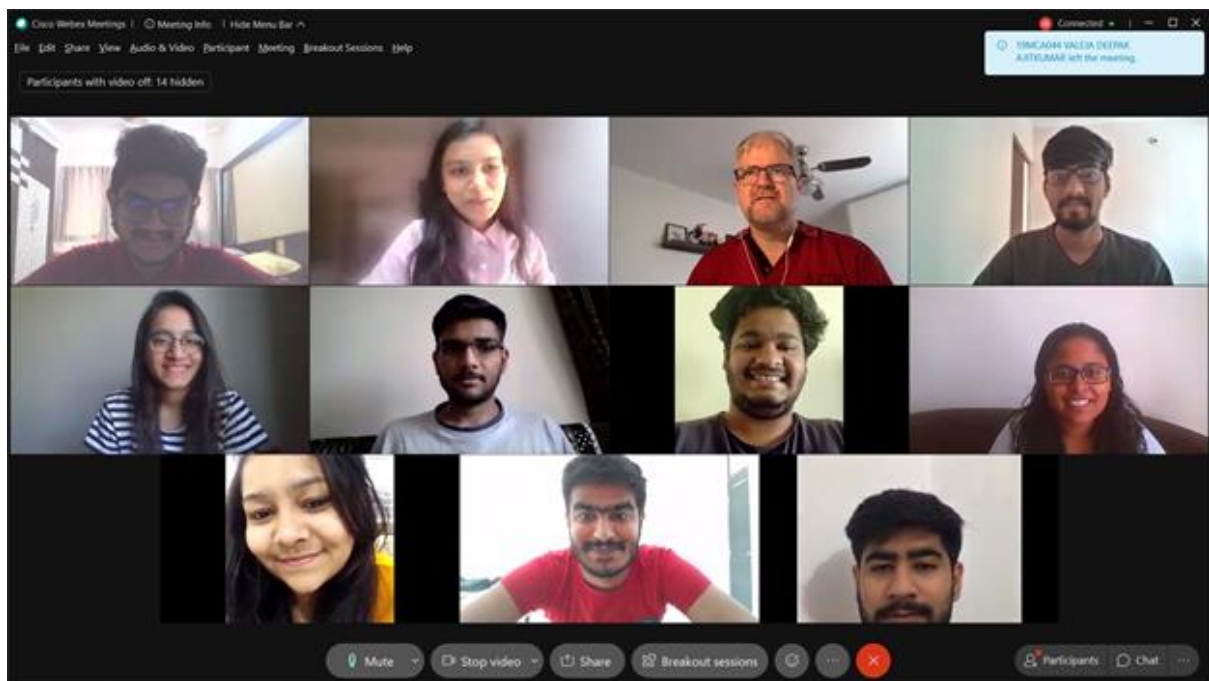
An Expert Lecture Series in Construction Project Management for the Civil Engineering students especially for Semester-VI was planned for a duration of 10 hours. The sessions were delivered by Dr. Deepak Sharma, Associate Professor, Department of Civil and Environmental Engineering, California State University. Dr. Sharma has delivered lectures on April 3, 2021, April 17, 2021, April 24, 2021 and May 1, 2021. More than 100 students of the B. Tech Civil Engineering branch have attended the lecture series. The main topics covered in the sessions are fuzzy logic and artificial intelligence in construction project, bayesian network, MS Project Software and Lean Construction.

Research Wave- International lecture series at Nirma University

During February 22-27, 2021, Nirma University ACM student's chapter organized 'Research Wave', a series of distinguished talks delivered by various international speakers in the emerging computer science fields such as AR/VR, Data Science, and Human-Computer Interaction. This year the event had Dr. Houbing Song, Prof Anthony Steed, Ms. Geeta Chauhan, and Prof Mark Billingham as the speakers. There was a great amalgamation of

energetic youths and high-tech speakers with 300+ participants. Dr. Houbing Song is an Assistant Professor of Electrical Engineering & Computer Science (EE&CS) and the Director of the Security and Optimisation for Networked Globe Laboratory (SONG Lab, www.SONGLab.us) at Embry-Riddle Aeronautical University (ERAU), Daytona Beach, Florida. In his session, he shared his knowledge on the topic of Counter – Unmanned Aircraft System(s) (C - UAS) with 145+ participants and the technologies based on it. He highlighted the problems and challenges faced by the scientific community in devising the software and hardware related to C-UAS and the future trends in the field.

Prof Anthony Steed, Head of the Virtual Environments and Computer Graphics group at University College London, shared his expertise on user engagement in Virtual Reality with 135+ participants. He discussed his recent work in Virtual Reality that draws on recent theories in embodied cognition, to show how our own representation within the system acts as an "interface". He said, 'We need to make such technologies that can adapt the interface by having speech and gesture.' The participants also explored examples of how virtual reality allows us to use their own bodies as a natural user interface. Ms. Geeta Chauhan, AI/PyTorch partner Engineering Head at Facebook AI, said, 'Deep learning is successful in detecting and treating diseases like breast cancer, brain lesions, diabetic retinopathy, skin lesion classification, bone suppression in chest X-Rays, and etc.' She explained how the medical domain is evolved after the introduction of deep learning in medical imaging with 175+ participants. She was concerned about gaining knowledge and her words were "if you are going for a single area go, but be aware of each and everything about that domain". She said, 'In the upcoming years the software will develop automatically.' Prof Mark Billinghurst, Professor of human-computer interaction at the University of South Australia. He shared his proficient knowledge regarding several decades of development in Human-Computer Interactions with 210+ participants and discusses the important trends that are currently being explored, and how we might use computers in the future. The event was successfully organized by the student team of Mr. Tirth Patel (Student chair) as per the vision and guidance of Dr. Saurin Parikh, faculty advisor of the chapter. Dr. Parikh said that the main objective of the event was to inculcate research interest in the students about the emerging research areas and the ACM student chapter at Nirma University plans to form special interest research groups of students to pursue research projects in said areas.



Interaction with the experts



Dr. Houbing Song is an Assistant Professor of Electrical Engineering & Computer Science (EE&CS) and the Director of the Security and Optimization for Networked Globe Laboratory (SONG Lab) at Embry-Riddle Aeronautical University (ERAU), Daytona Beach, Florida. He has invented his own C – UAS at his Lab. Prof. Anthony Steed is Head of the Virtual Environments and Computer Graphics group at University College London with over 25 years of expertise. He has long been interested in creating effective immersive experiences, more recently it has focused on user engagement in Virtual Reality. He received the IEEE VGTC's 2016 Virtual Reality Technical Achievement Award. He is the main author of the book titled “Networked Graphics: Building Networked Graphics and Networked Games”. Ms. Geeta Chauhan is working at Facebook AI as AI/PyTorch partner Engineering Head. She has done a lean launchpad course from the University of California, San Francisco, and MCA from the University of Pune. She has experience as CTO of 25+yrs. She has built and launched 17+ platforms and countless Applications. She has one patent in the Tag-based performance framework for the contact center. She is also honored with CTO of the year-2019. Mark Billinghamurst has obtained his Ph.D. In electrical engineering from the University of Washington. He has worked at various firms like Google, Nokia, and telecom. He was the director at the HIT Lab NZ, University of canterbury, and is presently working as a professor of human-computer interaction at the University of South Australia. He has published over 300 papers in the field of augmented reality, mobile interfaces, and wearable computing. He was the winner of the 2001 discover award for the best entertainment application and the 2013 IEEE VR achievement award for contributions to augmented reality.

Noteworthy Research Related Events by the Department

The Department of Computer Science and Engineering, under the activity of Centre of Excellence (Data Science) organized an online lecture series with Binghamton University (BU).

- Under this Lecture series, every month one speaker from Binghamton University has delivered a session for Nirma University faculty members and students. Likewise a speaker from Nirma University has delivered a lecture for faculty and students of Binghamton University. The speaker series was scheduled from July to November 2020.
- From February 22-27, 2021, Nirma University ACM student's chapter organized 'Research Wave', a series of distinguished talks delivered by various international speakers in the emerging computer science fields such as AR/VR, Data Science, and Human-Computer Interaction. This year the event had Dr. Houbing Song, Prof Anthony Steed, Ms. Geeta Chauhan, and Prof Mark Billinghamurst as the speakers. There was a great amalgamation of energetic youths and high-tech speakers with 300+ participants.
- The National Seminar on "Artificial Intelligence for Digital Transformation: A Step towards Digital India" was organized by Centre of Excellence in Data Science, CSE Department, Institute of Technology, Nirma University during 30-31 Dec. 2020.
- Centre of Excellence in Data Science (CoE-DS) at CSE Department, Institute of Technology, Nirma University organized a national level online Hackathon (MINeD) during February 26-28, 2021 in collaboration with SUNY Binghamton University, USA.
- Dr. Henry Hong-Ning Dai, Associate Professor, Faculty of Information Technology, Macau University of Science and Technology (MUST), Macau, Taiwan was invited to teach a few topics from the Blockchain Technology course, which is currently offered to M.Tech sem II students. Total 10 hours of sessions on selected topics from the syllabus were conducted by Dr. Henry. The sessions were conducted online between 27th March 2021 to 24th April 2021.
- The Department of Computer Science and Engineering conducted an expert talk of Dr. Kamal Goel from the University of California, San Diego.



Research Report of Institute of Management



INSTITUTE OF MANAGEMENT

Research Statistics at a Glance

April 01, 2020 – March 31, 2021

Research Projects		
Major Research Projects		
	Number of Projects	Grant in Rs.
Completed Major Research Projects	02	15,50,000/=
Ongoing Major Research Projects	03	1,16,69,000/=
Sanctioned Major Research Projects	01	72,00,000/=
Minor Research Projects		
Sanctioned, Ongoing and Completed Minor Research Projects during this Year	01	1,00,000/=
Research Publications		
Research Papers in Scopus / Web of Science / ABDC / EBSCO Listed Journals		57
Books Published		06
Book Chapters Published		01
Cases Published		
Cases		01
Doctoral Research		
Ph.D. Degree Awarded		14
New Ph. D. Students Enrolled in this Year		10
Current Ph.D. Students		51
Current Ph. D. Guides		21
Research Awards		
Research Awards Received by the Faculty Members		02
Conferences / Seminars / Research Talks Organized by the Institute		
International / National Conferences		03
Conclaves / Lecture series		01



Institute of Management

Research Projects

Major Research Projects

Completed Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Research Ambience and Research Productivity: A Study of Higher Educational Institutions in India, South Africa, and USA	Prof. Rajesh Jain, Prof. Udai Paliwal	Indian Council of Social Science Research (ICSSR)	11,00,000/-
2.	Assessing the Impact of Microfinance Services on Empowerment of Female Living in Rural area of North Gujarat	Prof. Riteshkumar Patel, Prof. Nikunj Kumar Patel	Indian Council of Social Science Research (ICSSR)	4,50,000/-
Total Grant				15,50,000/-

Ongoing Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Rainbow (Realizing Aspirations, Interests & Brilliance of Young Women in Indian Universities)	Prof. Nina Muncherji, Prof. Amola Bhatt	Erasmus+ Capacity Building for Higher Education (Erasmus+ CBHE), European Union	77,00,000/-
	This is an International Collaborative research project with total fund of 569557,00 € sanctioned by ERASMUS+. The other collaborative partners are Birla Academy of Arts And Culture (BIMTECH) India; Sir Padmavat Singhania University, India; Fh Joanneum Gesellschaft Mbh, Austria; Yvaskylan Yliopisto, Finland and International Consulting And Mobility Agency Sociedad De Respo, Spain.			
2.	Government Agency Initiatives for Scientific Research Management with Special Reference to Institute/University Interface	Prof. Nityesh Bhatt, Prof. Punit Saurabh, Prof. Balakrishnan Unny	Indian Space Research Organisation (ISRO)	19,69,000/-
3.	Adoption & Effectiveness of Digital Health Services in India: A Study of State of Gujarat	Prof. Jayesh Aagja, Prof. Samik Shome	Indian Council of Social Science Research (ICSSR)	20,00,000/-
Total Grant				1,16,69,000/-



Sanctioned Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Centers Of Excellence in Sustainable Tourism To Boost Economic Development And Enhance University-Business Cooperation In Southern Asia (Cestour)	Prof. Parag Rijwani	Erasmus+ Capacity Building for Higher Education (Erasmus+ CBHE), European Union	7200000/-
This is an International Collaborative research project with total fund of 9,01, 914/- € sanctioned by ERASMUS+. The other collaborative partners are FH JOANNEUM Gesellschaft mbH, Austria, University of Alicante, Spain, Università die Lingue e Comunicazione, Italy, Birla Institute of Management and Technology, India, Institute of Public Enterprise, India, Sabaragamuwa University of Sri Lanka, Sri Lanka, Uva Wellassa University, Sri Lanka, Tribhuvan University, Nepal Global College International, Nepal.				
Total Grant				72,00,000/-

Minor Research Projects

Sanctioned, Ongoing and Completed Minor Research Projects during this Year

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Organic Food Products: A Study on Attitude Towards Buying Behavior	Prof. Avani Raval, Prof. Diljeetkaur Makhija	Nirma University	1,00,000/-
Total Grant				1,00,000/-

Research Publications

Research Papers in Scopus/Web of Science/ABDC/EBSCO Listed Journals

1. Chaitali Shah, Avani Raval, "Personality Traits and its Impact on Preference of Digital Payment Wallets." Studies in Indian Place Names. 40(8) (2020): 01-12.
2. Sunita Guru, Jitendra Nenavani, Vipul Patel, Nityesh Bhatt, "Ranking of Perceived Risks in Online Shopping." Decision. 47(2) (2020): 137-152.
3. Rajesh Sharma, Pradeep Kautish, "Understanding the Dynamism of Electricity Consumption in India: An Empirical Investigation." International Journal of Economic Policy in Emerging Economies. 13(2) (2020): 107-127.
4. Rajesh Sharma, Avik Sinha, Pradeep Kautish, "Examining the Impacts of Economic and Demographic Aspects on the Ecological Footprint in South and Southeast Asian Countries". Environmental Science and Pollution Research. 27(29) (2020): 36970-36982.
5. Pradeep Kautish, Arpita Khare, Rajesh Sharma, "Values, Sustainability Consciousness and Intentions for Sdg Endorsement". Marketing Intelligence & Planning. 38(7) (2020): 921-939.



6. Rajesh Sharma, Pradeep Kautish, "Linkages between Financial Development and Economic Growth in the Middle-Income Countries of South Asia: A Panel Data Investigation". *Vision: The Journal of Business Perspective*. 24(3) (2020): 405-415.
7. Bhoomi Ruchit Mehta, "Sunshine Fastech Pvt. Ltd.: Working Capital Financing Decision". *Emerald Emerging Markets Case Studies*. 10(2) (2020): 1-37.
8. Viral Bhatt, Bhoomi Ruchit Mehta, "Factors Influencing Overall Service Quality Of Online Banking: A Comparative Study Of Indian Public And Private Sector Banks". *Journal of Applied Business and Economics*. 22(4) (2020): 152-167.
9. Vishal Goel, "Microfinance and Experiences in Measuring Income and Inequality: Evidence from an Indian State". *International Journal of Management*. 111(0) (2020): 1651-1664.
10. Bhoomi Ruchit Mehta, "Microfinance Loan Default Evidence from Indian Microfinance Institutions". *Journal of Commerce and Accounting Research*. 9(4) (2020): 45-54.
11. Diljeetkaur Gurbhejsingh Makhija, "Aanjaya Polymers: A Review of Strategies Adopted". *Journal of Critical Reviews*. 7(6) (2020): 1119-1122.
12. Diljeetkaur Gurbhejsingh Makhija, "Augmented Reality, Virtual Reality and Metaverse: Trend in Retail". *Test Engineering and Management*. 83(-) (2020): 289-297.
13. Bhajan Girraj Singh Lal, "Exploring the Relationship between Job Satisfaction and its Factors with Affective Commitment: A Study of Indian Managers". *International Journal of Advanced Science and Technology*. 29(7S) (2020): 4476-4485.
14. Rajesh Sharma, Pradeep Kautish, "Examining the Nonlinear Impact of Coal and Oil Based Electricity Production on Co2 Emissions in India". *The Electricity Journal*. 33(6) (2020): 7-15.
15. Rajesh Sharma, Pradeep Kautish, "Examining the Nonlinear Impact of Selected Macroeconomic Determinants on Fdi Inflows in India". *Journal of Asia Business Studies*. 14(5) (2020): 711-733.
16. Nisarg Joshi, Dhyani Mehta, "Co-Integration and Causality among Stock Market Indices: Evidence from Asia-Pacific Markets". *Test Journal of Engineering and Management*. 83(1) (2020): 28529 – 28548.
17. Monali S. Chatterjee, "Precarious Predicaments: A Reading of Ravi Subramanian's Novel Bankrupt". *Journal of Alterity Studies and World Literature*. 2(3) (2020): 77-89.
18. Punita Dhansingh Rajpurohit, Parag Rijwani, "Financial Reporting Practices and Internal Corporate Governance Mechanisms in Emerging Markets". *Prabandhan: Indian Journal of Management*. 13(8-9) (2020): 8-27.
19. Monali S. Chatterjee, "Contextualizing Socio-Cultural Dynamics in Tagore's Novel, the Wreck". *International Journal on Multicultural Literature*. 11(1) (2021): 27-36.
20. Hrudanand Misra, Nidhi Guna, "Informality Patterns in Alang Ship Breaking Industry". *The Indian Journal of Social Work*. 82(1) (2021): 99-114.
21. Rajesh Sharma, Avik Sinha, Pradeep Kautish, "Does Renewable Energy Consumption Reduce Ecological Footprint? Evidence from Eight Developing Countries of Asia". *Journal of Cleaner Production*. 285(6) (2021): 1-13.
22. Nityesh Bhatt, Sunita Guru, Shashank Thanki, "Analysing the Factors Affecting the Selection of Erp Package: A Fuzzy Ahp Approach". *Information Systems and E-Business Management*. 19(1) (2021): 01-20.
23. Satyendra Kumar Sharma, Saurabh Chadha, Pradeep Kautish, "A Theoretical Framework of Socially Responsible Supply Chain for Future Research: From a Literature Study Perspective". *International Journal of Procurement Management*. 14(1) (2021): 30-61.



24. Arpita Khare, Pradeep Kautish, "Cosmopolitanism, Self-Identity, Online Communities, and Green Apparel Perception". *Marketing Intelligence & Planning*. 39(1) (2021): 91-108.
25. Sunita Guru, Nityesh Bhatt, Nishant Agrawal, "Ranking the Determinants for International Educational Destination Decision of Indian Students: Application of Fuzzy Analytical Hierarchical Process". *Vision: The Journal of Business Perspective*. 25(1) (2021): 01-14.
26. Pradeep Kautish, Paul Justin, Rajesh Sharma, "The Effect of Assortment and Fulfillment on Shopping Assistance and Efficiency: An E-Tail Servicescape Perspective". *Journal of Retailing and Consumer Services*. 59(1) (2021): 1-11.
27. Nityesh Bhatt, Nishant Agrawal, Sunita Guru, "Technological Transformation through Electronic Reverse Auction: a Case of GSCSC, India". *Journal of Information Technology Case and Applied Research*. 22(4) (2021): 221-242.
28. Rajesh Sharma, Avik Sinha, Pradeep Kautish, "Does Financial Development Reinforce Environmental Footprints? Evidence from Emerging Asian Countries". *Environmental Science and Pollution Research*. 28(8) (2021): 9067-9083.
29. Riteshkumar Jayantilal Patel, "Risk-Return Tradeoffs in Indian Stock Market: Evidence from Garch Model Approach". *Towards Excellence*. 13(1) (2021): 556-566.
30. Supriya Singh, Punit Saurabh, Nityesh Akshayakumar Bhatt, "Demystifying the Meaning of Transnational Entrepreneurship: Indian Transnational Entrepreneurs in Comparative Perspective". *Technology Innovation Management Review*. 10(11) (2020): 47-59.
31. Nina Bomi Muncherji, Joseph Jerome, "The HR/IR Theory-Reality "Lag"- An Exploration". *The Indian Journal of Industrial Relations*. 56(2) (2020): 191-202.
32. Anupam Rana, Chauhan Himanshu Ashokkumar, "A Study on Consumer Preferences towards Fashion Jewellery in Ahmedabad & Gandhinagar City of Gujarat". *Studies in Indian Place Names*. 40(56) (2020): 232-248.
33. Amola Bhatt, Bhatt Shahir, "Financial Literacy and Portfolio Diversification: An Empirical Study in Ahmedabad". *The Journal of Wealth Management*. 23(1) (2020): 98-111.
34. Sanjay K. Jain, Rajesh K. Jain, "Avoiding Warning Letters in Pharmaceutical Industry: A Qualitative Study in the Indian Context". *The Pharma Innovation*. 9(6) (2020): 18-24.
35. Deepakkumar Jaykrishna Danak, Nikunj Patel, "A Study of Efficiency of Index Futures, Lead-Lag Relationship, and Speed of Adjustments in India Using High-Frequency Data". *Indian Journal of Finance*. 14(4) (2020): 7-19.
36. Deepakkumar Jaykrishna Danak, Riya Shah, "Value Anomaly or Value Premium? An Innovative Approach to Examining Risk-Return Profiles Using Discriminant Analysis". *Pacific Business Review International*. 12(12) (2020): 01-10.
37. Krishna Pravinchandra Kanabar, "The Post Covid-19 Era and "New Normal": Rumination from Inquisitive Lenses". *Vyapar Expert*. 6(2) (2020): 02-03.
38. Chetan Arvindbhai Jhaveri, Jitendra M. Nenavani, "Evaluation of E-Tail Services Quality: Ahp Approach". *The Journal of Business Perspective*. (2020): 01-10.
39. Abhinav Chittora, Ashwini K. Awasthi, "Sachet Marketing: Buying Behavior and Consumer Attitudes". *International Journal of Indian Culture and Business Management*. 21(4) (2020): 533-543.
40. Ritesh Patel, Nikunj Patel, "Impact of Microfinance on Women Empowerment: A Study from the Decision-Making Perspective". *Indian Journal of Finance*. 14(8) (2020): 52-68.



41. Nisarg Joshi, Dhyan Mehta, Nikunj Patel, Bhavesh Patel, "Volatility Analysis and Volatility Spillover across Equity Markets between India and Europe. Smart Journal of Business Management Studies. 17(1) (2021): 31-41.
42. Chetan Gondaliya, Ajay Patel, Tirthank Shah, "Sentiment Analysis and Prediction of Indian Stock Market Amid Covid-19 Pandemic". Iop Conference Series: Materials Science and Engineering. 1020(12023) (2021): 01-09.
43. Sanjay K. Jain, Rajesh K. Jain, "A Study of Regulatory Agencies Inspected Global Drug Manufacturers". Research Journal of Pharmacy and Technology. 14(2) (2021): 1008-1016.
44. Ritesh Patel, Nikunj Patel, "Does Microfinance Empower Women from Economic, Social, and Political Perspectives? Empirical Evidence from Rural Gujarat". Prabandhan: Indian Journal of Management. 14(3) (2021): 32-48.
45. Samik Dipak Ranjan Shome, Yuvika Gupta, "Social Media Advertisements and Buying Behavior: A Study of Indian Working Women". International Journal of Online Marketing. 10(3) (2020): 48-61.
46. Tejas Rajeshbhai Shah, "Green Supply Chain Management: Learning from Indian Chemical Sector". International Journal Business Performance and Supply Chain Modelling. 11(1) (2020): 01-35.
47. Bhaveshkumar Kantilal Patel, Gita Goriya, "Performance Analysis of Public Sector Banks in India: Application of Camel Approach". Shodh Sarita. 7(26) (2020): 211-216.
48. Bhaveshkumar Kantilal Patel, Gita Goriya, "Employee Productivity of Selected Public Sector Banks in India". Shodh Sanchar Bulletin. 10(39) (2020): 25-29.
49. Samik Shome, Sushma Verma, "Assessing Airline Bankruptcy in India". Eurasian Journal of Business and Economics. 13(25) (2020): 91-109.
50. Samik Shome, Yuvika Gupta, "A Reflection of Indian Higher Education System: An Academic Labour Market Perspective". Research in Education. 106(1) (2020): 3-21.
51. Sapna Parashar, "Modelling the Enablers of Food Supply Chain for Reduction in Carbon Footprint". International. 275(1) (2020): 1-16.
52. Samik Dipak Ranjan Shome, Priya Harchandani, "Global Tourism and Covid-19: An Impact Assessment". Tourism: An International Interdisciplinary Journal. 69(2) (2020): 262-280.
53. Sapna Chamanlal Parashar, Sanjay Jain, "Marcom Practices of Selected Organized Retail Stores". Shodh Sarita. 7(28) (2020): 164-169.
54. Patel Bhaveshkumar Kantilal, Gita Goriya, "Efficiency Analysis of Scheduled Commercial Banks in India: Application of Data Envelopment Analysis Tools". The Journal of Oriental Research. 91(1) (2021): 236-243.
55. Tejas Rajeshbhai Shah, "Service Quality Dimensions of Ride-Sourcing Services in Indian Context". Benchmarking: An International Journal. 28(1) (2021): 249-266.
56. Rajesh Sharma, Suresh Kumar, Pradeep Kautish, "Assessing Dynamism of Crude Oil Demand in Middle-Income Countries of South Asia: A Panel Data Investigation". Global Business Review. 22(1) (2021): 169-183.
57. Poonam Chhaniwal, Haresh Barot, "Millennials in the It/ITES: A Study of Employee Engagement Drivers. International Journal of Management. 11(8) (2020): 18-32.



Books Published

Sr. No.	Name of the Faculty	Name of the Book	Name of Publishing House	ISBN	Year of Publication
1.	Sapna Parashar, Tejas Shah	Customer, Competition and Marketing Strategy	Excel Publishers	978-81943641-2-2	2021
2.	Tejas Shah, Sapna Parashar	Innovations In Marketing	Excel Publishers	978-81943641-3-9	2021
3.	Nina Bomi Muncherji, Anna-Maija Lamsa, Suvi Heikkinen, Amola Shahir Bhatt	Career Counselling for Women's Empowerment	Bloomsbury Publishers	978-93903585-3-3	2020
4.	Pratham Prakash Parekh	Infrastructure And Human Development in Gujarat	Insc Publishing	978-19544612-0-8	2021
5.	Samik Dipak Ranjan Shome, Punit Saurabh	Unlocking Management Research: A Road Map to Future Business	Boomerang Publishing	978-81-949561-0-5	2021
6.	Rajesh K. Jain, Himanshu M. Trivedi	Quality and Innovation	ASQ South Asia	978-8-19-302165-1	2020

Book Chapters Published

Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
1.	Sushma Verma, Samik Shome	Assessing Airline Bankruptcy in India	The Financial Landscape of Emerging Economies: Current State, Challenges and Solutions	Springer Nature, Switzerland	978-3-030-60007-5	2020



Cases Published

Sr. No.	Name of Author	Title of Case	Year
1.	Avani Raval,Chaitali Shah,Swati Saxena	360 Financial Services: Sink or Swim	2020

Ph.D. Awarded

Sr. No.	Name of the Student	Name of the Guide / Supervisor	Title of Thesis
1.	Vineet Kumar	Dr. Ashwini Awasthi	An Empirical Study of the Causes, Symptoms and Organizational Responses to Customer Rage Behaviour
2.	P. Ganesh	Dr. Nityesh Bhatt	A Study of Usage & Projects of Business Intelligence (BI) Tools in SMEs and Large Organizations in Ahmedabad Region
3.	Reena Biju	Dr. Anamika Sinha	Express freely, but if you are masculine! Exploring the link between gender and emotional labour in entrepreneurship in India
4.	Kathak Rajen Mehta	Dr. Bindi Mehta	A Study of Non-financial Roles of Venture Capitalists - An Indina Perspective
5.	Pandya Hetal Laxmilal	Dr. Deepak Danak	A Study Based on Gender Behavioural Diffrences on Investment Decisions in State of Gujarat
6.	Binu Philip Thomas	Dr. P. K. Chugan	Determinants of Licensing A Study of Selected Biotech Companies and Research Institutions
7.	Sujata Behera	Dr. Deepak Danak	Evaluating EVA Based Valuation Models in Explaining Market Value of Equity
8.	Kadiya Shriram Surendra	Dr. Sapna Parashar	An Analysis of Communication Dissemination for Mahatma Gandhi National Rural Employment Gaurantee Act. (MGNREGA)
9.	Yogesh Sanjaybhai Mungra	Dr. P. K. Yadav	Effect of Social capital and Transaction cost on supplier's opportunism in Manufacturer - Supplier Relationship
10.	Anurodhsingh Pritpalsingh Khanuja	Dr. Rajesh Jain	A study of supply chain integration, flexibility and performance
11.	Sanjay Kumar Jain	Dr. Rajesh Jain	Best Practices in Pharmaceutical Industry: A Comparative Study of Regulatory Agencies Inspected



Sr. No.	Name of the Student	Name of the Guide / Supervisor	Title of Thesis
			Drug Manufacturers
12.	Rajwinder Kaur	Dr. Sameer Pingle	Examining the Relationship of Employer Branding with Organization Culture and Employee Brand Equity
13.	Neha Singh	Dr. Jayesh Aagja	Examining the Role of Choice Closure in Choice Overload Phenomenon
14.	Singh Ritika Sushilkumar	Dr. Hardik Shah	Examining the Impact of Perceived Organization Support and Multicultural Personality as Cross-Cultural Adjustment - Caseques and Interventions

Research Awards

Sr. No.	Name of the Faculty Awardee	Recognition Honor / Award	Name of the Organization / Event	Award Category
1.	Dr. Samik Shome	Certificate	International Conference on Changing Business Paradigm (ICCBP), organised Management Development Institute, Murshidabad	Best Paper Award
2.	Dr. Ritesh Patel	Certificate	International Youth Symposium (INYS) 2021 organised by B K School of Professional and Management Studi	Best Paper Award

Conferences / Seminars / Workshops / Research Talks Organized by the Institute

NICOM-2021

24th Nirma International Conference on Management (NICOM) organised by Institute of Management, Nirma University on January 7-9, 2021. The central theme of the conference is “Industry 4.0: Reinventing Human Resource Management for Organisational Effectiveness” and Conference had seven major sub-themes as well. In addition to the inauguration and valedictory sessions, there were five plenary sessions covering a variety of sub-themes, elaborating the main theme of the Conference. A total of 87 abstracts and 54 full papers were received from India and abroad. These papers were reviewed by two independent committees consisting of faculty members from IMNU. Around 135 delegates registered for NICOM out of which 87 papers were presented in 15 concurrent sessions organised in 3 tracks in three

Nirma University Annual Research Report (April 2020 - March 2021)



days. The chief guest for the inaugural session was Mr Yogi Sriram, Advisor to CEO & MD, Group Human Resources, Larsen & Toubro Ltd. The president of Nirma University, Dr Karsanbhai Patel presided over the function and released the book of abstracts “Prasthavna”. Mr Vijay Raj Ji GGM (HR), Cuavery Asset, ONGC was the Chief Guest of valedictory function. Shri KK Patel, Vice President, Nirma University spoke on the importance of Human Resource management in concurrent situation. Dr Anup K Singh, Director General, Nirma University graced the occasion and shared his thoughts on role of HRM in improving organisational effectiveness. Dr M Mallikarjun, Director, IMNU delivered the welcome address. After that Dr Hardik Shah, Conference Co-Chairperson introduced the theme of the conference i.e “Industry 4.0: Reinventing Human Resource Management for Organisational Effectiveness”. Mr Yogi Sriram began his address with the revolution in industrialisation and introduced the Industry 4.0 with six design principles (namely interoperability, virtualisation, decentralisation, real-time capability, service orientation and modularity). He also stressed on the implication of these principles to gain competitive advantages. Besides this, he also discussed the new trends of the HRM. The 1st plenary session commenced with the theme “Contemporary Discourse Dialogues in HRM”. The first speaker for this session was Dr Taran Patel, Associate Professor, Grenoble Ecole de Management, France. She elaborated on the theme of contemporary dialogues on leadership and followership, and presented a fresh perspective of their influence. The second speaker, Dr Anjan Bhowmick, Executive Director, Organisation Development - Asia Australia and New Zealand Markets, Reinsurance Group of America, Hongkong, spoke on the topic “Leadership Expectations for Building Organisational Capabilities”. His talk was focused on reorienting organisational structure and the fundamentals of enterprise capabilities, especially in managing human resources.



NICOM 2021

ANVESH 2020: Doctoral Research Conference in Management

Institute of Management, Nirma University organised the 16th Doctoral Research Conference in Management – ANVESH on November 26-27, 2020. For the first time, Anvesh was conducted in an online mode in view of the pandemic situation. It had one Research Workshop, 3 Track Sessions with 65 presentations and 1 Research Clinic. Delegates from across the country participated in this virtual conference. The Conference witnessed 140 abstracts and 75 full paper submissions. After the blind review of full papers received, 40 papers were accepted for conference publication. 5 papers were selected to be published in the **Economic Studies** Journal which is a Scopus indexed and ABDC listed journal. The Chief Guest for the inaugural ceremony was Dr Janat Shah, Director, Indian Institute of Management (IIM), Udaipur. The Presidential address was delivered by Dr Anup K Singh,

Nirma University Annual Research Report (April 2020 - March 2021)



Director General, Nirma University. Apart from track sessions and research clinics an expert session was also organised. Prof Jay Kandampulli, Ohio State University, USA delivered an expert lecture on ‘Research Priorities and Publishing Strategies’. Dr Bhaskar Majumdar, Professor, G.B. Pant Social Science Institute, Allahabad, imparted useful insights on ‘The Art of Writing a PhD Thesis’. The two days conference concluded with a valedictory session with Chief Guest Shri Shivam Bansal, Director of JJ Plastalloy Pvt. Ltd.



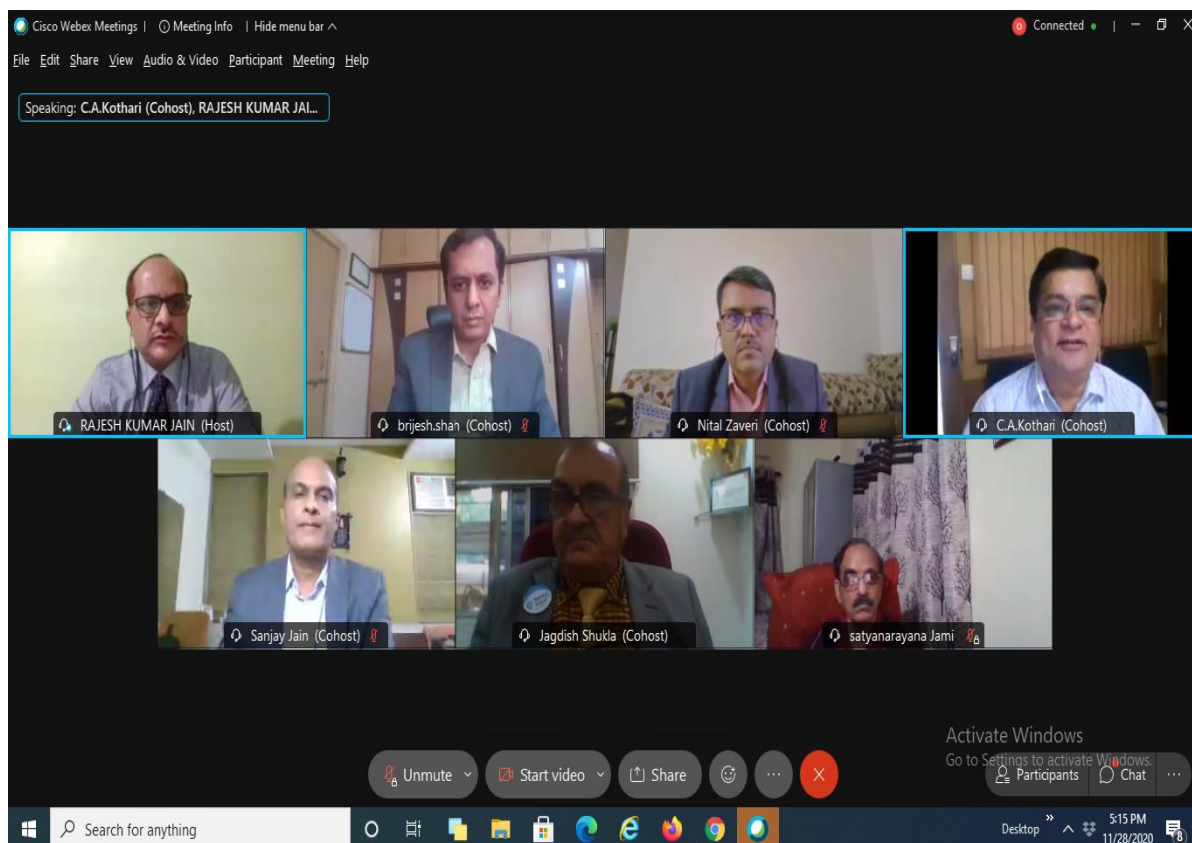
ANVESH 2020

10th Annual Conference on Quality Management 2020

The American Society for Quality (ASQ) Ahmedabad Local Member Community (LMC) and Institute of Management, Nirma University jointly organised the 10th Annual International Conference on Quality Management on Nov 27-28, 2020 at Nirma University in virtual mode. The theme of the conference was "Project Atmanirbhar: World Class Quality for Self-Reliance". The Conference was organised with the Association Partnerships of Vadodara Innovation Council, Rajkot Management Association, Project Management Institute (PMI) – Gujarat Chapter, and Auto Component Manufacturers Association of India (ACMA). The Chief Guest was Dr Joerg Dehmer, Global Quality Head, Bosch Rexroth AG, Germany. Key Note Speech was delivered by Prof Prem Vrat, Chairman, BoG, IIT (ISM) Dhanbad. Guest of Honour Speech was delivered by Mr Suresh Lulla, Founder & Mentor, QIMPRO. Another Guest of Honour was Mr Anindya Sarangi, Director, ASQ South Asia. Prof Rajesh K Jain, Professor, Institute of Management, Nirma University & Chair ASQ LMC gave the Welcome Address. The Second Day of the conference witnessed Samvad (Panel Discussion), on the theme “The role of Quality to make India self-reliant”. The eminent panellists were Mr

Nirma University Annual Research Report (April 2020 - March 2021)

Jagdish Shukla, CEO, Servilink Systems Ltd; Mr Sanjay K Jain, President-India Amneal Pharmaceuticals; Mr Brijesh Shah, Delivery Head, SPEC India and VP, PMI; Mr Chetan Kothari, Sr Lawyer, Chairman, RMA; Mr Sachin Garg, Regional Director, ASQ; Dr Rajesh K Jain, Professor, Nirma University (moderator). The Valedictory Chief Guest was Mr CV Raman, Sr Executive Director & Member of the Executive Board (Engg, Quality Assurance & Supply Chain) Maruti Suzuki India Ltd. The conference was attended by close to 350 participants including executives from industry, academia from India and abroad.



Annual Conference on Quality Management

Conclaves / Lecture Series

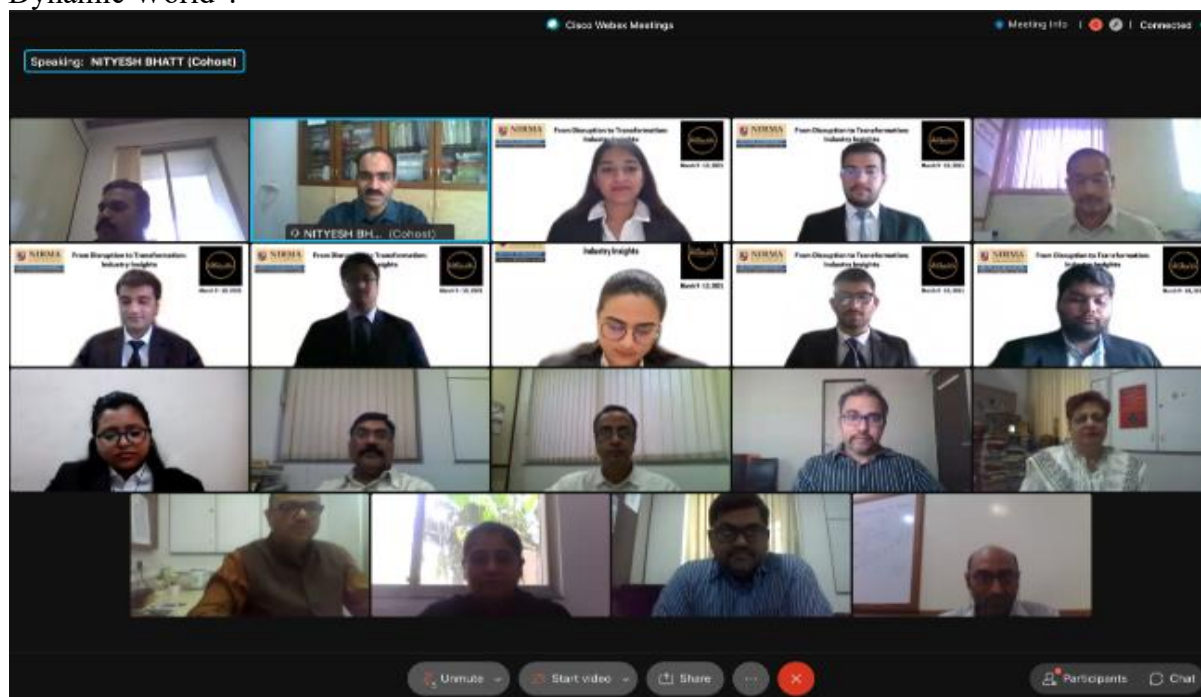
Utkrishta'21 – Management Conclave

Utkrishta 2021, the Management Conclave of Institute of Management, Nirma University, was organised by five prominent clubs of IMNU: Niche – the Marketing Club, Imprintz – the HR Club, Clique- the IT Club, Optimus – the Operations Club, and Finesse – the Finance Club on March 9-10, 2021 on the theme, “From Disruption to Transformation: Industry Insights”. The theme for the first Plenary Session was “The Future of Work” delivered by Mr Hariharan Mani, Director PwC AIMS; Mr Param Puneet Singh, Senior Principal of Management Consulting, Accenture India; Ms Rashmi Manasaramani, Chief HR officer at The Wave Group; Mr Anubhav Kapoor, Group Vice President Legal and Group Company Secretary, Cummins Group; Mr Titus Arnold, Director – HR, India & Commercial Excellence APAC at India Medtronic Pvt Ltd. The second Plenary Session was on the topic “Exploiting Digital Disruptions” delivered by Mr Nimish Danani, Director at Hitachi Vantara; Mr Harshit Desai, Design Entrepreneur, Fintech Professional & Digital Disrupter; Ms Namrata Somani, Gujarat Region Head, TCS Ahmedabad; and Mr Narendra Sharma,

Nirma University Annual Research Report (April 2020 - March 2021)

Regional Sales Director, at AIC Inc. The topic for the first Plenary session on Day 2 was “Managing in a VUCA World”. It was delivered by Mr Amitabh Tapadar, Executive Director - Marketing, Strategies & Business Development, Unidel Group; Mr Pradeep Talreja, Director of Operations, Apidel Technologies; and Mr Vishal Shastri, Senior Vice President, ICICI Prudential Life Insurance Company Limited.

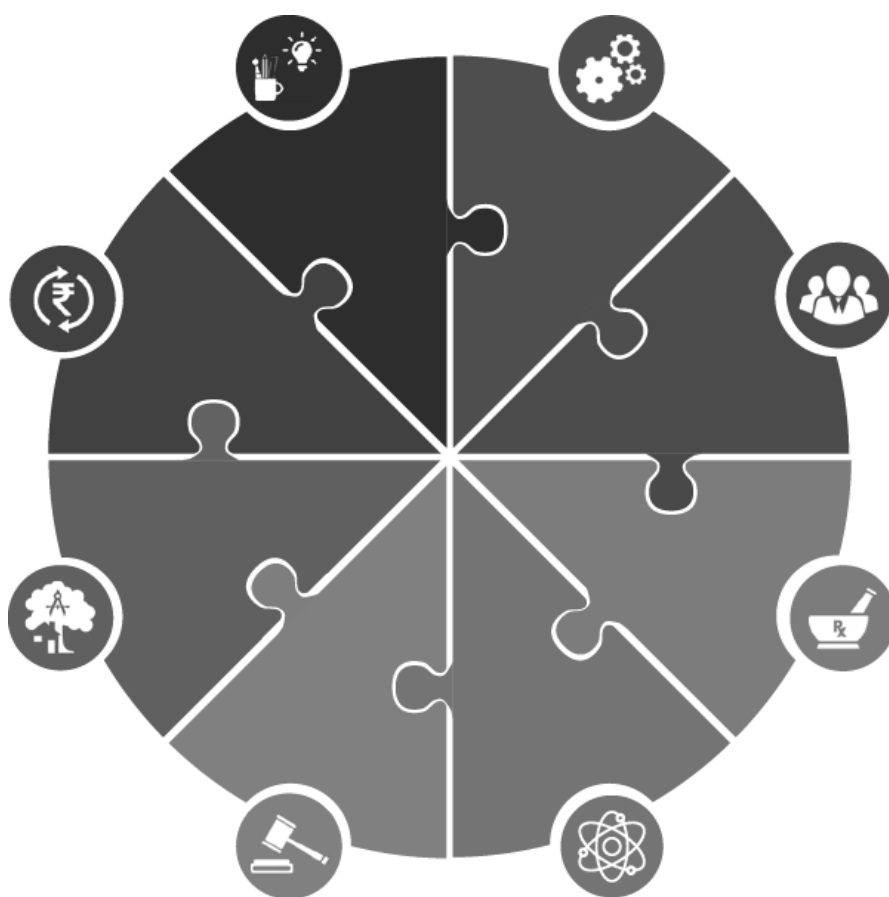
Ms Sandhya Sharma, Chief Financial Officer, Schindler India; Ms Priyanka Sharma, Global Head of Marketing at CIGNEX Datamatics Incorporation; Mr Vijay Rane, Vice President, HR, e-Infochips; and Ms Akhil Prasad, Director, Country Council India & Company Secretary, Boeing India delivered the second Plenary Session on the topic “Surviving in a Dynamic World”.



Utkrishta'21



Research Report of Institute of Pharmacy



INSTITUTE OF PHARMACY

Research Statistics at a Glance

April 01, 2020 – March 31, 2021

Research Projects		
Major Research Projects		
	Number of Projects	Grant in Rs.
Completed Major Research Projects	02	62,78,300/=
Ongoing Major Research Projects	03	1,35,81,900/=
Sanctioned Major Research Projects	02	35,01,724/=
Minor Research Projects		
Completed Minor Research Projects	02	4,00,000/=
Sanctioned, Ongoing and Completed Minor Research Projects during this Year	06	5,00,000/=
Research Publications		
Research Papers in Scopus / Web of Science / ABDC / EBSCO Listed Journals		75
Book Chapters Published		07
Papers in Conference Proceedings		05
Patents		
Patents Filed		01
Patents Granted		03
Doctoral Research		
Ph.D. Degree Awarded		10
New Ph. D. Students Enrolled in this Year		18
Current Ph.D. Students		70
Current Ph. D. Guides		22
Conferences / Seminars / Research Talks Organized by the Institute		
International / National Conferences		1
Seminars / Workshops / Training Programmes		1
Conclaves/Lecture Series		2
Research Talks / Lectures		33



Institute of Pharmacy

Research Projects

Major Research Projects

Completed Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Evaluation of Radio Protective Potential of Medicinally Important Indian Bamboo Plants in Cancer	Prof. Priti Mehta, Prof. Snehal Patel Prof. Sonal Bakshi,	Ministry of Ayush	42,00,000/-
2.	Exploring Non-Equilibrium Atmospheric Plasma for Effective Sterilization Including Biological Safety Aspects	Prof. Shital Butani, Prof. Priti Mehta	Board of Research in Nuclear Sciences (BRNS)	20,78,300/-
Total Grant				62,78,300/-

Ongoing Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Assistance for setting up R & D Institute	Prof. Manjunath Ghatge	Gujarat State Biotechnology Mission (GSBTM)	85,00,000/-
2.	Development and Evaluation of PH Responsive Multi-Modal Delivery Platform in the Treatment of Oral Cancer	Prof. Tejal Mehta, Prof. Jigna Shah, Prof. Heena Dave	Nirma University	30,00,000/-
3.	Evaluation of DNA Polymerase Inhibitors for the Treatment of Alzheimer's Disease	Prof. Jigna Shah, Prof. Hardik Bhatt	Gujarat State Biotechnology Mission (GSBTM)	20,81,900/-
Total Grant				1,35,81,900/-

Sanctioned Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Effect Of Oryzanol On Immunity In Healthy Volunteers	Prof. Shital Panchal, Prof. Charmy Kothari	AP Organics Pvt Ltd	25,01,724/-
2.	Bioavailability Enhancement Through A Novel Formulation Of Gamma-Oryzanol	Prof. Shital Panchal, Prof. Charmy Kothari	AP Organics Pvt Ltd	10,00,000/-



Total Grant	35,01,724/-
--------------------	--------------------

Minor Research Projects

Completed Minor Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Design and Synthesis of Poly (ADP-Ribose) Polymerase1 (Parp1) Inhibitors for The Treatment of Cancer	Prof. Bhumika Patel	Nirma University	2,00,000/-
2.	Design, Synthesis and Pharmacological Evaluation of Novel Benzimidazole Derivatives as C-Met Kinase Inhibitors	Prof. Palak Parikh	Nirma University	2,00,000/-
Total Grant				4,00,000/-

Sanctioned, Ongoing and Completed Minor Research Projects during this Year

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Evaluation of Serotonin Modulator in Ischemic Stroke and Associated Cachexia	Prof. Bhoomika Patel	Nirma University	80,000/-
2.	Pre-Clinical Evaluation of Cannabidiol Natural Adjuvant Therapy in Alzheimer's Disease	Prof. Niyati Acharya	Nirma University	80,000/-
3.	Development of Novel Topical Formulation for The Treatment of Rosacea	Prof. Dhaivat Parikh	Nirma University	90,000/-
4.	Curvatures of Carbon: Synthesis Characterization and its Drug Delivery Application	Prof. Jigar Shah	Nirma University	80,000/-
5.	Investigation of Neuroprotective Effect of Toll Like Receptor 4 Inhibitors for The Treatment of Neuro-Inflammation and Cognitive Decline Associated with Alzheimer Diseases	Prof. Bhagwati Saxena, Prof. Nagja Tripathi	Nirma University	90,000/-
6.	"Chromatographic Fingerprinting, and Safety Evaluation of The Proposed	Prof. Shital Panchal, Prof. Charmy Kothari	Nirma University	80,000/-



	Regimen Containing Plant Parts for Liver Protection".			
Total Grant				5,00,000/-

Research Publications

Research Papers in Scopus/Web of Science/ABDC/EBSCO Listed Journals

1. Charmy Shital Kothari, Nisha Parikh, "Therapeutic Role of Methanolic Extract of Ocimum Basilicum L. Seeds and its Isolated Compound as Potent Antidiabetic and Antihyperlipidemic Agents". The Natural Products Journal. 10(3) (2020): 226-235.
2. Bhagawati Saxena, Vijaya Durga Chavali, Milee Agarwal, Vivek Kumar Vyas, "Neuroprotective Effects of Ethyl Pyruvate against Aluminum Chloride-Induced Alzheimer's Disease in Rats Via Inhibiting Toll-Like Receptor 4". Journal of Molecular Neuroscience. 70(6) (2020): 836-850.
3. Jenish Parmar, Priti Jignesh Mehta, Rajvi Patel, Manan Shah, Charmy Kothari, "Raw Data Management and Data Integrity in Pharmaceutical Product Development". Applied Clinical Research, Clinical Trials and Regulatory Affairs. 7(3) (2020): 197-205.
4. Arpit Bana, Priti Jignesh Mehta, "Recognizing Barriers to Entry of Biosimilars in the United States Market and Highlighting the Solutions". Journal of Generic Medicines. 17(3) (2020): 01-08.
5. Jigar Nareshkumar Shah, Vimal Patel, Vishal Chavda, "Therapeutics and Research related to Glioblastoma: Advancements and Future Targets". Current Drug Metabolism Bentham Science. 21(1) (2020): 01-13.
6. P Mathur, S Sharma, S Rawal, "Fabrication, Optimization and In vitro Evaluation of Docetaxel Loaded Nanostructured Lipid Carriers for Improved Anticancer Activity". Journal of Liposome Research. 30(2) (2020): 182-196.
7. Niyati Sanjeev Acharya, Vaibhav Patel, "Anti-Urolithiatic activities of Macrotyloma Uniflorum Mediated through Multiple Pathway". Indian Journal of Pharmaceutical Education and Research. 24(2) (2020): 403-415.
8. Charmy Shital Kothari, Krunal Prajapati, "First Report on Clorprenaline HCl Degradation Products: Identification and Characterization by LC-MS/MS". Journal of the Iranian Chemical Society. 17(5) (2020): 1027-1039.
9. Prashik Dudhe, Hardik Girishkumar Bhatt, "Molecular Docking studies of some Novel 2 & 3-(4-Aminobenzamido) Benzoic Acid Derivatives as Dhfr Inhibitors for Treatment of Tuberculosis". International Journal of Pharmtech Research. 13(3) (2020): 261-271.
10. Charmy Shital Kothari, Mital Patel, "Multivariate UV-Chemometric and HPLC-QbD Method for Simultaneous Estimation of Vardenafil and Dapoxetine in Active Pharmaceutical Ingredients and its Marketed Formulation". Current Analytical Chemistry. 16(3) (2020): 263-276.
11. Snehal Sanjaykumar Patel, Deepa Ingawale, "Combination of Sarsasapogenin and Fluticasone Attenuates Ovalbumin-Induced Airway Inflammation in a Mouse Asthma Model". Immunopharmacology and Immunotoxicology. 42(2) (2020): 128-138.
12. Snehal Sanjaykumar Patel, Richa Tripathi, Vishal K. Chavda, "Anticancer Potential of Mefenamic Acid Derivatives with Platelet Derived Growth Factor Inhibitory Property". Anticancer agents in Medicinal Chemistry. 14(1) (2020): 01-10.



13. Snehal Sanjaykumar Patel, Vishal K. Chavda, Jigar Shah, "Glioblastoma under Siege of Therapeutics and Research: "Advancements and Future Targets". *Current Drug Metabolism*. 22(1) (2020): NA.
14. Shubhangi Kagade, Jignasa Savjani, Dattatraya Yadav, "Isoxsuprine Hydrochloride Loaded Cellulose Acetate Phthalate Microsponge Drug Delivery System: Design and Evaluation". *Indian Journal of Pharmaceutical Education and Research*. 54(2) (2020): 669-677.
15. Charmy Shital Kothari, Mital Patel, "Comprehensive Stability-Indicating Method Development of Avanafil Phosphodiesterase Type 5 Inhibitor Using Advanced Quality-By-Design Approach". *Journal of Analytical Science and Technology*. 11(29) (2020): 01-14.
16. Snehal Sanjaykumar Patel, Ram P.Das, Sarjak Chakravarti, "Tuning the Pharmacokinetics and Efficacy of Irinotecan (Iri) Loaded Gelatin Nanoparticles through Folate Conjugation". *International Journal of Pharmaceutics*. 10(586) (2020): 19522.
17. Hardik Girishkumar Bhatt, J. P. Chavda, "Systemic Review on B-Rafv600E Mutation as Potential Therapeutic Target for the Treatment of Cancer". *European Journal of Medicinal Chemistry*. 206(22) (2020): 112675.
18. Bhumika Patel, Hardik Girishkumar Bhatt, Ankitkumar Patel, "Comfa, Comsia, Molecular Docking and Molcad Studies of Pyrimidinone Derivatives to Design Novel and Selective Tankyrase Inhibitors". *Journal of Molecular Structure*. 1221(23) (2020): 128783.
19. Hardik Girishkumar Bhatt, Chirag C. Mehta, Ankitkumar Patel, "New Molecular Insights into Dual Inhibitors of Tankyrase as Wnt Signaling Antagonists: 3D-Qsar Studies on 4H-1,2,4-Triazole Derivatives for the Design of Novel Anticancer Agents". *Structural Chemistry*. 31(6) (2020): 2371 - 2389.
20. Hardik Girishkumar Bhatt, Udit J. Chaube, Rakesh Rawal, "Design and Development of Tetrahydro-Quinoline Derivatives as Dual Mtor-C1/C2 Inhibitors for the Treatment of Lung Cancer". *Bioorganic Chemistry*. 106(1) (2021): 104501.
21. Anroop B. Nair, Dipal Mahendrabhai Gandhi, Snehal S. Patel, Mohamed A Morsy, Bapi Gorain, Mahesh Attimarad, Jigar N Shah, "Development of Hplc Method for Quantification of Sinigrin from Raphanus Sativus Roots and Evaluation of its Anticancer Potential". *Molecules*. 25(21) (2020): 4947.
22. Jigna Samir Shah, "Recent Trends in Targeting Mi". *Journal of Pharmacy and*. 72(10) (2020): 1732-1749.
23. Hardik Girishkumar Bhatt, Keerti Vishwakarma, "Molecular Modelling of Quinoline Derivatives as Telomerase Inhibitors through 3D-Qsar, Molecular Dynamics Simulation and Molecular Docking Techniques". *Journal of Molecular Modeling*. 27(2) (2021): 30.
24. Niyati Sanjeev Acharya, Vaibhav Patel, "Effect of Macrotyloma Uniflorum in Ethylene Glycol Induced Urolithiasis in Rats". *Heliyon Cell Press*. 6(E04253) (2020): 01-07.
25. Hardik Girishkumar Bhatt, Paresh Patel, Dilip G. Maheshwari, "Discovery of Hiv-I Protease Inhibitors: Pharmacophore Mapping, Virtual Screening, Docking, and in Silico Pharmacokinetic and Toxicities Prediction". *International Journal of Pharmtech Research*. 14(1) (2021): 39-50.
26. Niyati Sanjeev Acharya, Parth Shah, Gaurang Patel, "Formulation Development and Optimization of Dapsone Depot Injection in Invitro Invivo Study". *International Journal of Pharmaceutical Sciences and Research*. 11(7) (2020): 3417-3426.
27. Snehal Sanjaykumar Patel, Pooja Shah, Vishal Chavda, "Promising Anti-Stroke Signature of Voglibose: Investigation through in-silico Molecular Docking and



- Virtual Screening in in-vivo Animal Studies". *Current Gene Therapy*. 20(3) (2020): 223-235.
28. Snehal Sanjaykumar Patel, Ruju Vasi, Vishal Chavda, "Cerebrovascular Complications of Diabetes: Sglt-2 Inhibitors as a Promising Future Therapeutics". *Current Drug Targets*. 20(1) (2020): 01-10.
 29. Shraddha V. Patel, Harsh Maru, Vishal K. Chavda, Jigar N. Shah, Snehal S. Patel, "Ethanollic Extract of Azadirachta Indica Ameliorates Ovarian Defects through Phosphoinositide-3 Kinase Inhibition in a Rat Model of Polycystic Ovary Syndrome". *Asian Pacific Journal of Reproduction*. 10(1) (2021): 21-28.
 30. Snehal Sanjaykumar Patel, Harika Duvva, "The Beneficial Effect of Boswellic Acid on Bone Metabolism and Possible Mechanisms of Action in Experimental Osteoporosis". *Nutrients*. 12(10) (2020): 3186-3196
 31. Ramesh K. Goyal, Jaseela Majeed, Rajiv Tonk, "Current Targets and Drug Candidates for Prevention and Treatment of Sars-Cov-2 (Covid-19) Infection". *Reviews in Cardiovascular Medicine*. 21(3) (2020): 365-384.
 32. Hiren Khatri, Nimitt Chokshi, Shruti Rawal, "Fabrication and In Vivo Evaluation of Ligand Appended Paclitaxel and Artemether Loaded Lipid Nanoparticulate Systems for the Treatment of Nsclc: A Nanoparticle Assisted Combination Oncotherapy". *International Journal of Pharmaceutics*. 583(1) (2020): 119386.
 33. Milan Agrawal, Mayur Patel, "Optimization and In Vivo Evaluation of Quetiapine-Loaded Transdermal Drug Delivery System for the Treatment of Schizophrenia". *Drug Development and Industrial Pharmacy*. 46(11) (2020): 1819-1831.
 34. Shruti Rawal, Bhoomika Patel, Mayur Patel, "Fabrication, Optimisation and In Vitro Evaluation of Docetaxel and Curcumin Co-Loaded Nanostructured Lipid Carriers for Improved Antitumor Activity against Non-Small Cell Lung Carcinoma". *Journal of Microencapsulation*. 37(8) (2020): 543-556.
 35. Mansi Patel, Priti Jignesh Mehta, "Bamboo a Supplement to Human Health: A Comprehensive Review on its Ethnopharmacology, Phytochemistry, and Pharmacological Activity". *The Natural Product Journal*. 11(5) (2020): 01-29.
 36. Riyaz Momin, Harshita Gupta, Rutu Panchal, Priti J. Mehta, "Development of Pramipexole Hydrochloride Nanocrystals and their Characterization Based on in Vitro Dissolution Studies". *Current Nanomedicine*. 10(4) (2020): 391-404.
 37. Hardik Girishkumar Bhatt, Paresh Patel, "Improved 3D-Qsar Prediction by Multiple-Conformational Alignments and Molecular Docking Studies to Design and Discover Hiv-I Protease Inhibitors". *Current Hiv Research*. 19(2) (2021): 154-171.
 38. Dipal Gandhi, Helly Shah, Maitri Madia, "Potential Importance of Juglans Regia Linn: Nutritional Profile and Health Benifits". *Nirma University Journal of Pharmaceutical Sciences*. 7(1) (2020): 37-48.
 39. Tejal Amit Mehta, Amit Chivate, Atul Garkal, "Application and Functional Characterization of Kollicoat Smartseal 30D as a Solid Dispersion Carrier for Improving Solubility". *Asian Journal of Pharmaceutics*. 14(2) (2020): 220.
 40. Tejal Amit Mehta, Abhijeet Pandey, Namdevdhas, "Heterogeneous Surface Architected Metal-Organic Frameworks for Cancer Therapy, Imaging, and Biosensing: A State-of-the-Art Review". *Coordination Chemistry Reviews*. 9(-) (2020): 213212.
 41. Milan Agrawal, Mayur Mahendrabhai Patel, "Formulation, Optimization and in Vivo Evaluation of Clozapine Loaded Transdermal Drug Delivery System for the Treatment of Schizophrenia". *Asian Journal of Pharmaceutics*. 14(4) (2020): 556-571.
 42. Shital Bhavin Butani, Vikas Rathore, Divyesh Patel, "Investigation of Physicochemical Properties of Plasma Activated Water and its Bactericidal Efficacy". *Plasma Chemistry and Plasma Processing*. 41(3) (2021): 871-902.



43. Charmy Shital Kothari, Mital Patel, Vivek Vyas, "An Innovative Impurity Profiling of Avanafil Using Lc and Lc-Ms/Ms with In-Silico Toxicity Prediction.". *Arabian J of Chemistry*. 13(8) (2020): 6493-6509.
44. Preksha Vinchhi, Mayur Mahendrabhai Patel, "Lipid Nanoparticulate System for Wound Healing". *Nirma Univ. J. Pharm. Sci.* 7(1) (2020): 11-36.
45. Saumitra Gajjar, Bhoomika Mayur Patel, "Common Targets for a Deadly Duo of Diabetes Mellitus and Colon Cancer: Catching Two Fish with One Worm". *European Journal of Pharmacology*. 893(-) (2021): 173805.
46. Tamhida Masi, Bhoomika Mayur Patel, "Altered Glucose Metabolism and Insulin Resistance in Cancer-Induced Cachexia: A Sweet Poison". *Pharmacological Reports*. 73(1) (2021): 17-30.
47. Ruju Vashi, Bhoomika Mayur Patel, "Roles of Arf Tumour Suppressor Protein in Lung Cancer: Time to Hit the Nail on the Head". *Molecular and Cellular Biochemistry*. 476(3) (2021): 1365-1375.
48. Charmy Shital Kothari, Krupal Prajapati, "Development and Validation of a Stability Indicating Rp-Lc Method for the Determination of Clenbuterol Hcl". *Drug Research*. 70(12) (2020): 552-562.
49. Charmy Shital Kothari, Manan Shah, "Desogestrel and Severe Psychiatric Disorders: A Retrospective Analysis of Federal Adverse Event Reporting System and Eudravigilance Desogestrel and Severe Psychiatric Disorders". *Current Drug Safety*. 13(3) (2020): 01-06.
50. Charmy Shital Kothari, Sumit Singh, Misari Patel, "Novel Bio-Analytical Technique for Estimation of Gamma Oryzanol in Rat Plasma and Brain Homogenate Using Hplc". *Annales Pharmaceutiques Francaises*. 78(6) (2020): 515-524.
51. Charmy Shital Kothari, Nisha Parikh, "Novel Reverse-Phase High-Performance Liquid Chromatography (Rp-Hplc) Method for the Quantification of Apigenin in Ocimum Basilicum Linn Seeds (Tukmaria)". *Current Analytical Chemistry*. 17(4) (2021): 528-535.
52. Jigar Nareshkumar Shah, Shery Jacob, Anroop Nair, "3D Printing Technologies: Recent Development and Emerging Applications in Various Drug Delivery Systems". *Aaps Pharmscitech*. 21(220) (2020): 42370.
53. Jigar Nareshkumar Shah, Tamer Shehata, Anroop Nair, "Vesicular Emulgel Based System for Transdermal Delivery of Insulin: Factorial Design and in Vivo Evaluation". *Applied Sciences*. 10(5341) (2020): 01-18.
54. Tejal Amit Mehta, Namdev Dhas, "Cationic Biopolymer Functionalized Nanoparticles Encapsulating Lutein to Attenuate Oxidative Stress in Effective Treatment of Alzheimer's Disease: A Non-Invasive Approach". *International Journal of Pharmaceutics*. 586(-) (2020): 119553.
55. Tejal Amit Mehta, Khushali Parekh, Namdev Dhas, "Emerging Nanomedicines for the Treatment of Atopic Dermatitis". *Aaps Pharmscitech*. 22(1530-9932) (2021): 01-14.
56. Jigna Samir Shah, Khushboo Faldu, Snehal Patel, "Celastrus Paniculatus Oil Ameliorates Synaptic Plasticity in a Rat Model of Attention Deficit Hyperactivity Disorder". *Asian Pacific Journal of Tropical Biomedicine*. 11(3) (2021): 105-114.
57. Jigna Samir Shah, Prashant Thakkar, Gaurav Agarwal, "Taste Masking of Pharmaceutical Formulations: Review on Technologies, Recent Trends and Patents". *International Journal of Life Sciences and Pharma Research*. 10(3) (2020): 88-96.
58. Bhumi Dipen Patel, Ankitkumar Patel, Abhishek Patel, "Comfa, Comsia, Molecular Docking and Molcad Studies of Pyrimidinone Derivatives to Design Novel and Selective Tankyrase Inhibitors". *Journal of Molecular Structure*. 1221(Na) (2020): 128783-128799.



59. Tejal Amit Mehta, Namdev Dhas, "Intranasal Delivery of Chitosan Decorated Plga Core/Shell Nanoparticles Containing Flavonoid to Reduce Oxidative Stress in the Treatment of Alzheimer's Disease". *Journal of Drug Delivery Science and Technology*. 61(2) (2021): 102242.
60. Tejal Amit Mehta, Namdev Dhas, "Molybdenum-Based Hetero-Nanocomposites for Cancer Therapy, Diagnosis and Biosensing Application: Current Advancement and Future Breakthroughs". *Journal of Controlled Release*. 330(2) (2021): 257-283.
61. Tejal Amit Mehta, Amit Chivate, "Hot Melt Extrusion: An Emerging Technique for Solubility Enhancement of Poorly Water-Soluble Drugs". *Pda Journal of Pharmaceutical Science and Technology*. 75(4) (2021): 357-373.
62. Mital Patel, Charmy Kothari, Vivek Shantilal Vyas, "An Innovative Impurity Profiling of Avanafil Using Lc and Lc-MS/MS with In-Silico Toxicity Prediction". *Arabian Journal of Chemistry*. 13(8) (2020): 6493-6509.
63. Vivek Shantilal Vyas, G. Qureshi, H. Dayani, Manjunath Madhuvobhat Ghathe, "Pharmacophore-Based Identification and in Vitro Validation of Apoptosis Inducers as Anticancer Agents". *Sar and Qsar in Environmental Research*. 31(11) (2020): 869-881.
64. Jigar Nareshkumar Shah, Sabah H. Akarawi, Bapi Gorain, "Development and Optimization of Naringenin-Loaded Chitosan-Coated Nanoemulsion for Topical Therapy in Wound Healing". *Pharmaceutics*. 12(893) (2020): 01-23.
65. Snehal Patel, Bandar E.A., Jigar Nareshkumar Shah, "The Beneficial Effect of Boswellic Acid on Bone Metabolism and Possible Mechanisms of Action in Experimental Osteoporosis". *Nutrients*. 12(3186) (2020): 01-13.
66. Jigar Nareshkumar Shah, Hiral Shah, Anroop Nair, "Enhancement in Antinociceptive and Anti-Inflammatory Effects of Tramadol by Transdermal Proniosome Gel". *Asian Journal of Pharmaceutical Sciences*. 15(6) (2020): 786-796.
67. Snehal Sanjaykumar Patel, Priyanka Nanavati, Vishal Chvada, "Functional Role of Indomethacin Derivatives for the Treatment of Hepatocellular Carcinoma". *Archives of Medical Research*. 21(5) (2021): 0188-4409.
68. Jigar Nareshkumar Shah, Shinu P, Mohamed Am, "Sars Cov-2 Organotropism Associated Pathogenic Relationship of Gut-Brain Axis And Illness". *Frontiers in Molecular Biosciences*. 22(7) (2020): 01-08.
69. Jigar Nareshkumar Shah, Shery Jacob, Anroop Nair, "Emerging Role of Hydrogels in Drug Delivery Systems, Tissue Engineering and Wound Management". *Pharmaceutics (Mdpi)*. 13(357) (2021): 01-36.
70. Jigar Nareshkumar Shah, Anroop Nair, Shery Jacob, "Experimental Design, Formulation and in Vivo Evaluation of a Novel Topical in Situ Gel System to Treat Ocular Infections". *Plos One*. 16(3) (2021): 01-18.
71. Snehal Sanjaykumar Patel, Bhoomi Arora, "Prevalence of Hypertension, Pre-Diabetes, Lipid Abnormality and Vitamin D Deficiency among Ahmedabad Population". *International Journal of Current Medical and Pharmaceutical Research*. 7(4) (2021): 5702-5707.
72. Manjunath Madhuvobhat Ghathe, "Histone Deacetylase 2: A Potential Therapeutic Target for Cancer and Neurodegenerative Disorders". *European Journal of Medicinal Chemistry*. 216(0) (2021): 113332.
73. Shikha Patel, Bhagawati Saxena, Priti Jignesh Mehta, "Recent Updates in the Clinical Trials of Therapeutic Monoclonal Antibodies Targeting Cytokine Storm for the Management of Covid-19". *Heliyon*. 7(2) (2021): 01-16.
74. Jigar Nareshkumar Shah, Mimansa Zaveri, Anroop Nair, "Improvement of Oral Bioavailability of Carvedilol by Lquisolid Compact: Optimization and Pharmacokinetic Study". *Drug Delivery Translational Research*. 20(3) (2020): 01-11.



75. Harshita Gupta, Ritu Panchal, Niyati Acharya, "Controlled Parenteral Formulations: An Efficacious and Favourable Way to Deliver the Anti-Psychotic Drugs". Current Psychiatry Research and Reviews Formerly: Current Psychiatry Reviews. 16(1) (2020): 42-59.

Book Chapters Published

Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
1.	Mehta Priti Jignesh, Dhara Bhayani,	Physicochemical Stability of Space Medicines	Handbook of Space Pharmaceuticals	Springer	978-3-319-50909-9	2020
2.	Mehta Tejal Amit, Namdev Dhas	Intranasal Gene Therapy for the Treatment of Neurological Disorders	Direct Nose-to-Brain Drug Delivery	Elsevier, Academic Press	978-0-12-822522-6	2021
3.	Tejal Mehta, Jigna Shah, Heena Dave, Kartik Hariharan	Nano Medicine for Challenging Solid Tumors: Recent Trends and Future Ahead	Nano Medicine and Nano Safety: Recent Trends and Clinical Evidences	Springer	978-981-15-6254-9	2020
4.	Tamhida Masi, Ramesh K. Goyal, Patel Bhoomika Mayur	Role of Liver X Receptor in Cardiovascular Diseases	Biochemistry of Cardiovascular Dysfunction in Obesity; Advances in Biochemistry in Health and Disease	Springer Nature	978-3-030-47335-8	2020
5.	Trisha Bhatt, Patel Bhoomika Mayur, Mayur M. Patel	Parkinsons Disease	Drug Delivery Devices and Therapeutic Systems	Elsevier Inc	978-0-12819-838-4	2020
6.	Shah Jigna Samir, Bhavya Baxi	Association of Pre-Pregnancy Body Mass Index and Gestational	Caesarean Section	Intechopen	978-1-78923-931-7	2021



Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
		Weight Gain With Preterm Delivery in Pregnant Women				
7.	Namdev Dhas, Tejal Mehta	Direct transport theory: From the nose to the brain	Direct Nose-to-Brain Drug Delivery	Elesiver-Academic Press	978-0-12-822522-6	2021

Papers in Conference Proceedings

Sr. No.	Name of the Faculty	Paper Title and Proceedings	Name of Publishing House	ISBN	Year of Publication
1.	Snehal Patel	SARS-CoV-2 and Recent Therapeutics: A Current Scenario	International e-Conference	-	2021
2.	Snehal Patel	Post exposure of anti-diabetic agents exerts neuroprotection and improve memory and learning in endothelin-1 induced global ischemia in adult zebrafish	Clinical Neurophysiology	1388-2457	2021
3.	Dipal Gandhi	Betulinic acid, a potent anticancer bioactive: Supercritical fluid extraction using response surface methodology and Identification from Dillenia pentagyna bark	International Conference	-	2021
4.	Nrupesh Patel	Development and Validation of UV-Visible Spectrophotometric and Spectrofluorimetric Methods for Estimation of Fexofenadine Hydrochloride and Montelukast Sodium in Bulk and Pharmaceutical Dosage Form	International e-Conference	-	2021
5.	Bhumika D. Patel	In-Silico Design Strategy for Novel Non NAD ⁺ PARP1 Inhibitors as Anti-Cancer Agents	International e-Conference	-	2021



Patents Filed

Sr. No.	Name of the Inventors	Title of the Patent	Year	Status
1.	Dr. Jigar N. Shah, Ms. Priti Chothani	Pulsatile Drug Delivery System of Antiarthritic Drugs for the Chronotherapy of Arthritis'	2021	Filed

Patents Granted

Sr. No.	Name of the Inventors	Title of the Patent	Year	Status
1.	Dr. Tejal Mehta, Prof. Mohit Shah, Dr. Amin Avni	Pharmaceutical Composition for Buccal Delivery	2020	Granted
2.	Dr. Jignasa Savjani	Aciclovir Co-crystals and the Process of Preparation	2020	Granted
3.	Dr. Priti Mehta, Mr. Tejas M. Dadhaniya	A Novel Depot Formulation Having Pharmaceutically Acceptable Salt Of Iloperidone For Treatment Of Schizophrenia	2021	Granted

Ph.D. Awarded

Sr. No.	Name of the Student	Name of the Guide / Supervisor	Title of Thesis
1.	Upadhyay Jagatkumar Rajendrakumar	Dr. Anuradha Gajjar	Design, Syntheses & Biological Evaluation of Heterocycles Targeting DPP-4 for Management of Type 2 Diabetes
2.	Khatri Hirenkumar Natvarlal	Dr. Mayur M. Patel	Formulation and Evaluation of Ligand Appended Lipid Nanoparticulate Systems for Oral Delivery of Anti-cancer Agents
3.	Prajapat Manali Dhanraj	Dr. Shital Butani	Design and Development of Drug Delivery Systems for Solubility Enhancement of Nimodipine.
4.	Nimitt Virenbbhai Chokshi	Dr. Mayur M. Patel	Formulation, Development and Characterization of Targeted Nano Drug Delivery Systems for the Treatment of Tuberculosis
5.	Nitin Dwivedi	Dr. Jigna Shah	Development and Evaluation of Donepezil Loaded PEGylated Dendrimers for the Treatment of Alzheimer's Disease
6.	Rajput Amarjitsing	Dr. Shital Butani	Development of Nasal Lipidic



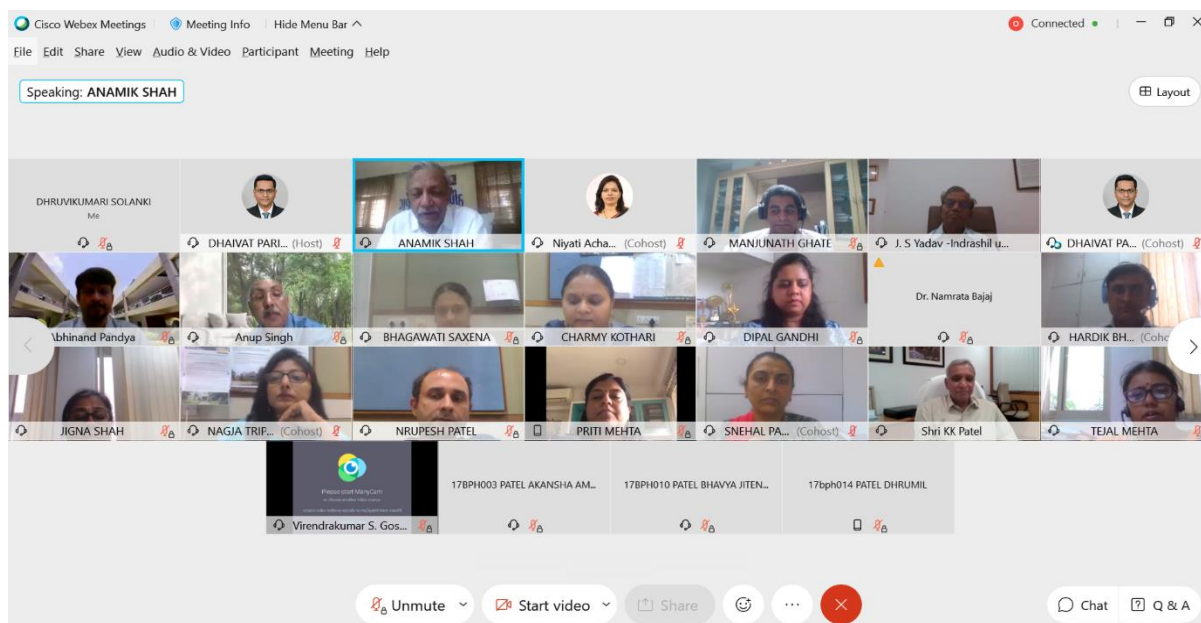
Sr. No.	Name of the Student	Name of the Guide / Supervisor	Title of Thesis
	Premsinh		Nanocarrier Systems for Treatment of Alzheimer'S Disease
7.	Patel Misari Dhruv	Dr. Charmy Kothari	Bio-analytical Method for the Combination of Lipid-Lowering and Anti-Hypersensitive Agents
8.	Tejal Rawal	Dr. Shital Butani	Formulation Development of lung targeted drug delivery System for treatment of tuberculosis
9.	Bhayani Dhara Rajeshbhai	Dr. Priti Mehta	Effects of Ionizing Radiations on Stability of Selected Drugs and their Formulations
10.	Viral Arvindbhai Patel	Dr. Tejal Mehta	Design and Development of Topical Nanoformulations for the Treatment of Fungal Diseases

Conferences / Seminars / Workshops / Research Talks Organized by the Institute

International e-Conference – 2021 on the theme of Covid-19: Challenges and Opportunities in Pharmaceutical Research

International e-Conference – 2021 on the theme of Covid-19: Challenges and Opportunities in Pharmaceutical Research was organised by Institute of Pharmacy, Nirma University, Ahmedabad and Indrashil University, Ahmedabad during 18th to 19th March, 2021. The prime objective of this e-Conference was to provide an opportunity for the close interaction of scientists with varied interests, in diverse fields of research related to Covid-19. The e-Conference provided a common platform to 20 speakers from various countries like USA, Italy, South Korea and also from India. The international speakers include Dr. Ian Haworth, Prof. Dong-Soo Shin, Dr. Marco Lolli, Dr. Heena Patel, Dr. Frederick Frankhauser & Dr. Stephen Kerr. Speakers from India includes Dr. Bhushan Patwardhan, Dr. Ram Vishwakarma, Dr. Thennati Rajmannar, Dr. Hitesh Malviya, Dr. Suresh Patankar, Dr. Ritu Verma, Dr. Prathama Mainker, Dr. Bakulesh Khmar, Dr. Souvik Maiti, Dr. Anthony Addlagatta, Dr. Suman S. Thakur, Mr. Dinesh Patel, and Dr. Prajwal Nandekar. Prof. Dr. Anamik Shah, Vice Chancellor, Gujarat Vidyapith was the Chief Guest and Shri K. K. Patel, Vice President, Nirma University was the President of Valedictory Function. Prof. J. S. Yadav, Provost, Indrashil University, Dr. Anup Singh, Director General, Nirma University, Prof. Manjunath Ghate, Director, Institute of Pharmacy & Convener, International e-Conference-2021 and Dr. Hardik Bhatt, Head, Dept. of Pharm. Chemistry, Institute of Pharmacy & Organizing Secretary, International e-Conference-2021 also graced the function. The International conference was attended by more than 300 researchers in the areas of chemical sciences, biological sciences, pharmaceutical science and other related areas from various parts of India as well as from USA to interact with each other. More than 230 researchers have presented their research/review work as Oral Presentation during parallel sessions and 13 researchers were awarded Best Presentation prizes. To encourage budding researchers and scientists, additional 26 consolation prizes were also announced as certificate of appreciation.





Glimpses of the conference

One Day Thesis Writing Workshop 2021

Institute of Pharmacy, Nirma University organized "One Day Thesis Writing Workshop 2021" on 31st March, 2021 to strengthen scientific writing skills of final year graduate, post graduate and doctoral students over a digital platform. The workshop consisted of e-expert sessions of the eminent speakers from National and International Universities. Prof. Virinder S. Parmar, Professor, Department of Chemistry and Environmental Science, Medgar Evers College, The City University of New York, USA.; Dr. Sayeed Ahmad, Associate Professor, Department of Pharmacognosy and Phytochemistry, Jamia Hamdard, New Delhi, India.; Dr. Shivananda Bhat, Associate Professor and Coordinator, Department of Library & Information Sciences, Manipal Academy of Higher Education, Manipal, India. ; Dr. Christophe LEN, Professor, Chimie ParisTech, PSL University - CNRS, Institute of Chemistry for Life and Health Sciences, Paris.; and Prof. Sanjib Bhattacharyya, Full Professor, Department of Pharmaceutical Science and Chinese Traditional Medicine, Southwest University, China have delivered their expert talk in line with the theme of the workshop. Over 110 students have attended the e-workshop.



Expert lecture by Dr. Sayeed Ahmad

Nirma University Annual Research Report (April 2020 - March 2021)

Conclaves/ Lecture Series

Lecture series on awareness on publication tools

Sr. No	Topic	Date
1	Workshop on reference Management Software Zotero & Online Resources	17.07.2020
2	Lecture on Library Practice: Search Strategy & Reference Management software	23.07.2020
3	Lecture on Access of e-resources of Nirma University through Remote login	15.01.2021
4	Lecture on "Access of e-resources of Nirma University through Remote login "	28.01.2021
5	Workshop on Creation of Research ID - ORCID	04.02.2021
6	Workshop on "Hands-on Practice: Science Direct"	11.02.2021

Lecture series on opportunities of UG Research

1. Dr. Manjunath Ghate, Director, IPNU delivered a talk on "Why UG Research?" on Thursday, 20/8/20
2. Dr. Amirali Popat, Director of Research, School of Pharmacy, University of Queensland, Australia delivered a talk on "Basics of Scientific Writing: Review and Research Article" on Monday, 5/10/20
3. Dr. Anurag Maheshwari, Regulatory Affairs Executive, Prime Health Limited, BC Canada delivered a talk on "How to pursue Career in Pharmaceutical Research" on Monday, 09/11/2020
4. Dr. Nikita Kheradiya, R & D Associate, Verdure Science. Inc, Noblesville, IN, USA delivers a talk on "Natural Product Research: An Industrial Perspective" on Saturday, 6/2/2021.

The screenshot displays a Zoom meeting in progress. The main window shows a presentation slide titled "NATURAL PRODUCT RESEARCH: AN INDUSTRIAL PERSPECTIVE" by Nikeeta Kheradia, M.Pharm, MS, R & D Associate at Verdure Sciences. The slide features a photograph of various natural products, including a green plant in a white pot, a glass bottle with green liquid, and several small jars and pills. The Zoom interface includes a top bar with menu options like File, Edit, Share, View, Audio & Video, Participant, Meeting, Breakout Sessions, and Help. Below the top bar, there are thumbnails of participants: DIPAL G... (Host...), BHUMI... (Co-host), and Nikeeta (Co-host). A right-hand sidebar shows a list of 92 participants and a chat window with a message from Nikeeta: "yes I will be recorded and I will click pics from Nikeeta (privately): 9:58 AM thank you". At the bottom, there are controls for Mute, Stop video, Share, and a red 'X' button.

Expert talk by Nikeeta Kheradia

Research Talk/Lecture Organized by the Institute

It is a regular practice at the Institute of Pharmacy to arrange research related expert talks by eminent personalities from Industry and Academia from within India and Abroad. Following are the details of some of the talks/lectures organized by the departments under Institute of Technology.

1. Dr. Nitesh Shah, Director, Technical and Business development, Evonik on Biodegradable polymers-Microparticles and medical device applications to B. Pharm., M. Pharm. and Ph.D students on June 24, 2020
2. Dr. Harish Padh, Ex, Vice-Chancellor Sardar Patel University, Vallabh Vidyanagar, Gujarat, delivered expert talk on CoVid-19: Infection, Immunity and Vaccines to Faculty and M Pharma and PhD students on July 16, 2020.
3. Dr. Javed Ali, Professor, School of Pharmaceutical Education and Research, Jamia Hamdard University, New Delhi, delivered expert talk on Planning, Design & Development of Lipid Nanocarrier system for Bioavailability Enhancement of Tacrolimus to M Pharma and PhD students on August 11, 2020.
4. Mr. Durga Shanker Dubey, District Manager, Johnson and Johnson (CNS Division covering UP and Bihar market), delivered an online -talk on 'Role of Phytoconstituents for the treatment of chronic diseases' to B. Pharm. Sem. V students on October, 21 2020.
5. Dr. Hiren Patel, General Manager, Formulation Development, Emcure Pharmaceuticals Ltd., Ahmedabad delivered an online Expert lecture on "Current perspectives in Liposomal Drug Delivery Systems" to B. Pharm Sem-VII, M. Pharm Sem-I and III (Pharmaceutics), Ph. D students on November 2, 2020.
6. Dr. Ajit Vikram, Assistant Professor, Division of Cardiology, Abboud Cardiovascular Research Center, Fraternal Order of Eagles Diabetes Research Center, Department of Internal Medicine, University of Iowa Carver College of Medicine, Iowa City, IA, USA, delivered a online Expert lecture on 'Role of Intestinal microbes in cardiovascular disorders' to B. Pharm. (Sem V), M. Pharm. (Pharmacology), PhD on November 4, 2020.
7. Prof. Krishnapriya Mohanraj, Principal - In Charge, Bombay College of Pharmacy, on "Research- Planning, Evaluation and Pitfalls" to M. Pharm. Sem-I and III delivered an online Expert lecture on November 4, 2020.
8. Dr. Varsha Patel, Professor and Head, Dr. M. K. Shah Medical College delivered an online Expert Lecture on 'New Drug Development' to M. Pharm. Sem-I and III students on November 4, 2020.
9. Dr. Shivprakash Rathnam, CEO, Synchron Research Services Pvt. Ltd., Ahmedabad delivered e-Expert Lecture on "Future Perspectives in Clinical Research" to M. Pharm. (Pharmacology) Sem-I and III students on November 5, 2020.
10. Dr. Nina Sharma, Managing Director, B-330-331-332, Sobo Center, Nr. Suncity South Bopal, Ahmedabad delivered online Expert Lecture on "Innovation and future trend in cosmetics" to B. Pharm Sem- V and M. Pharm. (Pharmaceutics) Sem-I students on November 5, 2020.
11. Dr. Pavankumar, Head and Vice-President - OSD Dosage forms, Dr. Reddy's Laboratories, Hyderabad delivered online Expert Lecture on OSD dosage forms: Industrial Perspectives to M. Pharm. (Pharmaceutics), PhD students on November 5, 2020.
12. Dr. Sameer Agrawal, Dy. General Manager and Principal Research Scientist, Zydus Research Centre, Ahmedabad delivered online Expert Lecture on Discovery of Novel Anti-Diabetic Agents to B. Pharm Research Council students, M. Pharm. Sem-I and III, Ph. D students on November 9, 2020.
13. Dr. Raj Sevak, Assistant Professor, Department of Pharmacy Practice, School of Pharmacy, University of the Pacific, Stockton , California , USA delivered online Expert

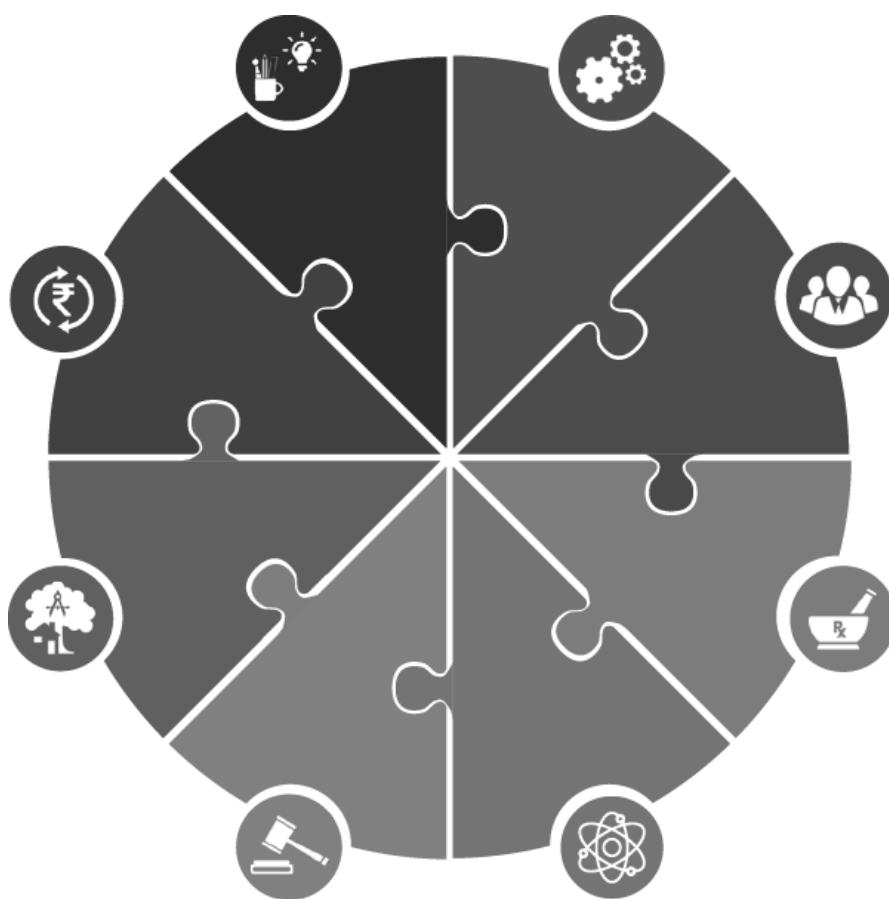
- lecture on “Clinical Study Design an Overview” to Ph. D Scholars, M. Pharm Semester-I and III students on December 29, 2020
14. Dr. Ganesh A. Thakur, Associate Professor and Chair, Department of Pharmaceutical Science, Northeastern University, Boston, USA delivered a talk on Molecules to Therapeutic Discoveries – Treating Chronic and Neuropathic Pain and Substance Use Disorders to B. Pharm. Semester-VI & VIII on March 4, 2021
 15. Prof. Sukhinder Cheema, Professor in Biochemistry, Memorial University of Newfoundland, Canada delivered a talk on “Maternal nutrition during pregnancy and cognitive function of the next generation” to B. Pharm. Semester-VIII, M. Pharm Semester-II & IV (Pharmacology) students on March 5, 2021.
 16. Prof. Nigel G. J. Richards, Department of Chemistry, Cardiff University, Cardiff, UK delivered talk on Role of Chemotherapeutic agents in Medicinal Chemistry to B. Pharm. Sem VI and M. Pharm. Sem IV (Medicinal Chemistry) students on March 6, 2021.
 17. Dr. Wong Tin Wui, Professor, Faculty of Pharmacy, Universiti Teknologi MARA delivered talk on Topical and Transdermal Delivery of Small Molecule and Macromolecular Therapeutics to M. Pharm. Semester- II and IV (Pharmaceutics Department), Ph.D. on March 10, 2021.
 18. Prof. Neelima Chauhan, Associate Professor, Department of Biochemistry and Molecular Genetics Chicago, USA delivered talk on Cholinergic Neurotransmission with reference to Alzheimer’s Disease to M. Pharm. Semester- II and IV (Pharmaceutics) and Ph.D. on March 11, 2021
 19. Professor Sibel Aysil Ozkan, Analytical Chemistry, Ankara University, Ankara, Turkey delivered online Expert on Electrochemical Carbon Based Nanosensors in Biological and Pharmaceutical Area: Current and Future Prospects to B. Pharm, M. Pharm. Semester- II and IV, Ph.D. Students on March 16, 2021.
 20. Dr. Amirali Popat, Director of Research, School of Pharmacy, The University of Queensland, Brisbane, Australia, delivered online Expert on Mesoporous silica nanoparticles : One particle many solutions to B. Pharm, M. Pharm. Semester- II and IV, Ph.D. on March 17, 2021
 21. Dr. R.N. Saha, Director & Shri B. K. Birla & Smt. Sarala Birla Chair Professor, BITS Pilani, Dubai Campus, Dubai International Academic City, Dubai, UAE delivered talk on Nanoparticulate Systems for Better Drug Delivery and role of Pharmacokinetic to M. Pharm. Semester- II and IV, Ph.D. Research Scholars on March 22, 2021
 22. Dr. Rory E. Kim, Assistant Professor of Clinical Pharmacy, USC School of Pharmacy, University of Southern California, USA delivered online Expert on Diabetes drug benefits beyond glycemic control to B. Pharm Semester-VI, M. Pharm. Semester- II and IV, Ph.D. Research Scholars on March 22, 2021.
 23. Dr Stephen Barton, Department of Chemical and Pharmaceutical Sciences, Kingston University, UK delivered online Expert on Applications of HPLC and MASS Spectroscopy in Bio-Analytical and R&D to B. Pharm Semester-VIII, M. Pharm. Semester- II and IV, Ph.D. Research Scholars on March 23, 2021
 24. Dr. Yashwant Pathak, Professor, School of Pharmacy, Material and Advanced Technologies for Healthcare, Tampa, USA, delivered online Expert on Back to square one: A passage towards drug delivery through precision medicine to B. Pharm Semester-VIII, M. Pharm. Semester- II and IV, Ph.D. Research Scholars on March 23, 2021
 25. Prof. Ryan F. Donnelly Chair in Pharmaceutical Technology, School of Pharmacy, Queen's University Belfast, UK delivered online Expert on Transdermal Drug Delivery Systems to B. Pharm Semester-VIII, M. Pharm. Semester- II and IV, Ph.D. Research Scholars on March 23, 2021
 26. Dr. Ian S. Haworth, Associate Professor & Vice Chair, Department of Pharmacology & Pharmaceutical Sciences, School of Pharmacy, University of Southern California, USA.



- delivered online Expert on Drug Design and Development: The Role of Water to B. Pharm Semester-VIII, M. Pharm. Semester- II and IV, Ph.D. Research Scholars on March 25, 2021
27. Prof. Cornelia Keck, Professor Pharmaceutics & Biopharmaceutics, Department of Pharmaceutics & Biopharmaceutics, Philipps-Universität Marburg, Germany delivered online Expert on “Smart” Nanocarriers for improved drug delivery B. Pharm Semester-VIII, M. Pharm. Semester- II and IV, Ph.D. Research Scholars on March 25, 2021
 28. Dr Luis Zea, Assistant Research Professor, BioServe Space Technologies, University of Colorado, Boulder, USA delivered online Expert on 'Why do we do biology and microbiology experiments in space?' B. Pharm Semester-VIII, M. Pharm. Semester- II and IV, Ph.D. Research Scholars on March 26, 2021
 29. Dr. Vinay Parikh, Associate Professor, Psychology and Neuroscience Program, Associate Professor, Center for Substance Abuse Research, Head, Neurochemistry and Cognition Laboratory, Former Director, CLA Neuroscience Program, Temple University, Weiss Hall, Philadelphia, PA 19122, USA delivered online Expert on Neural underpinnings of resilience and vulnerability in cognitive aging to B. Pharm Semester-VIII, M. Pharm. Semester- II and IV, Ph.D. Research Scholars on March 26, 2021
 30. Prof. Virinder S. Parmar, Professor in the Department of Chemistry and Environmental Science, Medgar Evers College, The City University of New York , USA delivered online Expert on Development of Advanced Polymeric Nanoparticles for Drug Encapsulation and Drug Delivery Applications to B. Pharm Semester-VI, M. Pharm. Semester- II and IV, Ph.D. Research Scholars on March 26, 2021
 31. Dr. EE Pui Lai, Rachel, Associate Professor, Department of Pharmacy, National University of Singapore, Singapore delivered online Expert on Polysaccharide hydrogels as sustainable biomaterials for wound healing to M. Pharm. Semester- II and IV, Ph.D. Research Scholars on March 26, 2021
 32. Dr. Chandresh Gajera, Research Scientist, Stanford University, San Francisco, USA, delivered online Expert on Genomics to Precision Medicine: Extracting ideas from genetics/genomics discoveries to define precise target for drug discovery and development to B. Pharm Semester- IV, VI and VIII, M. Pharm. Semester- II and IV, Ph.D. Research Scholars on March 27, 2021
 33. Dr. Ng Shiow Fern Associate Professor Chair, Centre for Drug Delivery Technology Research, Coordinator, Discipline of Pharmaceutics, Faculty of Pharmacy, Universiti Kebangsaan Malaysia (UKM)–The National University of Malaysia delivered online Expert on Pharmacokinetics and Pharmacodynamics Characterization of drugs for clinical translation to B. Pharm Semester- IV, M. Pharm. students, Ph.D. Research Scholars on March 31, 2021.



Research Report of Institute of Science



INSTITUTE OF SCIENCE

Research Statistics at a Glance

April 01, 2020 – March 31, 2021

Research Projects		
Major Research Projects		
	Number of Projects	Grant in Rs.
Completed Major Research Projects	03	90,95,000/=
Ongoing Major Research Projects	07	3,42,70,174/=
Sanctioned Major Research Projects	01	89,36,300/=
Minor Research Projects		
Completed Minor Research Projects	02	2,00,000/=
Sanctioned Minor Research Projects	02	5,38,000/=
Research Publications		
Research Papers in Scopus / Web of Science / ABDC / EBSCO Listed Journals		15
Doctoral Research		
Ph.D. Degree Awarded		13
New Ph. D. Students Enrolled in this Year		14
Current Ph.D. Students		43
Current Ph. D. Guides		70
Conferences / Seminars / Research Talks Organized by the Institute		
Research Talks / Lectures		07



Institute of Science

Research Projects

Major Research Projects

Completed Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Understanding the Functional Role of Vacuolar ATPases in Trophocytosis and Tissue Invasion Mediated by Entamoeba Histolytica	Prof. Kuldeep Verma	Science and Engineering Research Board (SERB), DST	29,91,700/-
2.	Understanding the Spatiotemporal Dynamics and Ultrastructure Details of ECM Degrading Device Amoebic Invadosomes and their Crosstalk with RAB GTPases and Cell Surface Proteases Trafficking Machinery in E. Histolytica	Prof. Kuldeep Verma	Science and Engineering Research Board (SERB), DST	38,51,300/-
3.	Elucidating the Role of Short Chain Fatty Acids (SCFAS) and Its Receptors in High Sugar Diet Induced Type II Diabetes	Prof. Sriram Seshadri	Gujarat State Biotechnology Mission (GSBTM)	22,52,000/-
Total Grant				90,95,000/-

Ongoing Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Development of Integrated Wastewater Treatment Systems Using Alternative Innovative Approaches of Microbial Fuel Cells, Magnetic Nanoparticles and Vermicomposting with Water Hyacinth for Secondary Sludge Management	Dr. Nasreen Munshi, Prof. Manisha Shah, Prof. Chetna Chauhan. This project is of interdisciplinary nature and combined with Institute of Technology, Nirma University and Veer Narmad South Gujarat University	Gujarat State Biotechnology Mission (GSBTM)	48,96,574/-



2.	Investigating the Role of CRC in Regulation of PQQ GDH Involved In MPS Phenotype of Acinetobacter SP. and its Repression	Prof. Shalini Rajkumar	Department of Science & Technology (DST)	37,34,000/-
3.	Bone Metastatic Signature in Indian Breast Cancer Patients	Prof. Heena Dave	Department of Science & Technology (DST)	7,25,000/-
4.	FIST Infrastructure Grant	Prof. Sarat Dalai	Department of Science and Technology (DST)	92,00,000/-
5.	Microbial Fuel Cell: An Approach for Wastewater Treatment with Generation of Green Electricity	Prof. Nasreen Munshi, Prof. Manisha Shah	Nirma University	29,90,700/-
6.	Studying the Immune Adjuvant Potential of Chimeric IL-15	Prof. Sarat Kumar Dalai	Gujarat State Biotechnology Mission (GSBTM)	49,48,200/-
7.	Engineered Bioremediation Approaches for Onsite Treatment of Soil Contaminated with Crude Oil	Prof. Nasreen Munshi, Prof. Shalini Rajkumar	Department of Biotechnology (DBT)	77,75,700/-
This is a National Collaborative research project with a total fund of the project is 8,42,92,612 crores sanctioned by Department of Biotechnology (DBT). The other collaborative partners are National Environmental Engineering Research Institute, Nagpur; Indian Institute of Toxicology Research, Lucknow; Assam University, Indian Institute of Technology, Bombay; Indian Institute of Delhi; National Institute of Oceanography Goa; The Energy and Resources Institute, New Delhi; Institute of Advanced Study in Science & Technology, Assam.				
Total Grant				3,42,70,174/-

Sanctioned Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Understanding The Role Of B Cells In Cross-Presentation Of Plasmodium Liver-Stage Antigen(S) To Cd8+ T Cells	Prof. Sarat Dalai	Department of Biotechnology	89,36,300/-
Total Grant				89,36,300/-



Minor Research Projects

Completed Minor Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Understanding the Functional Role of Sar1-Like GTPases Homologue from Entamoeba Histolytica	Prof. Kuldeep Verma	Nirma University	1,00,000/-
2.	To Investigate the Expression of T Cell and Their Subsets (Th1, Th2, Th17 and Treg) Cells in The Melanoma	Prof. Dablulal Gupta	Nirma University	1,00,000/-
Total Grant				2,00,000/-

Sactioned Minor Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Identification of Small Molecule Inhibitors of Transcriptional Activator Protein Lasr	Dr. Vijay Kothari	Atomwise Inc., USA	2,36,300/-
2.	Identification of Small Molecule Inhibitors of Nitric Oxide Reductase (NOR) in Pseudomonas Aeruginosa	Dr. Vijay Kothari	Atomwise Inc., USA	3,01,700/-
Total Grant				5,38,000/-

Research Publications

Research Papers in Scopus/Web of Science/ABDC/EBSCO Listed Journals

1. Parmar A, Needa A, Parmar G and Krishnakumar A, "Evaluation of Cell Viability in Two Dimensional and Three-Dimensional Fibrin Glue Scaffold with Human Dental Pulp Stem Cells Journal of Conservative Dentistry". Journal of Conservative Dentistry. 23(5) (2020): 479-483.
2. Sagar Batra, Puranjaya Pancholi, Mrinalini Roy, "Exploring Insights of Syntaxin Superfamily Proteins from Entamoeba Histolytica: A Prospective Simulation, Protein-Protein Interaction, and Docking Study". Journal of Molecular Recognition. 44197(14) (2021): 12.
3. Marceline Macwan, Manita Das, Sonal Thakore, Bakshi Sonal Rajiv, "In-Vitro Study on Genotoxicity of Green Synthesized Silver Nanoparticles". Nano Biomedicine and Engineering. 13(1) (2021): 72-81.
4. Ramesh Chaudhari, Nikunj Tandel, Kiran Sahu, Sushmita Negi, Hilal Bashir, Arzu Rupareliya, Ravi PN Mishra, Sarat K. Dalai, Rajeev K. Tyagi, "Transdermal Immunization of Elastic Liposome Laden Recombinant Chimeric Fusion Protein of P.



- Falciparum (Pfmsp-Fu24) Mounts Protective Immune Response". *Nanomaterials*. 11(2) (406) (2021): 01-23.
5. Munshi Nasreen Shakil, Rushika Patel, Anwesha Mukherjee, "Optimization of Immobilization Process and Survival Study of Microbial Sensing Strains used for Aromatic Hydrocarbon Detection in Industrial Wastewater.". *Water and Environmental Journal*. 34(S1) (2020): 937-948.
 6. Nasreen Shakil Munshi, Visha Rathod, Rasmeih Hamid, "Comparative Rna-Seq Profiling of a Resistant and Susceptible Peanut (*Arachis Hypogaea*) Genotypes in Response to Leaf Rust Infection caused by *Puccinia Arachidis*". *3Biotech*. 10(1) (2020): 284.
 7. Munshi Nasreen Shakil, Visha Rathod, Rasmieh Hamid, "Peanut (*Arachis Hypogaea*) Transcriptome Revealed The Molecular Interactions of the Defense Mechanism in Response to Early Leaf Spot Fungi (*Cercospora Arachidicola*)". *Plant Gene*. 23(1) (2020): 100-243.
 8. Pooja, Chinmayi, Vijay Kothari, "Supernatants of the Probiotic Bacterial Cultures at Sub-Mic levels Attenuates Virulence of Pathogenic Bacteria towards the Model Host *Caenorhabditis Elegans*". *Infectious Disorders - Drug Targets*. 20(6) (2020): 867-877.
 9. Patel H, Patel F, Jani V, Jha N, Ansari A, Paliwal B, Rathod B, Patel D, Patel P, Kothari V, "Anti-Pathogenic Potential of a Classical Ayurvedic Triphala Formulation". *F1000Research*. 8(-) (2020): 46327.
 10. Pooja, Chinmayi, Vijay Kothari, "Anti-Infective Potential of Hydroalcoholic Extract of *Phyllanthus Emblica* Seeds against Selected Human-Pathogenic Bacteria". *Infectious Disorders - Drug Targets*. 20(5) (2020): 672-692.
 11. Kothari Vijay Omprakash, "Discovery and Development of New Anti-Infectives: Perspectives and Prospective.". *Current Drug Discovery Technologies*. 17(4) (2020): 41730.
 12. Kothari Vijay Omprakash, "Validation of Traditional Medicinal Practices through Modern Scientific Approach: A Case for Reconsideration". *Current Pharmacogenomics and Personalized Medicine*. 17(1) (2020): 11-13.
 13. Das M, Nariya P, Joshi A, Vohra A, Devkar R, Seshadri S and Thakore S, "Carbon Nanotube Embedded Cyclodextrin Polymer Derived Injectable Nanocarrier: A Multiple Faceted Platform for Stimulation of Multi-Drug Resistance Reversal". *Carbohydrate Polymers*. 247(1) (2020): 116751-116763.
 14. Bai L, Sunny Kumar, Verma S, and Seshadri S, "Bacteriocin Pj4 from Probiotic *Lactobacillus* reduced Adipokine and Inflammasome in High Fat Diet Induced Obesity". *3Biotech*. 10(7) (2020): 355-365.
 15. Mandaliya DK, Patel S and Seshadri S, "The Combinatorial Effect of Acetate and Propionate on High Fat Diet Induced Diabetic Inflammation or Metaflammation and T Cell Polarization". *Inflammation*. 44(1) (2021): 68-79.

Ph.D. Awarded

Sr. No.	Name of the Student	Name of the Guide / Supervisor	Title of Thesis
1.	B. Narasiha Sharma	Dr. Arun Bhardwaj	Investigations on Systems and Methods for Performance Simulation and Characterization of Spaceborne Electro-optical Imaging Systems



Sr. No.	Name of the Student	Name of the Guide / Supervisor	Title of Thesis
2.	Ranjana Gangradey	Dr. Vipul Tanna	Pumping speed of Hydrogen and Helium gases using Activated Carbon as sorbent material at Liquid Helium Temperature for Cryopump Applications.
3.	Joshi Madhaviben Udayankumar	Dr. Amee Nair	Effect of Recurrent Hypoglycemia on NRG1 - ErbB Receptor Subtypes During Diabetes and its Implications in Motor and Cognitive Functions.
4.	Bhagya Nagarajan Iyer	Dr. Shalini Rajkumar	Biochemical Basis of Repression of Mineral Phosphate Solubilization (MPS) Phenotype in Rhizobial Species.
5.	Trivedi Varsha Bhagavatprasad	Dr. Sarat Dalai	Role of HLA Antibodies (Class-I and II) and Infections Among Renal Transplant.
6.	Sanchayita Das	Dr. Manab Chakraborty	Characterization of Himalayan Glaciers Using Synthetic Aperture Radar Data.
7.	Parmar Krupali Jitendra	Dr. Mili Das	Biochemical and Biophysical Studies on Thermostable and Thermoactive Enzymes and Understanding the Molecular Determinants of Protein Thermostability.
8.	Orpe Prachi Bhalchandra	Dr. Balasubramanian C.	The Study of Magnetic Nanostructures in Relation to its Atomic Ordering and Oxidation State.
9.	Bhurani Vishakha Manoj	Dr. Sarat Dalai	Induction of Memory T Cells by Mimicking Natural Course of Infection.
10.	Patel Rushika Bharkatkar	Dr. Nasreen Munshi	Development of bioprocess for identification of pollutant levels in industrial waste water.
11.	Jinto Thomas	Dr. Ajai Kumar	Study of Laser Produced Plasma Plume and its Dynamics in Nickel Thin Film.
12.	Patel Swetaben Bharatbhai	Dr. Sriram Seshadri	Evaluating the Immunological Environment of Liver and its Metabolic Shift following Gut microbiota Alteration in Diet Induced Type 2 Diabetes.



Sr. No.	Name of the Student	Name of the Guide / Supervisor	Title of Thesis
13.	Patel Pooja Ishvarbhai	Dr. Vijay Kothari	Investigation on Anti-pathogenic Potential of Herboheal Formulation and Phyllanthus emblica L. Seed Extract Against Selected Human-Pathogenic Bacteria.

Conferences / Seminars / Research Talks Organized by the Institute

Research Talks / Lectures Organized by the Institute

It is a regular practice at the Institute of Science to arrange research related expert talks by eminent personalities from Industry and Academia. Following are the details of some of the talks/lectures organized by the departments under Institute of Science.

1. Dr. Preeti Desai delivered the expert lecture on vaccinology on 18th and 19th September 2020.
2. Prof. Suresh Balakrishnan, Professor, Dept. Of Zoology, M.S. University invited to deliver lecture series on Developmental biology from 14th October 2020 to 17th October 2020.
3. Prof. L. Shashidhara, Professor, ISSER, Pune delivered lecture series on ‘Evolution Biology’ from 21st October 2020 to 24th October 2020.
4. Dr. Neha Jain, Asst. Professor, IIT-Jodhpur delivered lecture series on ‘Amyloid-dependent biofilm formation’, ‘Role of microbial amyloids in non-microbial diseases’ and ‘Cross-talk between amyloids of different origin and its Consequences’ during 21st October 2020.
5. Ms. Kavita Shah, A registered patent agent delivered lecture on ‘Intellectual Property Right’ on 20/02/2021.
6. Dr. Sindhav Gaurang, Department of Zoology, Biomedical Technology and Human Genetics, Gujarat University delivered a lecture on “Mirage Legacy: Duchenne Muscular Dystrophy” on 23rd March 2021.
7. Dr. Sloka Iyengar, Ph.D, Global Health Strategist, USA delivered lecture on “Neuropathology of Epilepsy” on 31st March 2021.



Research Report of Institute of Law



INSTITUTE OF LAW

Research Statistics at a Glance

April 01, 2020 – March 31, 2021

Research Projects		
Major Research Projects		
	Number of Projects	Grant in Rs.
Ongoing Major Research Projects	01	10,00,000/=
Minor Research Projects		
Completed Minor Research Project	01	1,15,000/=
Sanctioned, Ongoing and Completed Minor Research Projects during this year	04	3,42,200/=
Research Publications		
Research Papers in Scopus / Web of Science / ABDC / EBSCO Listed Journals		01
Books Published		02
Doctoral Research		
New Ph. D. Students Enrolled in this Year		07
Current Ph.D. Students		21
Current Ph. D. Guides		03
Conferences / Seminars / Research Talks Organized by the Institute		
International/National Conferences/Symposium		06
Seminars/Workshops/Training Programmes		01
Research Talks/Lectures		24



Institute of Law

Research Projects

Major Research Projects

Ongoing Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	A Study on Public Participation in Environmental Decision-Making Process in Gujarat with Special Reference to Environment Impact Assessment Process	Prof. Madhuri Parikh, Prof. Bishwa Kallyan Dash	Indian Council of Social Science Research (ICSSR)	10,00,000/-
Total Grant				10,00,000/-

Minor Research Projects

Completed Minor Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	An Empirical Study on the Status of The Undertrial Prisoners in Gujarat Central Jails	Prof. Purvi Pokhariyal	National Human Rights Commission, New Delhi	1,15,000/-
Total Grant				1,15,000/-

Sanctioned, Ongoing and Completed Minor Research Projects during this Year

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Impact on Carbon Tax on Energy Mix for Sustainable Development Goals: A Legal Study	Prof. Sukrit Garg, Prof. Neeraj Sharma	Nirma University	82,000/-
2.	Redressal of Sexual Harassment at Work Place: A Legal Study at Private Health Sector in Ahmedabad	Prof. Vikash Upadhyay	Nirma University	70,200/-
3.	Piracy of Copyrighted Content- A Case Study on Film Industry	Prof. Gunjan Arora	Nirma University	90,000/-

Nirma University Annual Research Report (April 2020 - March 2021)



4.	Impact Analysis of Geographical Indications of Goods (Registration and Protection) Act, 1999 in Gujarat: Case Study of Patan Patola and Jamnagar Bandhani.	Prof. Taruna Jakhar, Prof. Gunjan Arora	Nirma University	1,00,000/-
Total Grant				3,42,200/-

Research Publications

Research Paper in Scopus/Web of Science/ABDC/EBSCO Listed Journals

1. Amit Kumar Kashyap, Pranav Singh Rathore, "Law and Economies of Arbitration in Global Tax Policy: Indian Practice", International Journal of Private Law 9(4) (2020): 231-245.

Books Published

Sr. No.	Name of the Faculty	Name of the Book	Name of Publishing House	ISBN	Year of Publication
1.	Purvi Pokharyal, Amit K. Kashyap, Arun B. Prasad	Artificial Intelligence: Law And Policy Implications	Eastern Book Company publications	978-93-89656	2020
2.	Dr. Anjani Singh Tomar, Amit K Kashyap	Sustainable Development: India and Beyond	Bharti Publication	978-93-90818-211	2021

Conferences / Seminars / Research Talks Organized by the Institute

International/National Conferences/Symposium

Webinars by Research Centres on the Impact of Covid -19 on IBC

Centre for Corporate Law Studies (CCLS), Institute of Law organized an open-to all webinar session on May 24, 2020. The webinar is based on the theme 'Impact of COVID-19 on Insolvency and Bankruptcy Code'.



Symposium on ‘Law and Justice in Globalising World’

The Institute of Law organized a three-day Symposium on ‘Law and Justice in Globalising World’ on November 04, 05 & 06, 2020. The Symposium was organised through online mode. The programme was graced by eminent speakers from across the globe.

Ninth International (Virtual) Conference on International Humanitarian Law and Refugee Law

The Centre for International Humanitarian Law and Human Rights, Institute of Law, Nirma University hosted the inaugural ceremony of its Flagship Conference, Ninth International (Virtual) Conference on International Humanitarian Law and Refugee Law on January 13, 2021.

International Conference (Virtual) on Law Language Literature: Dialogic Interfaces

The Institute of Law, Nirma University organized a two-day virtual international conference on ‘Law, Language, and Literature: Dialogic Interfaces’ on March 23 and 24, 2021. In 8 sessions, 26 scholars presented their papers, with their topics varying from purpose of teaching literature to law students, choice of texts, classroom techniques, pedagogical tools and innovations in textual interpretations to make literary studies relevant to legal scholars.



Glimpses of the International conference

International Symposium on ‘Educating Future Lawyers for Just & Sustainable Society’

The Institute of Law, Nirma University in association with South Asia Network for Justice Education (SANJE) organized an international symposium on ‘Educating Future Lawyers for Just & Sustainable Society’, on 08-09 February 2021. The symposium focused on needs for social justice and ‘Justice for All’, the SDG 16.



On the first day (08 February 2021), a panel of five speakers (2 from USA and 3 from India) presented thoughts on role of performing arts for promoting social justice based on their life and work experiences. On the second day (09 February 2021), a panel of five speakers (one from USA and 4 from India) presented thoughts on ‘Clinical Legal Education’ (CLE) and its linkages with ‘relational lawyering’, ‘New Education Policy’ (NEP), ‘Education 4.0’, and SDG 16 based on their life and work experiences.



Glimpses of the panel discussion

International Virtual Conference on ‘Sports and Law’

The Institute organized its first International (Virtual) Conference on ‘Sports and Law’ on March 05-06, 2021 at the Institute. Several eminent speakers covered different aspects of Sports and legal regime, i.e. Global Sports Law for Indian Sport, Sports persons and Constitution- The Doping Dilemma, Image Rights and Sports, Nuances of Contracting in Sports, The Power of Sport: A story of \$250+ Billion Sports Brand, Anti-Doping Regulations in Sports, Gender Issues in Sports: The Dutee Chand’s Case Study, Fantasy Sports and Legal Regulations in India and Risk Insulations in Sports Contracts- A Trans-legal experience. These themes touched upon various facets that control the whole gamut of sports across jurisdictions.

Seminars/Workshops/Training Programmes

Symposium on Agriculture Market Reforms and Competitive Markets

The Centre of Competition Law and Market Study (CCLMS), ILNU organised a Symposium on Agriculture Market Reforms and Competitive Markets on March 20, 2021. The keynote Nirma University Annual Research Report (April 2020 - March 2021)

speakers were Prof R Ramakumar, Professor, Tata Institute of Social Science Mumbai, Dr Abha Yadav, Associate Professor, Indian Institute of Corporate Affairs, Prof Dr Sukhpal Singh, Professor, Indian Institute of Management, Ahmedabad and Dr Arindam Banerjee, Associate Professor, Dr B R Ambedkar University, Delhi.

Research Talks/Lectures

Celebration of International Teaching Month (ITM)

The Institute celebrated February 2021 as the International Teaching Month ITM). More than 80 eminent speakers from across the globe – an array of expert sessions through webinars, panel discussions, symposium, and seminars through online mode. The inaugural lecture was also graced by Shri Hirenghai K. Patel (Managing Director, Nirma Limited).

The sessions were designed on varied subjects, such as Alternative Dispute Resolution, Cyber Law, Global Health Law, Comparative Legal History, Artificial Intelligence, Climate Change Regulation, defending of the indigent, Labour and Social Security Laws, Principles of drafting of tax laws, Law and Religion, Human trafficking, Managing and negotiating complex business transactions, Air and Space Law, and Contempt of Court and Free Speech.

1. Mr Thomas P Valenti, (Attorney, Arbitrator (ACI Arb), Mediator, Facilitator, USA) and Prof (Dr) S Surya Prakash (Vice Chancellor) on the topic, 'Alternative Dispute Resolution in Current Times' on 04 February, 2021.
2. Ms Mel Flanagan (Former Circuit Judge, Wisconsin, USA, Visiting Professor, University of Sarajevo, and Adjunct Professor, Institute of Law, Nirma University) on the topic, 'Implicit Bias and Justice' on 10 February, 2021.
3. Dr Rajesh Sharma, Senior Lecturer RMIT University, Melbourne, Australia on the topic, 'Arbitrability of IP Disputes' on 12 February, 2021.
4. Prof (Dr) Dmitry Poldnikov, (Professor, Faculty of Law, Higher School of Economics University, Russia) on the topic, 'Comparative Legal History' on 12 February, 2021.
5. Dr Peter Mezei (Associate Professor and Associate Dean for International Affairs, Szeged School of Law, University of Szeged, Hungary) on the topic, 'AI and Copy Right' on 12 February, 2021.
6. Prof (Dr) Hari Osofsky Dean (Penn State Law and Penn State University School of International Affairs, USA) on the topic, 'Climate Change Regulation' on 12 February, 2021.
7. Prof (Dr) Elmarie Fourie (Senior Lecturer, University of Johannesburg, South Africa) on the topic, 'Women in Informal Sector (Labour and Social Security Perspectives' on 13 February, 2021.
8. Mr Pranav Menon (Member, New York State Bar, USA) on the topic, 'Reanimation Technology and the Legal Impact on the Decedent' on 13 February, 2021.
9. Prof (Dr) Muhammad Ekramul Haque (Professor, Faculty of Law, University of Dhaka, Bangladesh) on the topic, 'Comparative Constitution' on 15 February, 2021.
10. Prof (Dr) Dietmar Boerner (Professor, Business Law, Hof University of Applied Sciences, Germany) on the topic, 'Introduction to German Labour Law' on 15 & 16 February, 2021.
11. Prof Sital Kalantry (Clinical Professor of Law Cornell Law School New York) and Prof (Dr) Dilip Ukey (Vice Chancellor Maharashtra National Law University Mumbai) on the topic, 'Comparative Constitutional Law from India and U.S. Perspectives' on 16 February, 2021.



12. Dr Michal Radvan, (Vice Dean for International and External Relations, Faculty of Law, MUNI (Masaryk University), Czech Republic) on the topic, 'Tax Law Drafting Principles' on 17 February, 2021.
13. Prof (Dr) Davor Derencinovic (Professor of Criminal Law and Criminology, Faculty of Law, University of Zagreb University, Croatia, and Shri Amod K. Kanth (IPS (Retd.), Member, Coordinator NITI Aayog, CSO Standing Committee, Chairman of Domestic Workers Sector Skill Council.) on the topic, 'Human Trafficking' on 18 February, 2021.
14. Prof (Dr) Raphael Cohen-Almagor (Professor and Chair in Politics, University of Hull, UK) and Prof (Dr) Amita Dhanda (Emeritus Professor, NALSAR University of Law, Hyderabad) on the topic, 'Ethics, Academic Freedom and Politics' on 19 February, 2021.
15. Prof (Dr) Thomas Yunlong Man (Professor of Law, Peking University, China, Prof (Dr) Sudhir Krishnaswamy (Vice Chancellor National Law School of Indian University Bangalore) on the topic, 'Seeking Truth in History and Law' on 24 February, 2021.
16. Prof (Dr) Venkat Iyer (Professor and Head, School of Law Ulster University United Kingdom) and Prof Paul Carmichael, Associate Dean, Global Engagement, Ulster University, UK on the topic, 'Contempt of Court and Free Speech' on 25 February, 2021.
17. Prof (Dr) M Padmavati, Professor and Dean, Rajiv Gandhi School of IP Law, IIT Kharagpur on the topic, 'Role of Patents and Technology Transfer in Coping with Post Covid 19 Conditions' on June 06, 2020.
18. Dr Pavan Duggal, Advocate- Supreme Court of India; Specialized in the field of Cyber Law, E-Commerce law on the topic, 'The Need of Artificial Intelligence Law in India on June 17, 2020'.
19. Mr G R Raghavender, Jt. Secy. Ministry of Law and Justice on the topic, 'India's Strategic Response to Artificial Intelligence Regulations' on October 04, 2020 for Semester – IX students.
20. Mr Renjith Thomas, Assistant Professor, NLU, Jodhpur on the topic, 'Judicial Trends in Offences relating to Marriage: A critical Analysis' on October 14, 2020 for Semester – III students.
21. Mr Abhayraj Naik, Advisor, Consultant and Educator on the topic, 'Research Design and Method of Data Collection' on October 19, 2020 for Semester – III Students.
22. Mr Kashyap Joshi, Advocate, High Court of Gujarat on the topic, 'Drafting Legal Notices in the course of Legal Writing and Legal Research' on November 02 & 04, 2020 for Semester – III students.
23. Major Gen Nilendra Kumar, Advocate Supreme Court of India, New Delhi on the topic, 'Distinction between International armed conflict and non-International armed conflict' on November 6, 2020 for Semester – VII & IX students.
24. Dr Tara Nair, Professor, Gujarat Institute of Development Research, Ahmedabad on the topic, 'How to Prepare a Research Proposal' on January 05, 2021.



Research Report of Institute of Architecture & Planning



INSTITUTE OF ARCHITECTURE AND PLANNING

Research Statistics at a Glance

April 01, 2020 – March 31, 2021

Research Projects		
Major Research Projects		
	Number of Projects	Grant in Rs.
Completed Major Research Projects	01	10,40,000/=
Ongoing Major Research Projects	01	10,92,500/=
Sanctioned Major Research Projects	01	65,83,300/=
Minor Research Projects		
Sanctioned, Ongoing and Completed Minor Research Projects during this Year	02	1,70,000/=
Research Publications		
Research Papers in Scopus / Web of Science / ABDC / EBSCO Listed Journals		05
Doctoral Research		
New Ph. D. Students Enrolled in this Year		03
Current Ph.D. Students		08
Current Ph. D. Guides		02
Conferences / Seminars / Research Talks Organized by the Institute		
Seminars / Workshops / Training Programmes		07
Research Talks / Lectures		06



Institute of Architecture and Planning

Research Projects

Major Research Projects

Completed Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Preparation of DPR for Proposed Projects in Puducherry and Kerala under Encore Programme	Prof. Aparna, Prof. Utpal Sharma	National Centre for Sustainable Coastal Management (NCSCM) and Gujarat Institute of Development Research (GIDR)	10,40,000/-
Total Grant				10,40,000/-

Ongoing Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Residential Building Energy Demand Reduction in India (Reside)	Prof. Utpal Sharma, Prof. Parag Mistry, Prof. Purvi Jadhav	Department of Science & Technology (DST)	10,92,500/-
Total Grant				10,92,500/-

Sanctioned Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Urban Resilience and Adaptation for India and Mongolia: Curricula, Capacity, Ict and Stakeholder Collaboration to Support Green & Blue Infrastructure and Nature-Based Solutions / Urgent	Prof. Swati Kothari	Erasmus+ Capacity Building for Higher Education (Erasmus+ CBHE), European Union	65,83,300/-



	This is an International Collaborative research project with total fund of 983,428.00 € sanctioned by ERASMUS+. The other collaborative partners are UNIVERSITAET BREMEN, Germany; UNIVERSITA DEGLI STUDI DI CATANIA, Italy; Estonian University of Life Sciences, Estonia; Martin-Luther-University Halle-Witten berg, Germany; National University of Mongolia, Mongolia; Khovd University, Mongolia; Mongolian University of Life Sciences, Mongolia; City of Khovd, Mongolia and Urban Planning and Design Institute of Ulaanbaatar, Mongolia; National Garden Park of Ulaanbaatar, Mongolia; Jawaharlal Nehru University, India; Pondicherry University, India; Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir, India; National Institute of Urban Affairs, India; Gujarat International Finance Tec-City, India; Urban Horticulture and Landscaping Department of Ulaanbaatar, Mongolia; Town and Country Planning Department of Shimla, India
Total Grant	65,83,300/-

Minor Research Projects

Sanctioned, Ongoing and Completed Minor Research Projects during the Year

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Frame Work for Safe Evacuation of Elderly During Fire in High Rise Residential Building in India	Prof. Prachi Patel, Prof. Ankit Kumar	Nirma University	90,000/-
2.	Permeability and Social Networking Within Neighbourhoods of Ahmedabad	Prof. Digisha Mehta, Prof. Madhvi Pratyooosh	Nirma University	80,000/-
Total Grant				1,70,000/-

Research Publications

Research Papers in Scopus/Web of Science/ABDC/EBSCO Listed Journals

1. Ankit Kumar, P Madhavi, Sanil Kumar, "Heritage and Architectural Style of Muir Central College, Prayagraj". Studies in Indian Place Names. 40(10) 2020: 109-119.
2. Ketankumar Jagdishchandra Solanki, Mistry Parag Vasantkumar, "Understanding the Integration of Construction Techniques in the Architectural Design Process by Assessing Catalan Vaulting Structures". Masonry International. 1(33) 2020: 15-26.
3. Patel Prachi Kunal, "Understanding of "Universal Space" in Architecture". Studies in Indian Place Names. 40(10) 2020: 96-111.
4. Mehta Digisha Kirtan, Pratyooosh Madhavi, Yasin Kabaria, "Informal Settlements as Self-Sufficient Responsive Neighborhoods". Lecture Notes in Civil Engineering. 121(1) 2020: 91-104.



5. Gajjar Vibha Haresh, Utpal Sharma, "Deliverable to Improve Air Quality Using Ndv Analysis for Ahmedabad City_ Addressing the Agendas of Sdg". Current Research in Environmental Sustainability. 3(1) 2021: 01-10.

Conferences / Seminars / Workshops / Training Programmes Organized by the Institute

Webinar on “Opportunities for Design Professionals Post COVID -19”

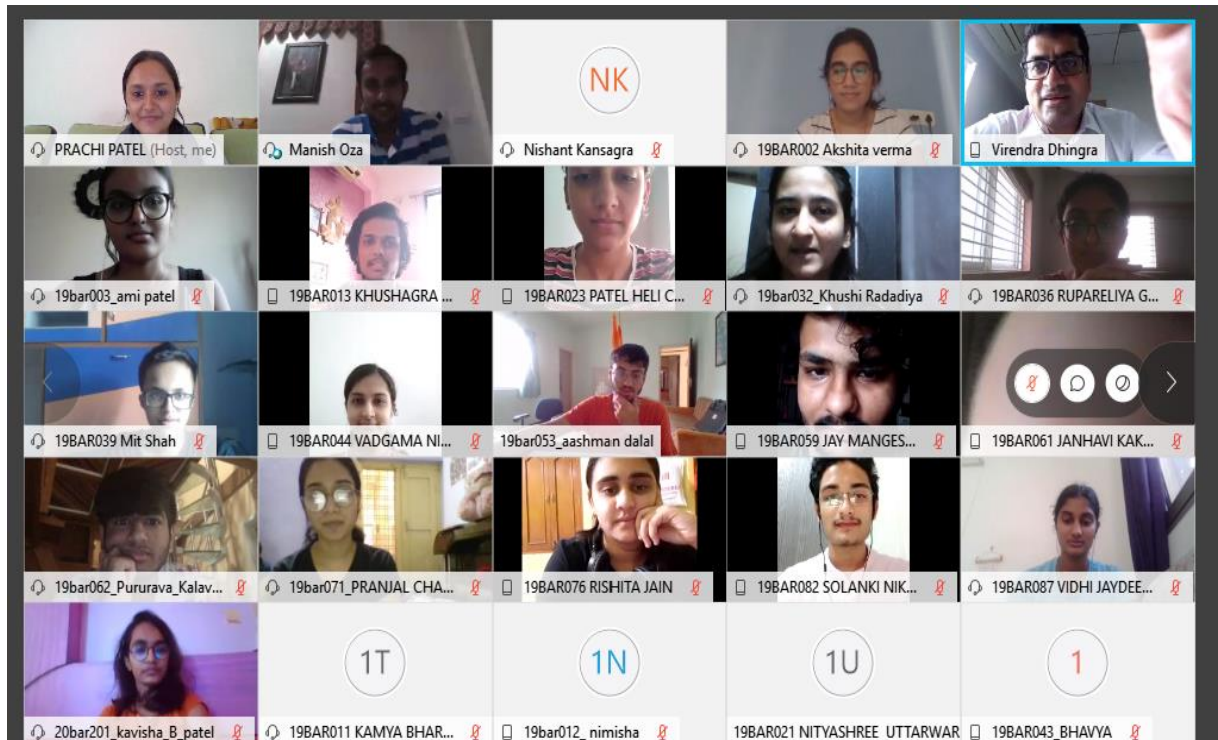
IAPNU in collaboration with RICS School of Built Environment Amity University had organised a webinar - "Opportunities for Design Professionals Post COVID -19", for final and pre-final year Planning and Architecture students on June 1, 2020. This was an "Exclusive Webinar" for the students of the institute. There were 125 participants which included both students as well as faculty members. The session was conducted by Prof Amol Shimpi (MRICS) - Associate Dean and Director, School of Real Estate and Infrastructure.



Glimpses of the event

Online workshop on Blue Infrastructure - A workshop on Plumbing

Construction itself is an amalgamation of different areas and fields of knowledge in Architecture. Plumbing is one of them and it can also be dealt with creatively. A workshop on plumbing with collaboration with Jaquar Group, India was organized on September 12, 2020 by Institute of Architecture & Planning. The workshop was a series of conceptual presentations of products in each vertical to build up a context where we can co-relate the plumbing planning and precautions. Students of second, third and fourth year participated.



A Workshop on Blue Infrastructure

Workshop on Parametrics + Product Design

The workshop intends to equip the students with understanding of the parametric tool of grasshopper and its application to develop complex forms for products which can be digitally fabricated through the process of 3D printing. It further intends to understand and analyse the rule-based systems of Voronoi, Fractals, L-systems etc to define parameters and develop these complex parametric products. The workshop was from December 16-29, 2020 as part of RSP (Related study Program). a large number of students (88) from 2nd and 3rd year B.Arch participated. It was conducted by field experts Jinal Shah, Darshi Kapadia, Arpi Maheshwari and Palak Gajjar.

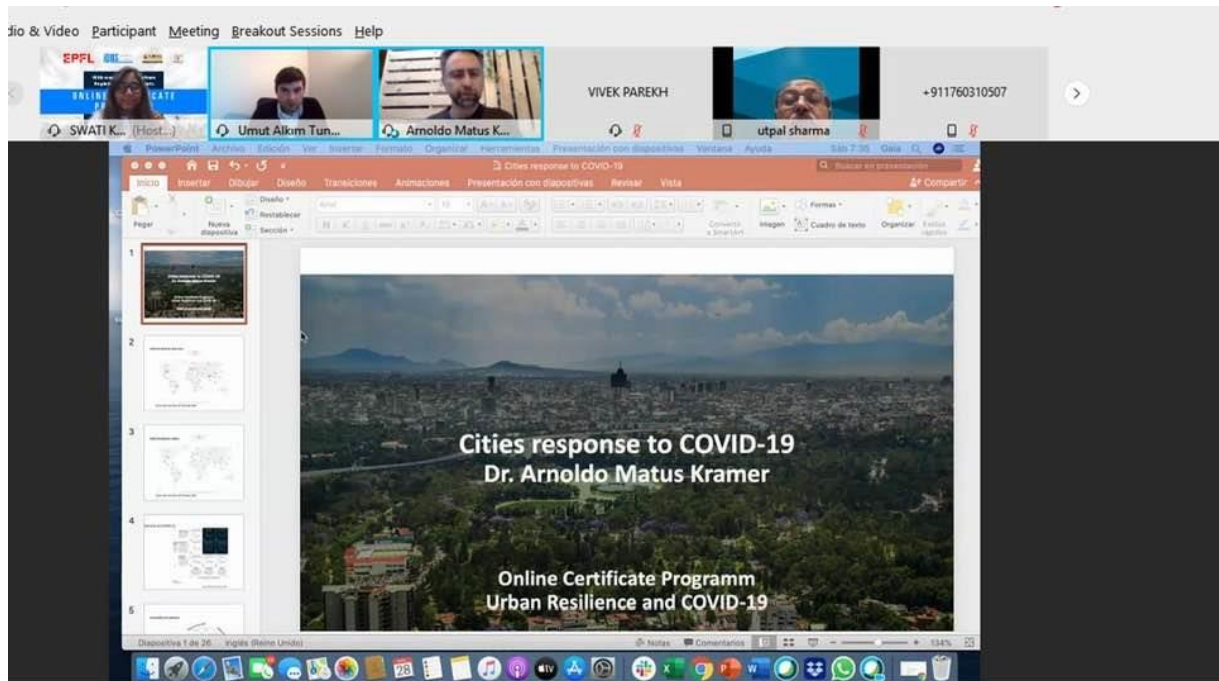
Webinar on Olous App and World of Digital Construction

We are living in an exciting era where technology is finally coming to construction and it is important that students get accustomed to it. The platform, Olous App, is dedicated towards the Construction fraternity for knowledge sharing and networking opportunities for career. Through this platform the objective is to bridge the gap between students and the professional world. Olous is confident that the platform will immensely benefit students and our young generation of Architects and Civil Engineers. Ar. Darshan Teredesai who is the founder of the app and Ar. Nivedita Mishra from the business development team of Olous were conducted the webinar on March 19, 2021 at IAPNU for the students of Architecture & Planning. The session opens up the whole new frontier for the students to look in the field of Digital Construction.



Webinar on Resilient Housing Paradigm

Institute of Architecture and Planning organized a guest lecture by an international expert Dr. Mona Chhabra Anand on disaster resilience. She is an Architect and Development Planner with more than 20 years of work experience, who has been associated with housing, participatory processes and sustainable development in emergency and non-emergency situations. She has great communication skills making her sessions very interactive. The talk was specifically on "Resilient Housing Paradigm". The lecture scheduled on 17th April 2021.

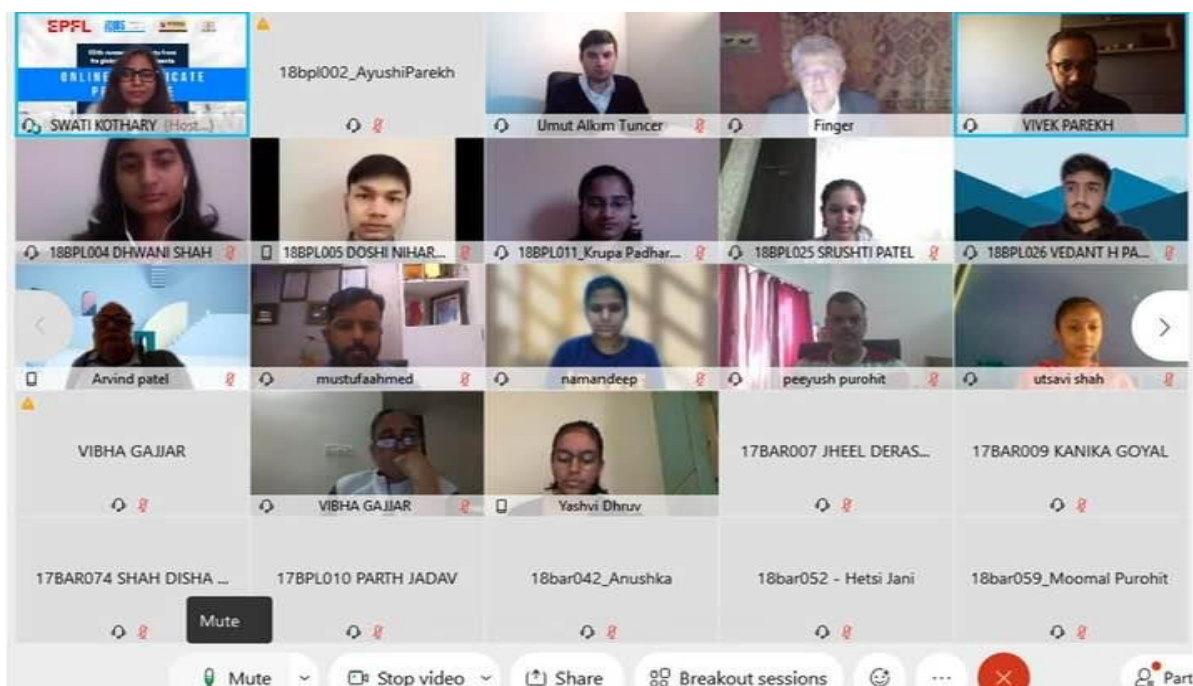


Expert lecture by Dr. Arnoldo Matus Kramer

Short Term Training Programmes (STTP)

Online Certificate Programme on “Urban Resilience and Covid 19 Pandemic” - 28th November to 19th December 2020

The Institute of Architecture and Planning, Nirma University along with EPFL as part of IGLUS Center of Excellence (ICE) has successfully concluded the first Online Certificate Program as part of IGLUS Center of Excellence (ICE). The certificate program had 52 participants and the sessions were taken by renowned experts from the global network of IAPNU and EPFL. The sessions planned over the weekends of November and December 2020 focused on one theme each week. Experts from IGLUS global network and Nirma University in Switzerland, Mexico, UAE, South Korea and India came together to take 10 online interactive sessions with new focus each week in an international teaching and learning environment.



Glimpses of the event

Noteworthy Research Related Events by the Department

The Institute of Planning and Architecture, Nirma University is a part of the Urban Resilience and Adaptation for India and Mongolia: Curricula, Capacity, ICT and Stakeholder Collaboration to support Green & Blue Infrastructure and Nature- Based Solutions / URGENT Project which is a collaboration between universities across countries to modifying curricula, enable Capacity Building of partner institutes and country, develop ICT based courses and Stakeholder collaboration for better outreach. There are 4 European universities, 6 Indian universities and 6 universities from Mongolia coming together as part of this project. The Kick off meeting of this Project was successfully conducted online on 10th March, 2021 and it saw participation from all the four Program universities from Germany, Estonia and Italy and 12 Universities from Mongolia and India. This has set the momentum for the project that will continue till 2024.

Research Talks / Lectures Organized by the Institute

It is great for expanding one's own horizons and knowledge to listen to different perspectives and thought processes pursued in research of varied nature, hence we in IAPNU to inculcate this practice of research in all the perspective, experts' talks are conducted on regular basis. Following are the details of some of the talks/lectures organized by the Institute.

1. 'Opportunities for Design Professionals Post COVID -19' by Prof. Amol Shimpi from RICS School of Built Environment, AMITY University on June 1, 2020.
2. 'Digital tools for architects: evolution or revolution' by Dr. Laurent Lescop, professor at the Nantes' Superior School of Architecture (ENSA Nantes) on September 7, 2020.



3. 'Cities and Cultural Production' by Dr. Kiran Shinde, professor at La Trobe University in Australia on September 7, 2020.
4. 'Resource Efficiency in Human Settlements: Celebration of World Habitat Day' by Dr. Zeenat Niaazi, Vice president of Development Alternative Group, India on October 10, 2020.
5. 'Career Opportunities in rapidly changing built environment sector post COVID-19', by Prof. Amol Shimpi, RICS School of Built Environment, AMITY University on April 16, 2021.
6. 'Resilient Housing Paradigm' by Dr. Mona Chhabra Anand, Architect and Development Planner has been associated with housing, participatory processes and sustainable development in emergency and non-emergency situations on April 17, 2021.



Research Report of Institute of Commerce



INSTITUTE OF COMMERCE

Research Statistics at a Glance

April 01, 2020 – March 31, 2021

Research Projects		
Major Research projects		
	Number of Projects	Grant in Rs.
Completed Major Research Projects	01	11,55,000/=
Minor Research Projects		
	Number of Projects	Grant in Rs.
Sanctioned, Ongoing, Completed Minor Research Projects during this Year	03	2,94,000/=
Research Publications		
Research Papers in Scopus / Web of Science / ABDC / EBSCO Listed Journals		02
Conferences / Seminars / Research Talks Organized by the Institute		
International / National Conferences		03
Seminars / Workshops / Training Programmes		01



Institute of Commerce

Research Projects

Major Research Projects

Completed Major Research Projects

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Research Ambience and Research Productivity: A Study of Higher Education Institutions in India, South Africa and USA	Prof. Udai Lal Paliwal, Prof. Rajesh Kumar Jain (This project is of interdisciplinary nature and combined with Institute of Management and Institute of Commerce, Nirma University)	Indian Council of Social Science Research (ICSSR)	11,55,000/-
Total Grant				11,55,000/-

Minor Research Projects

Sanctioned, Ongoing and Completed Minor Research Projects during this Year

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	A Study on Financial Literacy Level and Investment Decisions: An Analysis of Investors in Gujarat State	Prof. Sumita Goyal	Nirma University	99,000/-
2.	Impact of Goods and Services Tax (GST) on Textile Industry of Surat	Prof. Ashutosh Pandey, Prof. Nitin Kishore Saxena	Nirma University	1,00,000/-
3.	Financial Inclusion and Women Empowerment in Rural Gujarat	Prof. Avani Shah, Prof. Karishma Butani	Nirma University	95,000/-
Total Grant				2,94,000/-



Research Publications

Research Papers in Scopus/Web of Science/ABDC/EBSCO Listed Journals

1. Avani S. Shah, Impact of Eva or Traditional Accounting Measures On Mva - A Study of BSE Listed Companies, Journal Of Commerce And Accounting Research, 9(3) 2020: 33-40.
2. Ashutosh Pandey , Nitin K. Saxena, Effectiveness of Government Policies in Controlling COVID-19 in India, International Journal Of Health Services, 1(0) 2020: 01-08.

Conferences / Seminars / Workshops / Training Programmes Organized by the Institute

International Webinar – "Accounting Education and Accounting Profession: Post COVID 19"

An international webinar on "Accounting Education and Accounting Profession: Post COVID 19" was organized by the Institute of Commerce, Nirma University (ICNU) on June 06, 2020, from 05.30 pm to 07.00 pm. The Institute welcomed the esteemed guest of honors "Prof Rajendra P. Srivastava" and "Prof Jaco P. Fouche." Dr. Rajendra is a Professor Emeritus of Accounting & Information Systems, School of Business, *University of Kansas*, Lawrence, USA and, Dr. Jaco Fouche – Professor of Accounting & Finance, *NorthWest University*, South Africa were the esteemed guest of honors. Around 250 participants from all over the country and abroad registered for the webinar. Out of which, 232 participants were present during the webinar. Prof Udai Paliwal, Dean, Institute of Commerce, Nirma University inaugurated the webinar with his welcome address to the guest and participants, followed by the guest speakers' speeches and views on the webinar by Prof G. Soral. Prof Rajendra and Prof Jaco highlighted the effect of COVID 19 on accounting education and profession through a well-constructed PPT. As the pandemic increases in both magnitude and duration, entities are experiencing conditions associated with a general economic downturn. The continuation of this pandemic could result in an even broader economic downturn which could have a prolonged negative impact on an entity's financial results. Many companies are forced to address the impact on their businesses, including accounting and financial reporting implications. Following the speech, there was an excellent interactive session through chatbox where the participants interacted, clarifying their doubts and asking interesting questions. Prof Rajendra and Prof Jaco resolved the queries and answered the questions of participants with utmost sincerity.



What will Change Post COVID 19

- **Mode of delivery**
 - **Classroom vs. Web**
- **Mode of Interaction**
 - **One-on-One** in Classroom versus Internet
 - **Classroom would be your residence or the natural environment** (park, forest, mountain)
- **Need of Classroom facility will decrease**
- **Need of High-Speed Internet Connection**
- **Need of IT Solutions to web meetings with multiple participants**
- **Need IT Solutions to Homework Problems and Its grading**

Expert lecture by Prof. Rajesh Srivastava

National Webinar - Digitisation for building business continuity and resilience during and after Covid-19

Mr Nehal Vora, MD & CEO, Central Depository Services (India) Limited (CDSL) delivered session on the topic "Digitisation for building business continuity and resilience during and after Covid-19" on May 27, 2020, as the expert in the first national webinar of the ICNU. One hundred eighty-four participants belonging to different states, including north-eastern states, were present during the webinar. The webinar received a good number of entries from the countries like Mauritius, South Africa, Namibia, Rwanda, and, Netherlands. Prof Udai Paliwal, Dean – Institute of Commerce, Nirma University, inaugurated the webinar proceedings with a heartfelt welcome address to the guest and participants, followed by the guest speaker's speech. Mr. Vora highlighted the role of digitization in the business world and its significant benefits to business entities and individuals. He explained the role and working of CDSL through a well-constructed PowerPoint presentation. He also addressed the pros and cons of digitisation in Indian Capital Markets. In the end, Mr. Vora shared his experiences at CDSL and answered participant's questions with utmost sincerity. The organizers circulated feedback forms to the participants and an e-certificate was provided to the webinar participants.



Expert Lecture of Mr. Nehal Vora

National Webinar – "Financial Literacy and Fundamentals of Financial Planning"

ICNU organized a National Webinar on "Financial Literacy and Fundamentals of Financial Planning" on July 04, 2020. The webinar's objective was to guide the students on the significance of financial literacy and the fundamentals of financial planning. The Institute welcomed one hundred and sixty participants from across the country and the guest speakers - CA Harish Menon and Mr. Bhavesh Rajpal to the webinar conducted through Google Meet. They highlighted the techniques of evaluating shares, Stock and Mutual Fund categories, and the magnitude of difference between returns of top-performing and poorly performing mutual funds over long periods.

Sr. No.	Particulars	Site	Example
1	P&L Annually & not Quarterly, Ideally Case Scenario - Sales increase, Profit increase	Screener	Hero Moto Corp
2	Balance Sheet - Each Liability & Asset Trend Analysis Ideally Case Scenario - Share Capital same, Reserves increase, Debt decrease, Fixed Assets increase, Investment increase	Screener	Hero Moto Corp
3	Share Holding Pattern by Promoters, FITs, DIIs like MFs & Insurance (Click on plus for detailed view)	Screener	Hero Moto Corp
4	Stock P/E (Price to Earnings), $P/E = \text{Stock Price} / \text{EPS}$, $\text{EPS} = \text{Net Profit} / \text{Number of Shares}$ Industry P/E vs Stock P/E (for Under / Over Valuation, Growth Prospects of Co vs Industry based on Future Projections)	Screener Moneycontrol	TCS vs Infy TCS vs IT Industry

Expert lecture by Mr. Bhavesh Rajpal

Webinar on Digitalization for Education and Businesses

Dr. Tejas Shah, Assistant Professor, Institute of Management, Nirma University, (IMNU), was invited to address the theme of the webinar "Digitalization for Education and Businesses" organised on June 15, 2020. The impact of digitalisation on the existing business was the central theme of the discussion. He discussed the usefulness of social media and other e-learning platforms for education and demonstrated the functioning of an online learning management platform Google Classroom. He further explained the social media marketing tools and search engine optimisation techniques. A total of around 70 members, including students and faculty members, were present in the webinar.



Research Report of Institute of Design



INSTITUTE OF DESIGN

Research Statistics at a Glance

April 01, 2020 – March 31, 2021

Research Projects		
Minor Research Projects		
	Number of Projects	Grant in Rs.
Sanctioned, Ongoing and Completed Minor Research Projects during this Year	01	92,311/-
Research Publications		
Research Papers in Scopus / Web of Science / ABDC / EBSCO Listed Journals		04
Book Chapter Published		01
Research Awards		
Research Awards Received by the Faculty Members		01
Conferences / Seminars / Research Talks Organized by the Institute		
Research Talks / Lectures		07



Institute of Design

Research Projects

Minor Research Projects

Sanctioned, Ongoing and Completed Minor Research Projects during this Year

Sr. No.	Title of the Project	Project Investigator/s	Funding Agency	Grant (in Rs.)
1.	Design and Development of a Vision Based Multi- Degree of Freedom Feeding Robot for Operational Rehabilitation Based on Ergonomic Consideration	Prof. Priram Parikh, Prof. Jatinkumar Dave	Nirma University	92,311/-
Total Grant				92,311/-

Research Publications

Research Papers in Scopus/Web of Science/ABDC/EBSCO Listed Journals

1. Parikh Priyam Anilkumar, Rena Trivedi, Jatin Dave, Trajectory Planning For The Five Degree Of Freedom Feeding Robot Using Septic And Nonic Functions, International Journal Of Mechanical Engineering And Robotics Research, 9(7), 2020 : 1043-1050
2. Gupta Kanchan, War Fear As A Subject Matter Of Artist In Today`S Scenario, International Journal Of Creative Research Thoughts - Ijcr (Ijcr.Org), 8(11), 2020:842-853
3. Parikh Priyam Anilkumar, Reena Trivedi, Keyur Joshi, Trajectory Planning Of A 5 Dof Feeding Serial Manipulator Using 6Th Order Polynomial Method, Journal Of Physics: Conference Series, 1921(13), 2021: 012-088
4. Taneja Kanupriya A.N.Taneja, Graphic Design In Search Of Its Identity, Acta Graphica, 30(2), 2020:17-28

Books Chapter Published

Sr. No.	Name of the Faculty	Name of the Book Chapter	Name of the Book	Name of Publishing House	ISBN	Year of Publication
1.	Priyam A. Parikh	Vision-Based Trajectory Planning For A Five Degree Of Freedom	Mechatronics And Machine Vision In Practice 4	Springer International Publishing	978-3-030-43703-9	2020



Research Awards

Research Awards Received by the Faculty Members

Sr. No.	Name of the Faculty Awardee	Recognition / Honor / Award	Name of the Organization / Event	Award Category
1.	Prof. Priyam A. Parikh	Research Excellence	INSC Bangalore	Memento

Research Talks / Lectures Organized by the Institute

A list of important lectures by subject experts are shared here.

1. “Paper folding techniques for designers” by Prof. Aditi Anuj of Adigami on 26th and 27th Oct 2020.
2. “Post-Graduation studies in abroad for design students” by. Dr. Vikram Parmar from Prof. NTNU, Norway on 14th Oct, 2020.
3. “Keynote speaker in the field of Industrial Design” by Mr. Ashish Deshpande, founder of elephant design, Pune on 6th Aug, 2020.
4. “Keynote speaker for the 4th Foundation Day of Institute of Design”, by Prof. Pradyumna Vyas, Former Director, NID on 6th Aug, 2020.
5. “Keynote speaker in the field of Animation, Film making and Storytelling” by Prof. Nina Sabnani, Professor, IIT Bombay on 7th Aug, 2020.
6. “People with Special Needs: Artifacts, Appliances, Physical Aids” by Prof. Shilpa Das, Principal Faculty, Interdisciplinary Design Studies, National Institute of Design, Ahmedabad on 6th April, 2021.
7. “Technology & processes in SME clusters” by Prof. Shashank Mehta, Principal Faculty, Industrial Design at National Institute of Design on 20th April 2021.





FACULTY OF DOCTORAL STUDIES AND RESEARCH



INSTITUTE OF ARCHITECTURE



INSTITUTE OF COMMERCE



INSTITUTE OF DESIGN



INSTITUTE OF LAW



INSTITUTE OF MANAGEMENT



INSTITUTE OF PHARMACY



INSTITUTE OF SCIENCE



INSTITUTE OF TECHNOLOGY



PUBLISHED BY:

Directorate of Research and Innovation

NIRMA UNIVERSITY

Sarkhej- Gandhinagar Highway,
Ahmedabad- 382 481
Gujarat, INDIA

Website: www.nirmauni.ac.in

Phone: +91-79-71652000, +91-2717-241900 to 04,
+91-2717-241911 to 15