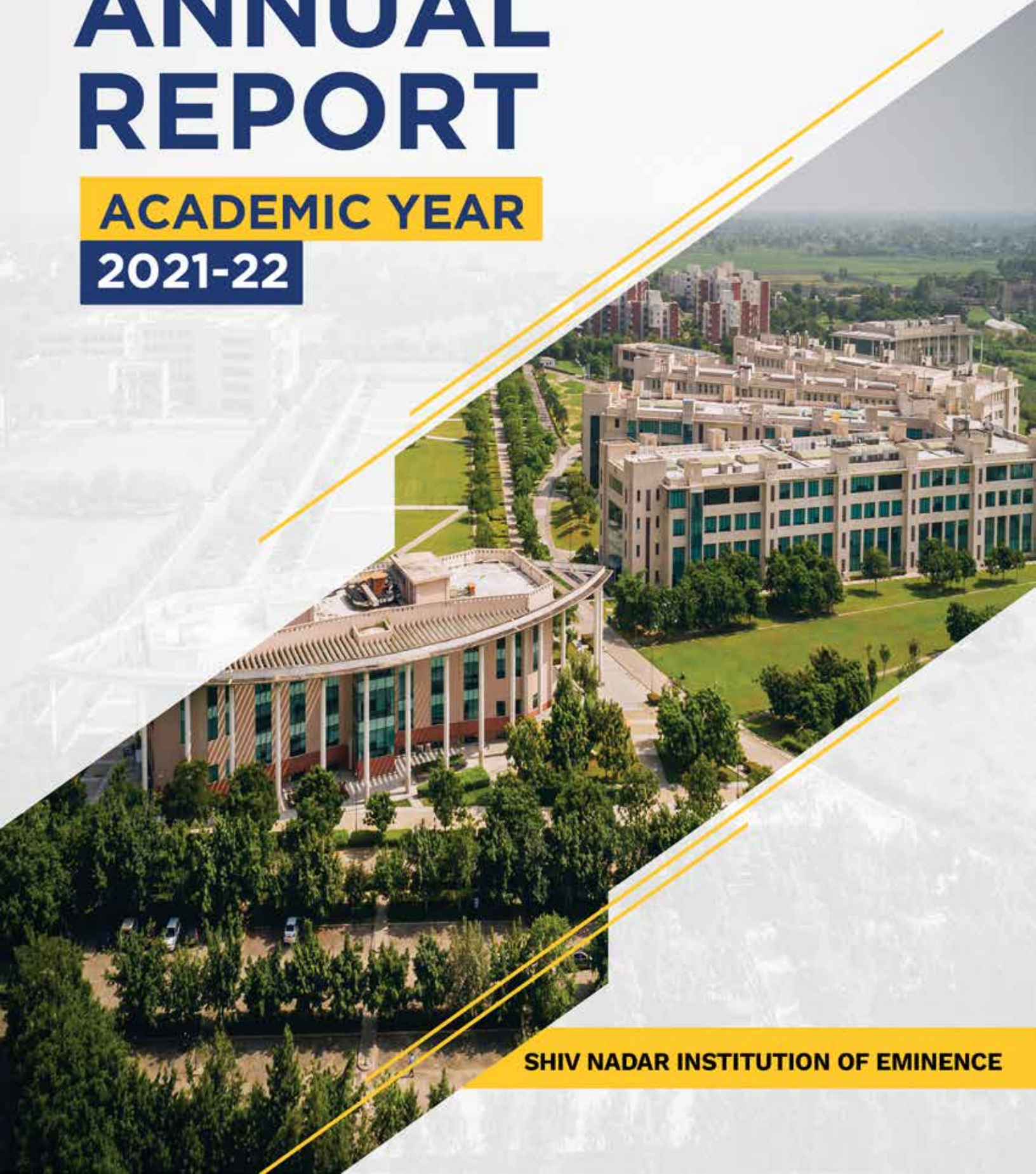


# ANNUAL REPORT

ACADEMIC YEAR

2021-22









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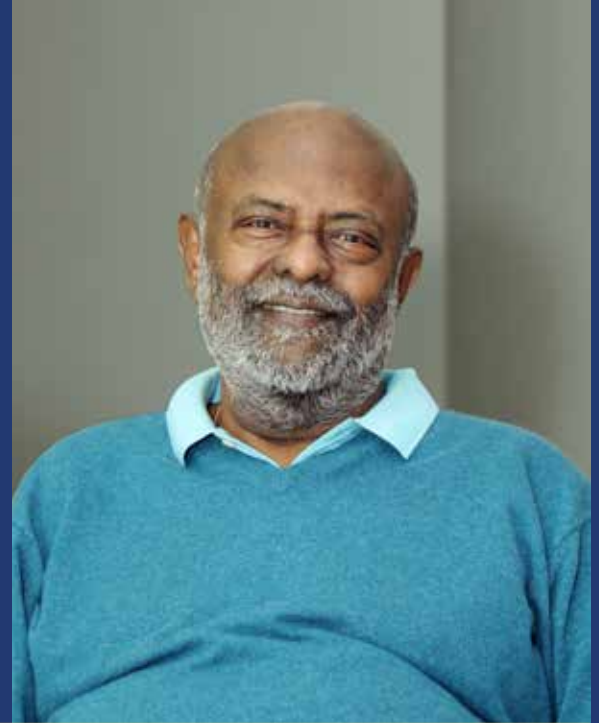
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# PREAMBLE

“

If there is a tool that can empower individuals and narrow the socio-economic, rural-urban divide, I believe it is transformational education.

”



**SHIV NADAR**  
**FOUNDER AND CHAIRMAN,**  
**HCL AND FOUNDER, SHIV NADAR UNIVERSITY**

From Shiv Nadar University to Shiv Nadar Institution of Eminence (SNIOE) has been an intense journey of a decade built on academic excellence through its commitment to teaching, research, and collaboration. Founded in 2011 by Shiv Nadar Foundation, a philanthropic foundation established by Mr. Shiv Nadar, founder of HCL, this 286 acres sprawling institution envisions becoming an enduring global center for learning and higher education.

Anchored in research, innovation, and technology, supported by outstanding faculty, exceptional students, and international academic partnerships, the university, within just ten years, has defined a new trajectory of higher education in India. The recognition as the youngest Institution of Eminence by the Government of India is a testament to this trajectory.

Our students today receive an education that has several distinctive dimensions:

- A combination of diverse disciplines
- Opportunity to pursue undergraduate research
- Opportunities to volunteer for social causes
- Global exposure through partnerships with leading universities in the world;
- Opportunity to pursue entrepreneurial ambitions;
- An immersive residential life with world-class sports amenities
- Dedicated resources for launching careers after graduation



the fundamental pillars of a globally acclaimed higher education institution: holistic and multidisciplinary education, research and innovation, and commitment to improving society.

We understand that higher education institutions are at the core of agenda 2030 and education, research, and innovation are essential in achieving sustainable development goals. Shiv Nadar University intends to lead the way and be a facilitator to achieving the goals of agenda 2030. In this sense, every effort in raising capable students is a brick in the making of the new India, and Shiv Nadar University is committed to creating leaders and newer possibilities.

As we launch our second decade, we reconfirm our commitment to academic and administrative excellence based on the principles of two global frameworks - Environment, Social, Governance (ESG) and Sustainable Development Goals (SDGs) that are not isolated pursuits but are about embedding principles of sustainable development across disciplines. At the university, we are committed to achieving this on various fronts and creating a unique initiative on higher education leadership to contribute to the rapid evolution of the higher education ecosystem premised on the ethics of decolonization. This report brings to life the vision of Shiv Nadar University and its journey in 2021-22.



# VISION

To be a globally recognized research university known for its contributions toward a world that is healthy, sustainable and inclusive. We work toward generating new forms of knowledge where disciplinary barriers are dissolved and academic benefits of research are accompanied by concrete societal benefits.

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# MISSION

- To develop and educate the path-shapers of tomorrow, capable of responsible and ethical leadership.
  - To support research, scholarly, and creative endeavors that contribute to the creation of new knowledge at the frontiers of specialized areas, as well as at the interface of diverse disciplines.
  - To establish research and teaching programs to address the most pressing problems of India and the global community.
-

# LEADERSHIP



**MR. SHIKHAR MALHOTRA**  
PRO-CHANCELLOR, SHIV NADAR UNIVERSITY

Shikhar Malhotra is the Pro-Chancellor, Director, and Board Member of HCL Corporation. He is also on the board of HCL Technologies, an \$11.8 billion global technology firm with over 211,000 professionals operating from 52 countries. Mr. Malhotra also serves as the Vice Chairman & CEO of HCL Healthcare, one of India's largest corporate health solutions firms, providing end-to-end healthcare solutions with a vision to make corporate India healthier. Today, HCL Healthcare is delivering personalized, sustainable, and managed care health solutions to organizations across sectors, including technology and banking. It has eight world-class corporate health centers across the country, serving over 70,000 families.

Passionate about wildlife and conservation, Mr. Malhotra co-founded The Habitats Trust in 2018 with his wife Roshni Nadar Malhotra. He is the Trustee of the Habitats Trust, which is empowering on-ground conservationists to achieve its vision of securing India's natural habitats and indigenous species.

Mr. Malhotra comes from an entrepreneurial family, raised in Kuwait. His early lessons as an entrepreneur were learned at his family business and were later sharpened at Babson College in the US, with a specialization in entrepreneurship.

Professor Ananya Mukherjee joined Shiv Nadar University, Delhi-NCR on January 31, 2022, as its third vice-chancellor, taking charge from Dr. Rupamanjari Ghosh. She returned to India after spending more than two decades in the two of the largest universities in Canada, the University of British Columbia and York University.

Professor Mukherjee obtained her PhD from the University of Southern California, USA and her BA and MA degrees in Economics from Jadavpur University, India. Before joining Shiv Nadar University, Professor Mukherjee was Provost and Vice-President Academic, University of British Columbia (UBC) Okanagan. She also led UBC's strategy for antiracism and inclusive higher education and has been involved in several national initiatives for higher education in Canada. Between 2015-18, Professor Mukherjee was Dean of the Faculty of Liberal Arts & Professional Studies at York University, Toronto. In this capacity, she led the largest liberal arts faculty in Canada with 23,000 students from 123 countries.

Professor Mukherjee is an interdisciplinary scholar of Development. She has authored and edited several books, published widely in journals and the media. At York University,



**PROFESSOR ANANYA MUKHERJEE**  
VICE-CHANCELLOR, SHIV NADAR UNIVERSITY

Professor Mukherjee established and served as the Founding Director of the International Secretariat for Human Development (ISHD), an initiative dedicated to research for social change. Under her leadership as the Founding Director, ISHD collaborated with institutions such as the International Labor Organization; the UN Office for Project Services, Rome; the UN Development Program; the UN Research Institute for Social Development (UNRISD), and others.

Professor Mukherjee was named as one the 15 most influential women in Education by Business World in 2022; amongst Canada's 100 most powerful women in 2021; and one of five brilliant women in academia by Canadian Immigrant magazine in their tribute to 'Immigrant Women of Inspiration' in 2016.

Professor Bibek Banerjee is the Senior Dean and Head of Strategic Initiatives, and the Dean of School of Management and Entrepreneurship. He, along with the University's leadership team drives efforts to build Shiv Nadar University as an outstanding research-driven, multidisciplinary institution, and also host to a world-class management school.

Prior to joining the University, Professor Banerjee has served as the Senior Dean of Strategic Initiatives and Planning at the Ahmedabad University and Professor at the Amrut Mody School of Management. He has earlier been Director General and Academic Mentor of the Institute of Management Technology (IMT) Group and is a former Professor of Marketing and Economics, at IIM Ahmedabad, where he also led the IIMA-Duke Corporate Education collaboration as its Managing Director. Professor Banerjee has held visiting professor positions at several international universities and is an honorary Director of the Academy of Indian Marketing (AIM), an academic and professional think-tank. He has also successfully incubated companies in education and technology.

His research publications have appeared in several international academic journals including Marketing Science, International Journal of Management, Journal of International Consumer Marketing, and Advances in Applied Microeconomics. Professor Banerjee is also the founding co-editor of the Journal of Entrepreneurship and Innovation in Emerging Economies.

Professor Banerjee holds PhD and MS degrees from Purdue University's Krannert Graduate School of Management and BS (Economics Honours) from Calcutta University (St. Xavier's College).



**PROFESSOR BIBEK BANERJEE**  
**DEAN, SCHOOL OF MANAGEMENT &**  
**ENTREPRENEURSHIP, DEAN, ACADEMY OF**  
**CONTINUING EDUCATION**





**PROFESSOR RAJAT KATHURIA**  
**DEAN, SCHOOL OF HUMANITIES & SOCIAL**  
**SCIENCES,**  
**PROFESSOR, ECONOMICS**

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Professor Rajat Kathuria joined Shiv Nadar University as Dean, School of Humanities & Social Sciences, and Professor of Economics, on April 1, 2021.

He carries over 20 years of experience in teaching and more than 15 years of experience in economic policy, besides pursuing extensive research on a range of issues relating to regulation and competition policy. Professor Kathuria served as Director and Chief Executive at the Indian Council for Research on International Economic Relations (ICRIER) before joining the University.

He has earlier taught undergraduate Economics at the University of Maryland, USA, and spent over 12 years with the International Management Institute (IMI), New Delhi teaching post-graduate students Managerial Economics and International Trade. He has also previously worked with the World Bank in Washington D.C. as a Consultant, and worked on research assignments for a number of international organizations, including the International Labour Organization (ILO), United National Conference on Trade and Development (UNCTAD), LinneAsia, The World Bank and The Asian Development Bank (ADB). Professor Kathuria's work has been published in several journals of repute as well as in top magazines and newspapers across the world. He serves on multiple industry and government Committees such as the Confederation of Indian Industry (CII) Committee on International Trade Policy and Exports, the Implementation for Intended Determined Contribution (Ministry of Environment, Forest and Climate Change, Government of India), and on the Research Advisory Council of the State Bank of India (SBI).

Professor Kathuria has an undergraduate degree in Economics from St. Stephens College (University of Delhi), a Masters' from the Delhi School of Economics (University of Delhi) and a PhD from the University of Maryland (College Park), USA.



**PROFESSOR SANDEEP SEN**  
**DEAN, SCHOOL OF ENGINEERING (SOE),**  
**SENIOR PROFESSOR, COMPUTER SCIENCE &**  
**ENGINEERING**

Professor Sandeep Sen joined Shiv Nadar University as Director, School of Engineering, on May 16, 2019. Prof. Sen did his Ph.D. (1989) in Computer Science from Duke University, M.S. (1986) in Computer Engineering from University of California at Santa Barbara, and B.Tech. (1984) in Computer Science and Engineering from IIT Kharagpur. He worked with Bell Labs, Murray Hill, in 1990-91.

He has been a faculty member in the Department of Computer Science and Engineering, IIT Delhi, since 1991. His research interests are in the area of Algorithms and Complexity; and in particular, Randomized Algorithms, Parallel Computation, Computational Geometry, Dynamic Data Structures etc.

Professor Sen has held the Dhananjay Chair Professor and the Microsoft Chair Professor in IIT-Delhi. He has been a Visiting Researcher/ Faculty in notable institutions in India and abroad. He is a Fellow of the Indian Academy of Sciences, and also of the Indian National Science Academy. He shouldered the responsibility of heading his Department during 2007-10; and served as the Dean of Faculty of IIT-Delhi during 2016-18.

Professor Sanjeev Galande joined Shiv Nadar University, Delhi-NCR, as Dean of the School of Natural Sciences in June 2021. Professor Galande brings with him over two decades of experience as a renowned cell biologist, epigeneticist and academic. He earlier served the Indian Institute of Science Education & Research (IISER)-Pune, as Professor of Biology, and Dean of Research & Development. At IISER-Pune, he led the Centre of Excellence in Epigenetics and assembled a team of scientists to study the evolution of epigenetic mechanisms using multiple model systems.

Professor Galande has previously also served the National Centre for Cell Science (NCCS) in Pune, as a senior scientist, where he was part of a group that elucidated how cellular signalling pathways eventually exert their effect at the level of chromatin to orchestrate cell-type-specific patterns of gene expression. He earned his Ph.D. in Biochemistry from the Indian Institute of Science in 1996. As a postdoctoral fellow at the Lawrence Berkeley National Laboratory in the USA from 1996-2001, he studied the role of MAR-binding proteins in tumorigenesis.

Professor Galande was the recipient of the International Senior Research Fellowship, Wellcome Trust, UK, 2005-10, DBT



**PROFESSOR SANJEEV GALANDE**  
**DEAN, SCHOOL OF NATURAL SCIENCES,**  
**PROFESSOR OF LIFE SCIENCES**



National Bioscience Award 2006, DST Swarnajayanti Fellowship 2007, the coveted CSIR Shanti Swarup Bhatnagar Prize 2010, GD Birla Award for Scientific Excellence 2015, and the SERB JC Bose Fellowship 2019. He has been a Fellow of the Indian Academy of Sciences since 2010, of the Indian National Science Academy since 2012, and of the National Academy of Sciences since 2017.

Professor Galande was an honorary associate faculty at the University of Sydney, Australia, and a visiting faculty at the University of Turku, Finland.

Professor Suneet Tuli is a distinguished academician and administrator with over 35 years of experience in higher education. He joined Shiv Nadar University, Delhi-NCR in May 2019 and leads the research initiatives and academic partnerships for the University. Dr. Tuli has been working towards promoting the inter and multidisciplinary research at the University and manages the externally-funded research, carried out by the faculty and researchers at the University. He is also responsible for developing the University's global strategy and its implementation through international partnerships and strategic engagements across the world.

Professor Tuli was faculty member, Indian Institute of Technology (IIT), Delhi for three decades, and held terms as Dean, Research & Development (2012-16); Associate Dean Industrial Research & Development (2005-09); and Head, Centre for Applied Research in Electronics (2009-12). He is a widely regarded faculty and mentor in academia, and a visiting researcher in the UK and France. His research areas include thermal-acoustic-electrical-optical interactions, non-destructive characterization – active and passive thermography, and surface acoustic wave devices and electronic systems. A Ph.D. and M.Tech. in Electronics from IIT Delhi, Professor Tuli holds B.E. (Honors) in Electrical & Electronics Engineering from BITS, Pilani.



**PROFESSOR SUNEET TULI**  
**DEAN, RESEARCH & PARTNERSHIPS,**  
**PROFESSOR, ELECTRICAL ENGINEERING**



**DR. RAJEEV KUMAR SINGH**  
**ASSOCIATE DEAN, ACADEMICS, ASSOCIATE**  
**PROFESSOR, COMPUTER SCIENCE &**  
**ENGINEERING)**

Dr. Rajeev Kumar Singh joined Shiv Nadar University, Delhi-NCR as a member of the founding faculty in the Department of Computer Science & Engineering in July 2011. Prior to joining the University, he served as Assistant Professor at various reputed institutions and also worked in the corporate world with stints at CL Educate, MeritNation.com, IMS Learning Resources, and EXL Services. His deep theoretical foundation blended with industry practices helped him to migrate to teaching and research in a seamless manner.

Dr. Singh's research interests lie in the broad domain of Computer & Communication Networks as well as Machine Learning application in Medical Imaging. His work has been published in various international journals, and he has served as a reviewer of many articles. He has delivered specialized lectures on Research Methodology and Big Data & Machine Learning for the Cabinet Secretariat, Ministry of Home Affairs, Government of India.

Dr. Singh was bestowed with the 'Best Faculty' award by the global IT giant, Cognizant, the 'Excellence' award at Shiv Nadar University in 2014 for his outstanding services during the founding years of the University, and was voted 'Outstanding Faculty' by the students of the University.

He earned his Ph.D. in Computer Science from Jawaharlal Nehru University (JNU), Delhi, M.Tech. in Computer Science from JNU, and a Bachelor's degree in Computer Science from Delhi University.

Mr. Raja Natarajan is the Executive Director, Finance & Operations at Shiv Nadar University, Delhi NCR. He joined the University in July 2022.

Mr. Natarajan holds a Bachelor of Commerce (Honors) Degree from Calcutta University and is an Associate of the Institute of Cost Accountants of India (ACMA).

He brings with him more than 30 years of experience, with a combination of expertise and experience in Finance, HR, Operations, Legal, IT, Procurement, Facility Management and related areas. He has worked both in the corporate and non-profit sectors.

Before joining Shiv Nadar University, Delhi NCR, Mr. Natarajan was a Chief Operating Officer and CFO at Make A Difference, a non-profit organization working for children in need of care and protection. Before that, he was with the Piramal Foundation as its Chief Operating Officer, responsible for the Foundation's initiatives in Education, Health and Water. Prior to moving into the social sector, he served in the corporate sector in various capacities. He has been associated with organizations like SAGE Publishing, TNS Global Market Research, Ariba, DHL, Marico, and Indian oil, to name a few.



**MR. RAJA NATARAJAN**  
**EXECUTIVE DIRECTOR,**  
**FINANCE & OPERATIONS**



## KEY INFORMATION

### (AS REPORTED IN THE ANNUAL QUALITY ASSURANCE REPORT 2021-22)

TABLE 1. KEY INFORMATION 2021-22

<b>Number of programmes offered during the year:</b>	
16 Bachelor's-level degree programs [B.Tech., B.M.S., B.Sc.(Research) and B.A. (Research)], 6 Master's programs [M.Sc., M.F.A., M.A. M.Tech. and M.B.A.], and 17 Doctoral level [Ph.D.] programs; and 4 Integrated programs	43
Number of departments	18
Number of students	2906
Number of courses	832
Number of teachers	248
Seed grants provided to faculty by the university	248 Lakhs
Number of faculty receiving external support for research	32
Number of JRFs, SRFs, Post-Doctoral Fellows, Research Associates and other research fellows enrolled in the institution during the year	344
Grants for research projects sponsored by the government agencies during the year (INR in Lakhs)	1930
Total number of workshops/seminars conducted on Research methodology, Intellectual Property Rights (IPR), entrepreneurship, skill development year wise during the year	116
Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings during the year	36
Bibliometrics of the publications during the year based on Scopus/	
Total amount generated from consultancy and corporate training during the year (INR in lakhs)	14.23
Number of functional MoUs with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the year	16
Annual expenditure for purchase of books/ e-books and subscription to journals/ e-journals during the year (INR in Lakhs)	779
Number of usage of library by teachers and students per day (foot falls and login data for online access)	3900
Total expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component during the year	12254

# GRANTS

Many international and domestic grants were activated during 2021-22 across departments and centers. The data on the various aspects of research growth are provided below.

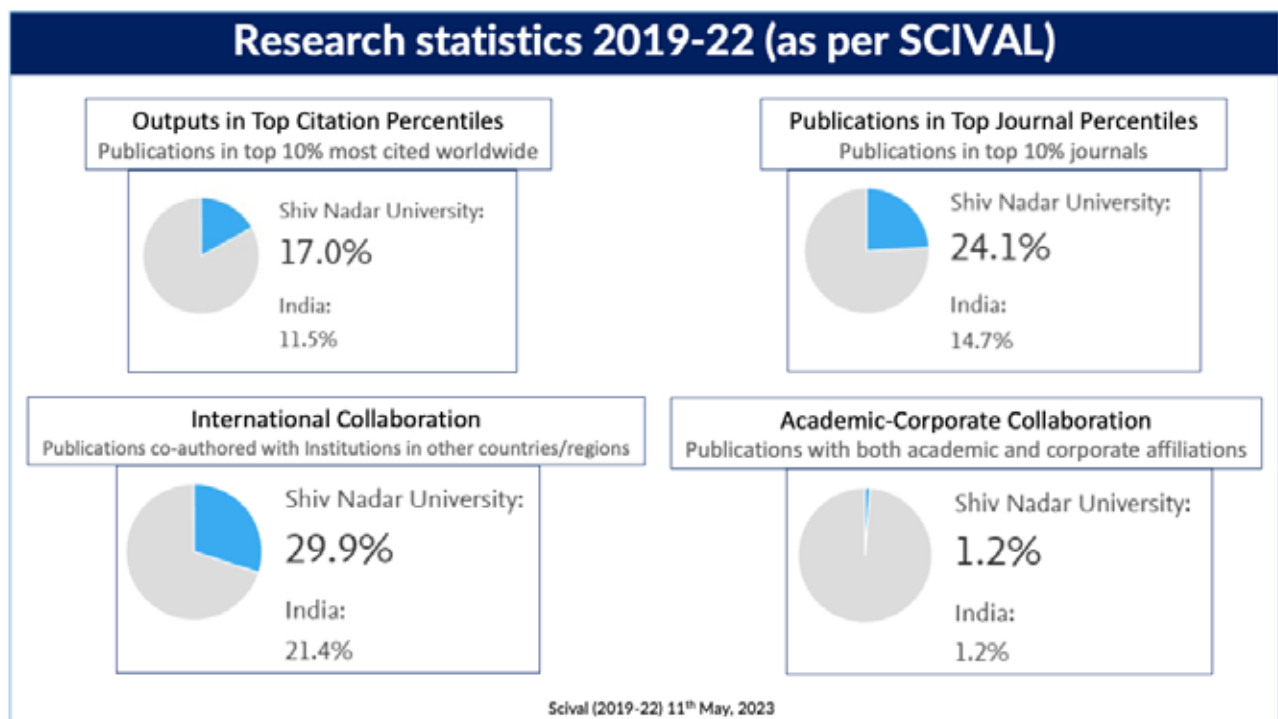
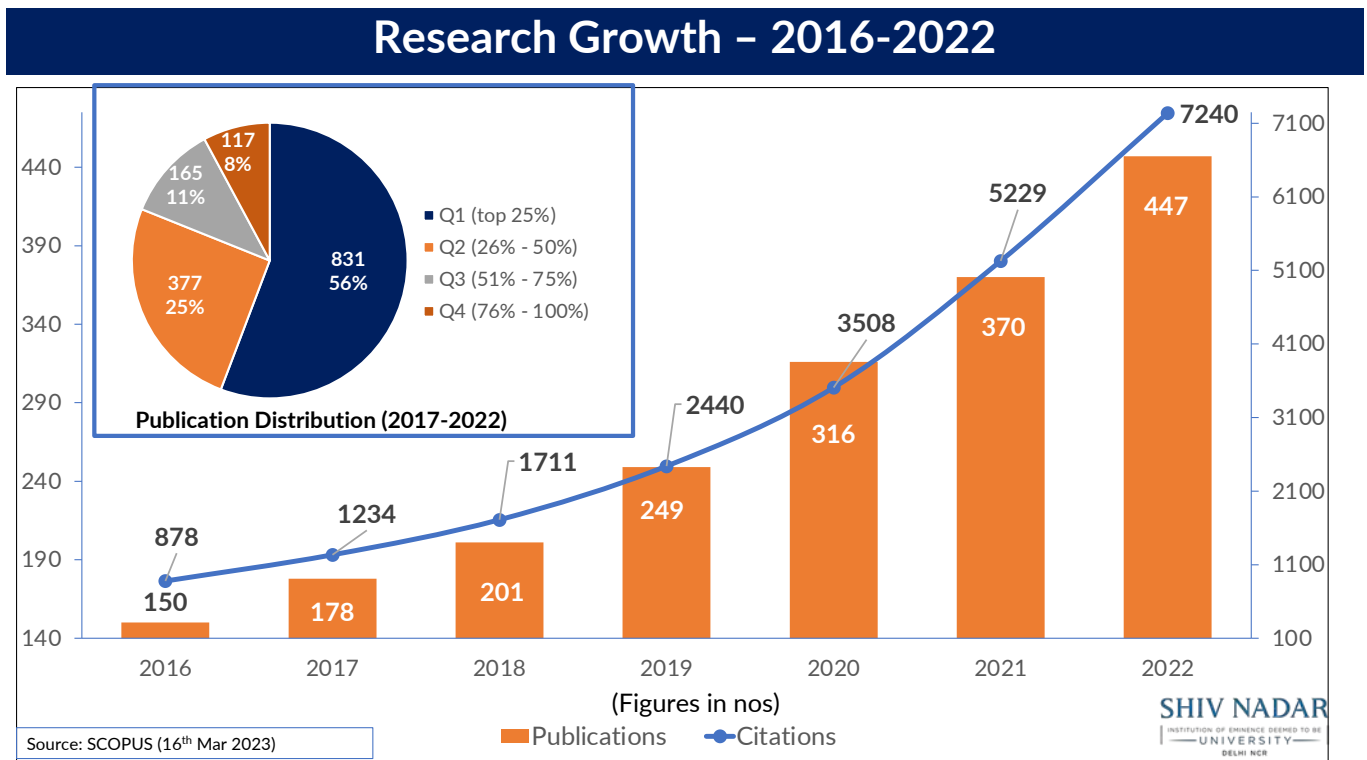




TABLE 2: ACTIVE RESEARCH GRANTS, 2021-22

PI (DEPT/ SCHOOL) & CO-PI (IF ANY)	DEPARTMENT	PROJECT TITLE	DURATION	PROJECT APPROVED COST	FUNDING AGENCY
Ashish Gupta	Life Sciences	"Modulation of Essential Tumor Suppressor HAT Protein TIP60 by Hepatitis C Virus (HCV)"	3 years	50,53,420	ICMR
Debdas Ray	Chemistry	Angularly Distributed Donor-Acceptor Based Chromophore Simple System for Sophisticated NLO effect	3 years	22,58,325	Board of Research In Nuclear Sciences
Basab Bijayi Dhar	Chemistry	Development of FE(III) Complex of AMIDO-QUINOLINE TETRADENATE ACYCLIC LIGANDS: CATALYSTS FOR C-H ACTIVATION AND EPOXIDATION	3 years	42,28,000	CSIR
N Sukumar	Chemistry	"Exploring the Applications of Chemical Space Networks in Molecular Library Design and Drug Design"	3 years	45,16,490	SERB
Subhra Sen Gupta	Physics	Theoretical Investigations of High Energy Optical Conductivity and Anomalous Spectral Weight Transfer in Cuprates and Other Strongly Correlated Electron Systems	3 years	20,78,560	Science and Engineering Research Board
Sajal Kumar Ghosh	Physics	Biophysical study of forming and controlling nano-sized domain in model cellular membrane.	3 years	33,25,518	Science and Engineering Research Board
Meenakshi Choudhry	Life Sciences	SR/WOS-A/LS-110/2018(G)	3 years	30,73,000	Department of Science and Technology
Sneh Lata	Mathematics	"Investigating a class of Operators on Certain Hilbert Spaces and Their Connection to Frame Theory" SERB	3 years	19,80,000	Science and Engineering Research Board
Richa Priyadarshini	Life Sciences	INVESTIGATING THE PHYSIOLOGICAL ROLE OF CELL WALL AMIDASE IN caulobacler crescenlus	2 years	21,50,400	Council of Scientific & Industrial Research
Bimlesh & Priya	Chemistry	Development of new Mg-S Battery Chemistry and Electrodes through Synthesis, Characterization, and Simulations	3 years	36,26,040	Department of Science and Technology
Pratibha Biswal	Civil Engineering	Financial Sanction under Teachers Associatesrup for Research excellence (TARE)	3 years	1,83,000	SERB
Rohini Garg	Life Sciences	Understanding structure-function relationship of G-quadruplex DNA conformation with plant developmental responses	3 years	50,34,832	SERB
Kshatresh Dutta Dubey	Chemistry	BT/RLF/Re-entry/10/2017	5 Years	1,13,60,000	Department of Biotechnology
Seema Sehrawat	Life Sciences	Synergistic A2BR inhibitor/Paclitaxel combination therapy for triple negative breast cancer treatment	3 years	39,79,240	SERB
Priynaka Grover	Mathematics	"Differentiability and orthogonality in Banach space"	3 years	19,82,332	SERB Board
Gouriprasanna Roy	Chemistry	"Detoxification of Arsenic Compounds: Enzyme Mimetic Studies to Understand the Methylation of Arsenic by Ar(III) S-adenosymimethione (SAM) Methyltransferase (AS3MT)"	3 years	59,53,775	SERB
Parthaparthim Munshi	Chemistry	"Exploring ferroelectricity in single-component organic Molecular crystals: Cases of Imidazoles"	3 years	33,26,000	SERB
Nagasuresh Verapu	Life Sciences	"Host determinants of Hepatitis E Disease Severity"	2 years	23,96,354	ICMR

Koyeli Mapa	Life Sciences	A systemic investigation on sub-compartment specific proteotoxicity in mitochondria and the adaptive response mechanisms"	3 years	56,07,810	DBT
Samarendra Pratap Singh	PHYSICS	"Development of sensors for blast and blight diseases and stomatal activity measurement in rice (O. Sativa L.)"	3 years	67,79,200	ICMR
Deepak Sehgal	Life Sciences	"Structure based design of nanobody inhibitors against EGFR: A protein engineering approach to develop novel therapeutics for lung cancer"	3 years	19,25,532	ICMR
Subhabrata Sen	Chemistry	"Preclinical pharmacokinetics and efficacy optimization of selective potent indoleamine2,3 dioxygenase inhibitors for the treatment of colorectal breast and lung cancer"	18 Months	10,00,000	Biotechnology Industry Research Assistance Council
Bimlesh Lochab	Chemistry	Novel Composite Polymeric Adhesives Based On Fibers And Nano-Fillers For Joining Metals	3 years	4,50,000	Council of Scientific & Industrial Research
Rohit Singh	Electrical Engineering	"Modehng,simulation, and fabrication of MgZnO/ZnO heterostructures for biosensor application ."	2 years	25,89,110	SERB
J Venkatramani	Mechanical Engineering	Predicting and preventing aeroelastic flutter using the concepts of synchronization and amplitude death	2 years	18,83,100	SERB
Animesh Samanta	Chemistry	The Ramanujan fellowship award	5 Years	89,00,000	SERB
Rohini Garg	Life Sciences	iGEM-2019 event at Boston		10,00,000	DBT
Koyeli Mapa	Life Sciences	Elucidation of role of cytosolic chaperone Sse1, Hsp110 of yeast, during ER stress.	3 years	43,80,663	SERB
Satyanarayana Reddy	Mathematics	? Polynomials with integer coefficients divisible by cyclotomic polynomials?	3 years	6,60,000	SERB
Bimlesh Lochab	Chemistry	"Synthesis and exploration of Polybenzoxazines (PBZs) resins as an alternative to traditional phenolic resin in friction materials- A possible breakthrough"	2 years	21,49,840	SERB
Deepak Sehgal	Life Sciences	"Development of potent inhibitors against drug-resistant EGFRkinase for the treatment ofEGFRpositive tumors"	3 years	10,94,500	SERB
Soumya Pati	Life Sciences	"Unravelling novel metabolic biomarkers in children with idiopathic autism in India using 1PSC-based neurological disease remodeling".	3 years	60,83,240	DST
Gopal Das Singhal	Civil Engineering	Development of AI based DSS for Improved Crop Water Use Efficiency under Regulated Deficit Drip Irrigation Regime in the Backdrop of Climate Change	2 years	1,09,98,472	DST
Naga Suresh Veerapu	Life Sciences	"Systematic assembly of SARS-CoV-2 full-length and subgenome cDNA clones"	2 years	36,72,200	DBT
Anu Bala	Centre of Informatics	"Computational design of low-dimensional energy materials for solar cells and optoelectronics"	3 years	29,68,240	DST
Debdas Ray	Chemistry	"Organic High Efficient Biluminescent Materials for Data Security Applications"	3 years	40,43,120	SERB
Ajoy Kapat	Chemistry	"Development of Palladium - Catalyzed Triple Cascade for the Synthesis of Tetracyclic Core of Apocynaceae Family of Indole Alkaloids: Combined Experimental & Computational Based Mechanistic Study and Structure Activity Relationship Study".	2 years	26,42,646	SERB

Biswajit Guchhait	Chemistry	Photoinduced Charge Transfer and Förster Energy Transfer Dynamics in Supported Ionic Liquid Membranes	2 years	26,65,454	SERB
Susant Kumar Padhi	Civil Engineering	Simultaneous Treatment of Gaseous BTEX and Wastewater Containing Nitrate and Sulphate by Using an Anaerobic Hybrid Bioreactor for Methane Production	2 years	19,40,400	SERB
Karan Gupta	Chemical Engineering	INSTABILITIES DURING PRODUCTION OF NANOFIBRES BY ROTARY JET SPINNING	2 years	15,24,290	SERB
Rajan Vyas	Life Sciences	Structural and functional characterization of Suf operon enzymes in Mycobacterium tuberculosis (M. tb) / Ramalingaswami Re-entry Fellow	5 Years	11,02,329	DBT
Prem Chandra Pandey	Center for Environmental Sciences & Engineering	Assessment of aquatic weeds in Northern India using Remote Sensing Technology	3 years	27,65,044	DST
Ganeshthangaraj Ponniah	Mechanical Engineering	Reinforcement Learning of a quadruped robot	2 years	4,80,000	Dassault
Debayan Das	Chemical Engineering	EXPERIMENTAL STUDIES AND MATHEMATICAL MODELING OF PAPER-BASED ISOTHERMAL DNA AMPLIFIED	5 Years	65,39,924	DST
Animesh Samanta	Chemistry	Unbiased Screening of Diversity Orientated Fluorescence Library to accelerate the Probe Development for Diagnostics and Environmental Analysis	3 years	40,22,832	SERB
Richa Priyadarshini	Life Sciences	Peptidoglycan recycling and its role in cell wall stress response in Caulobacter crescentus.	3 years	45,28,832	SERB
Prem Chandra Pandey	Center for Environmental Sciences and Engineering,	Algal discrimination and characterization using hyperspectral datasets of Chilika Lake, Odisha, India	2 Year	23,85,120	SERB
Harpeet Singh Grewal	Mechanical Engineering	Sustainable Manufacturing of the Nanostructured Self-Cleaning Surfaces	3 years	17,80,295	SERB
Ajay Dandekar	History	Revisiting India's Transboundary Rivers: Social and Environmental Security- reg.	1 Year	14,50,000	National Security Council Secretariat
Kamlesh Ganesh Pawar	Life Sciences	"Role of tRNA halves in LPS induced acute lung injury"	5 Years	1,68,67,400	DBT
Santosh Singh	Mathematics	AI Project on Strategic Planning	1 Year	91,303	National Security Council Secretariat, Government of India
Nagasuresh Verapu	Life Sciences	Phase ii/iii clinical trials of an indigenously-developed	2.5 years	63,80,000	Biotechnology Industry Research Assistance Council
Richa Priyadarshni	Life Sciences	Cell wall remodelling by N acetylmuramyl- L- alanine amidases and its implication in biofilm formation and pathogenesis in E.coli	3 years	37,92,354	ICMR
Aloke Kanjilal	Physics	Development of radiation hard ZnO/SiC composite materials with tunable optical property		50,68,712	SERB
Bimlesh Lochab	Chemistry	Oxazine-Ring Substituted Benzoxazine Monomers: Alternative Sustainable 4th Generation Polybenzoxazines		22,79,332	SERB
Santanu Mitra	Mechanical Engineering	The Development, Testing and Performance Analysis of Batoid-Inspired Autonomous Underwater Vehicles The Development, Testing and Performance Analysis of Batoid-Inspired Autonomous Underwater Vehicles		18,00,000	Naval Research Board



Harpreet Singh Arora	Mechanical Engineering	High Performance Supercapacitors through Nano-moulding and Surface Activation		21,29,680	SERB
Dr. Sajal Kumar Ghosh	Physics	Developing infection imaging agent of peptides & deciphering their interactions with cell membrane		26,91,000	Board for Research in Nuclear Sciences
Dr. Bappaditya Gole	Chemistry	Supramolecular approach towards creating mechanoresponsive and self-resistance materials		32,35,792	SERB-SRG
Dr. Animesh Nayak	chemistry	Photoelectrochemical Investigation of Phosphonate-Functionalized Chromophores for Synthesis of Solar-Fuels		31,49,872	SERB-SRG
Dr. Santosh Kumar Singh	Physics	Demonstration of 3D Printed Electrodes for Next-generation Energy Devices ("Nextgen-Cell")		31,54,520	SERB-SRG
Dr. Ajoy Kapat	Chemistry	Enantioselective Catalytic Radical Fluorination of Nonactivated C(sp <sup>3</sup> )-H Bond		61,12,645	SERB:
Dr. Sathi Rajesh Reddy	Mechanical Engineering	Development of Nano fluid based Evacuated Tube Solar Collector (ETSC) for efficient Solar Heating applications		5,50,000	Dassault Systèmes Foundation
Dr. Ellora Padhi	Civil Engineering	A novel hybrid approach for the design of stilling basin to counter the downstream local scour		20,99,370	SERB-SRG
Dr. Ankit Gupta	Mechanical Engineering	A Novel Electromagnetic effect based Technique for Manufacturing of Polymer/MetalFe Eco-Functionally Graded Materials using Industry waste materials		8,25,000	SERB, TARE scheme
Dr. Ankit Gupta Co-Pi: Dr. Ramesh Gupta Burela, Associate Professor, Mechanical Engineering, Shiv Nadar University & Dr. Yamini Sistla, Assistant Professor, Chemical Engineering, Shiv Nadar University	Mechanical Engineering	Revamping efficiency of Solar Thermal System using advanced composites		6,00,000	Dassault Systèmes Foundation
Dr. Ganeshtangaraj Ponniah	Mechanical Engineering	Advanced Automation and Robotics course content development		4,00,000	Dassault Systèmes Foundation
Dr. Puli Chandramouli Reddy	Life Sciences	Elucidation of specification mechanisms of male germ cells and epigenetic reprogramming during gametogenesis in Hydra		29,13,097	SERB-SRG
Dr. Debdas Ray	chemistry	Organic donor-acceptor based macrocycles: Accessing thermally activated delayed fluorescence and room-temperature phosphorescence for photonic applications		36,32,332	SERB-CRG
Dr. Priyanka Katiyar Co-Pi: Dr. V.m. Rajesh	Chemical Engineering	Pyrolysis of oil extracted spice waste and up-gradation of bio-oil to bio-diesel using novel catalysts		9,28,000	CST, UP
Neha Gupta	Mathematics	SR/FST/MSI-106/2015 ( C)	5 Years	46,00,000	DST
Deepak Sehgal	Life Sciences	SR/FST/LS-I/2017/59(C)	5 Years	1,62,00,000	DST
Parthapratim Munshi	Chemistry	SR/FST/CS-I/2017/13(C)	5 Years	2,60,00,000	DST

# UNIVERSITY HIGHLIGHTS

## Shiv Nadar University, Delhi NCR, was conferred with the title of Shiv Nadar Institution of Eminence (Deemed to be University) by the Ministry of Education, Government of India

The Ministry of Education announced the Institution of Eminence scheme in 2017 through the University Grants Commission (UGC) to create a distinct category of higher education institutions that would have greater levels of autonomy and will aim to be ranked internationally for its teaching and research as top hundred Institution in the world over time.

As the title was inked, Shiv Nadar University has emerged as the country's youngest institution of higher education to be conferred the prestigious title of Institution of Eminence (Deemed to be University). This coveted status is a testament to the contribution of all faculty, students, and staff to the university's goal to deliver world-class education in India. While celebrating its commitment to creating an outstanding institution, we reconfirm our vision to continue to hone the fundamental pillars of a great university: a holistic, multidisciplinary education, research-driven, innovation-inspired, and a commitment to a better society.

## Eighth Convocation Ceremony 2022

We celebrated our eighth convocation ceremony on May 28, 2022. The guest of Honor was the Nobel Peace Laureate, Mr. Kailash Satyarthi, Founder of Kailash Satyarthi Children's Foundation, and his wife, Ms. Sumedha Kailash, co-founder Bachpan Bachao Andolan and founder of Bal Ashram. The occasion celebrated the class of 2022 and marked a moment of high transition in the lives of 474 of our undergraduate, postgraduate and doctoral students, who stepped out into the world to make an impact.



### Shiv Nadar University conferred Honorary Doctorate upon Dr. M.K. Ranjitsinh and Dr. Balakrishna Doshi

An honorary doctorate was conferred upon two distinguished individuals in recognition of their remarkable contributions at the university's eighth convocation ceremony. Dr. M.K. Ranjitsinh, is India's leading wildlife conservationist, renowned author, and a former bureaucrat. Dr. Balakrishna Doshi, is one of India's greatest architects and the winner of the 2018 Pritzker Award.



### Inauguration of Center of Excellence in Epigenetics (CoEE)

The vision for the Center of Excellence in Epigenetics at SNU is to build upon an interdisciplinary synergy generated during the first decade of its existence at IISER Pune. To bring together a group of established as well as young investigators with expertise in diverse fields, including Molecular Genetics, Biochemistry, Molecular Cell Biology, Developmental Biology, Neurobiology, Genomics, Proteomics, and Computational Biology, to formulate and test a set of novel and exciting hypotheses in the field of Epigenetics. In particular, the center is focused on epigenetic modifications underlying various biologically important phenomena and their role in gene expression, development, regeneration, diseases, evolution, and adaptation.

Pro-Chancellor Mr. Shikhar Malhotra inaugurated the center on May 27, 2022 and Dr. Sanjeev Galande is leading the center.



### Students on sports scholarships made us proud

The year 2020-21 witnessed many proud moments from the students on sports scholarships who performed extraordinarily. To name a few, **Unnati Bisht** excelled in badminton and is currently studying in the second year of her bachelor of management studies at the school of Management and Entrepreneurship. She is ranked 518 in the world and 16 in India under the badminton women's singles category. **Mohit Bhatt** gave an exemplary performance in squash. Enrolled in the first year of his bachelor of management studies, Mohit is India ranked first in the under-19 boys' category.



### **Notable academic achievements of students**

Zaffer Ishaq War, Class of 2021, Department of History, received the Commonwealth Master's Scholarship to pursue M.Sc. in Modern South Asian Studies at the University of Oxford from September 2021; Akshita Todi received fully funded offers for a Ph.D. from Oxford University, the University of California, Berkeley, and the University of Chicago. She has now begun her Ph.D. in Berkeley; Malavika Ramkumar, Class of 2022, was selected for the Chemistry Opportunities for Research and Education (MICORE) program, 2021 at the University of Michigan, USA; Ph.D. student Juhi Khurana published a paper in 'Journal of Molecular Structure and Dynamics' where she identified novel molecular targets for anti-malarial therapy and new lead compounds that could be developed as therapeutic compounds for malaria treatment; Sai Vishal Reddy and Ashwad Raaj, B. Tech and M. Tech from the University, got fully funded Ph.D. positions in the Department of Aerospace Engineering, Georgia Tech, USA and Department of Mechanics, EPFL, Switzerland, respectively.

### **Executive Leadership Academy, 2021**

In collaboration with the Center for studies in higher education, the University of California, Berkeley, the Shiv Nadar University hosted an Executive Leadership Academy (ELA) to foster leadership in higher education. With twenty academicians and administrative staff from SNU and five from other universities, the academy was held on November 15-19, 2021, on the theme of leading in a Multicultural & Global Environment. This was the first time this renowned academy was hosted in India.

### **Global Young Scientists Summit, GYSS 2022**

Ten students from Shiv Nadar University participated in the Global Young Scientists Summit, held online, January 17-21, 2022. The summit was an opportunity to interact with eminent scientists and technology leaders.

# STUDENTS

**Four students from across disciplines went to the University of California, Berkeley, for a semester abroad from January 22- May 2022.**

## **Opportunities for Undergraduate Research**

One of the flagship programs at the SNU is the Opportunities for Undergraduate Research (OUR). The undergraduate curriculum fosters students' ability to integrate critical thinking, interpretive skills, scientific exploration, and normative principles into their worldview and prepares them as future leaders in a complex, changing, and unpredictable world. The Research, Experiential, and Applied (REAL) courses integrate research and training at the undergraduate level across disciplines. In 2020-2021, the seventh edition of the OUR conference was held, with more than 60 projects presented across four schools.

## GENDER SENSITIZATION EFFORTS

**The main events on gender sensitization during the year are provided below:**

- Session for new students on 16 August 2021 and had a participation of 300 students
- ICC undergraduate student interactions: Volunteers of ICC conducted discussions and interviews (online) during August-September 2021
- Session for MBA students was organized on 29 September, 2021 had a participation of 28 students
- Conducted 10 mandatory sessions on 13 and 14 November, 2021 that had 400 participants

## CULTURAL EVENTS

Shiv Nadar Institution of Eminence appreciates the campus's cultural, geographical, linguistic, and ethnic diversity. Although there are worries about moral standards eroding and intolerance rising among the communities, castes, and groups that make up our magnificent nation, the institution embraces the nation's variety and unity. This is demonstrated by the members' passion for and involvement in the various events planned to honor this diversity.

## Diwali Celebrations

Diwali represents the triumph of light over darkness, knowledge over ignorance, and the value of knowledge, self-inquiry, and self-improvement. The lighting of diyas and heartfelt dance lets people search through and know themselves. On campus, various Diwali events are organized and the celebration is enthusiastically observed.

## Lohri, Pongal and Makar Sankranti Celebrations

Lohri and Pongal commemorate the passing of the winter solstice and the starting of the Sun begins its journey to the Northern Hemisphere. This movement is traditionally called Uttarayana. These festivals are celebrated with great fervor too.

## Holi

The coming of spring is celebrated with the festival of Holi. The institution's community celebrates Holi by smearing color and losing ourselves to the beat.

## International women's day

Celebrated on the 8th of March every year, IWD 2022 saw the campaign theme of #BreakTheBias forged by millions worldwide. Shiv Nadar University, through various programs & competitions, conveyed the importance. Creative writing competition on the theme 'Inspiring Women's Skills for a Better World' was hosted which further witnessed students inking their thoughts on paper pouring heartfelt writings.

## Republic Day Celebrations

At Shiv Nadar Institution of Eminence, 73rd Republic Day was celebrated with fervor. Dr. Rupamanjari Ghosh, VC of Shiv Nadar University, hosted the flag, and the campus residents performed cultural events.

## World Environment Day

Shiv Nadar Institution of Eminence, Delhi NCR hosted the 5 June webinar. Go Green and Sheetal Prathom Aahaar Society (SPAS) conducted a World Environment Day event at 4 pm on Ecosystem Restoration.

## International Yoga Day

Since 2015, International Yoga Day has highlighted yoga's health benefits. On this day, the Shiv Nadar University physical education department organizes group yoga.

## Independence Day

Independence Day celebrates independence from British authority. The institution celebrates Independence Day by displaying the Flag, with cultural programs, and distributing sweets to honor our liberation heroes and martyrs.



# SCHOOLS



## School of Humanities and Social Sciences

The School of Humanities and Social Sciences (SHSS) is a unique multidisciplinary collective dedicated to transformative research and teaching in the true spirit of a liberal arts education that is responsive to the challenges of 21st-century India.

### The School brings together seven dynamic departments:

Economics, English, International Relations and Governance Studies, History and Archaeology, Sociology, Design and Art, and the Performing Arts. It is also home to a Writing Centre that caters to the academic writing needs of different disciplines across the University.

The year 2021-22 for the School brought new achievements, accolades, fresh frontiers of research, successful graduates, innovation, and design. It established the School even more firmly on the international academia and research stage. Many School faculty showed keen interest and brought intriguing research on covid pandemic-related research themes relevant to the times.

## SHSS – Highlights of the Year

**Dr. Punarjit Roychowdhury**, from the Department of Economics, was appointed as a Fellow of the Global Labor Organization (GLO), a global network for researchers and policymakers interested in scientific research and its social policy implications on global labor markets, demographic challenges, and human resources.



**Dr. Atul Mishra** published a book titled, *The Sovereign Lives of India and Pakistan* (by OUP, India). The book examines the ideas and practices of sovereignty in India and Pakistan since the partition. It offers a new framework for analyzing South Asia's politics and international relations. Dr. Mishra is from the Department of International Relations and Governance Studies.



**Dr. Siddharth Mallavarapu**, from the Department of International Relations and Governance Studies, is appointed as part of the team of international Editors in Chief for the *Global Social Challenges Journal* launched by Bristol University Press. The journal is envisaged as a multi-disciplinary journal with other co-editors in chief for specific domains of scholarly inquiry. He also continues to be a member of the Scientific Advisory Board of the Centre for Global Cooperation, Käte Hamburger Kolleg, Duisburg (Germany).



**Dr. Sanjay Srivastava**, British Academy Global Professor in Anthropology at SOAS, is a Research Professor affiliated with the Department of Sociology. His affiliation brings a partnership with Cambridge University and over 1.5 million pounds in research funding from the ESRC (Economic and Social Research Council, UK) to research a transdisciplinary comparative project on gendered violence and urban transformations between South Africa and India.

**Dr. Yasmeen Arif**, from the Department of Sociology is appointed visiting guest researcher at the Global Research Programme on Inequality (GRIP) and the Department of Social Anthropology, University of Bergen, Norway, in June 2022. She is also an affiliate in the GRIP project.



**Dr. Sambudha Sen**, from the Department of English, has won the prestigious Hawthornden Writing Fellowship at the Hawthornden Castle from March to April 2022. Hawthornden Literary Retreat at Hawthornden Castle in Scotland was founded to provide a peaceful setting for creative writers to work without disturbance. It houses six writers at a time, known as Hawthornden Fellows, in four-week sessions. The Retreat is international in character and welcomes applications from writers from across the world.

**The Center for Public Affairs and Critical Thinking (C-PACT)** completed the project on Water Science and Policy Program. A three-year project received a grant of 550 000 CAD in August 2018. The project developed a unique and sustainable water science and policy program to create a cadre and network of professionals in India with a contextualized, multi-disciplinary understanding of water. Specifically, it achieved its objective by training M.Sc., Diploma, and Certificate students, including regular, mid-career professionals; opportunities to conduct student-led research on water; and extensive faculty research, publications, network, and bringing on-board experts; the project attempted to influence policy thinking and practices.

### **The Department of Design has set up a Virtual Reality Lab for teaching and research purposes.**

The immersive technologies that comprise Virtual, Augmented, Mixed, and Extended Reality are among the fastest growing technologies that have found their applications in all wakes of human life. There is a huge scope for innovation using these futuristic technologies to solve human problems. Hence, to expose design students to these new technologies, enabling them to explore their innovative applications to solve human needs, a Virtual reality lab was established in 2022.

The lab houses a high-end VR-ready PC system with an HTC VIVE Pro 2 VR kit that helps students design and develop various applications for their assignments and projects.

Currently, the students are working on various topics such as designing and developing the Virtual Trial room, Comics experiences in VR, Virtual Experience of Shiv Nadar University campus, and virtual experiences of exhibition spaces.

## **Three faculty from the Department of Design have published patents in the official journal of the Patent office.**

### **1. A sipper cum straw system in bottles and the method thereof**

**Name: Prakash Kumar, application no. 202211012253**

The invention pertains to the baby products segment. The invention proposes a new type of bottle for feeding liquid like milk, juice, water etc. to the babies in both upright and inverted positions. Patents as Prakash Kumar as one of the inventor

### **2. Tablet dispenser and the method thereof**

**Name: Prakash Kumar and Samrath Suri, application no. 202311005930**

The invention pertains to the health and hygiene of people using bottle packaged medicine pills. The invention helps take out exactly one tablet from the bottle without spilling out or touching/ contaminating other tablets. It can also help prevent contamination or moistening of tablets that degrade due to exposure to moisture, dust or biological contamination.

### **3. Egg boiling and peeling device and method thereof**

**Name: Prakash kumar, Kolla Veda Sai, Kolli Venkata Sraavan Kumar and Sai Paramahamsa Poluri, application no. 202211012300**

The equipment helps in boiling and peeling of eggs in large quantities without much time and effort. The equipment would find relevance in the mess and hotels industry. The equipment has a big metal tub with a heating element and a cage-like rotatable container for holding eggs in large quantities. The equipment also has a top lid to cover the container.

## School of Engineering

The School of Engineering (SoE) at the Shiv Nadar University is a pioneering effort in the field of engineering that aims to provide a world-class learning experience in the discipline. With innovative and engaging teaching methods, the school endeavours to hone engineers who specialize in their core discipline and are capable of shouldering leadership responsibilities in the 21st century.

The school combines research and education at the undergraduate level, providing students with a well-rounded experience. Each department has been set to prepare students for a rapidly changing world where global boundaries are fast disappearing. Each program at the school is carefully customized in consultation with the industry and academia to provide the best mix of theoretical and practical knowledge.

### SoE – Highlights of the Year

The School had an exciting academic year with new faculty joining on-board, publications in high-impact international peer-reviewed journals, state-of-the-art new labs, accolades, student achievements, innovation, design, and school graduates joining leading universities for M.S. and Doctoral studies.

Department seminars around the year are an integral part and a great platform where faculty share their research and learnings. Workshops, discussion series, and conferences brought together some new, thought-provoking research project themes. To add to this, faculty awards and accolades adorned the School.

#### **Dr. Harpreet Singh Grewal, Dr. Harpreet Singh Arora, and Dr. Sumit Tiwari from the Department of Mechanical Engineering were featured in Stanford University's list of the top 2% of Scientists.**

Stanford University released a list identifying the top 2% of the most-cited scientists in various disciplines. Dr. Harpreet Singh Grewal, Dr. Harpreet Singh Arora, Associate Professors in the Department of Mechanical Engineering, and Dr. Sumit Tiwari, Assistant Professor in the Department of Mechanical Engineering, have been included in the list of scientists who have excelled in research in the fields of Material Science and Energy.

Dr. Arora's research interests include using different surface engineering approaches, including Friction stir processing and advanced materials for addressing material degradation, Energy storage, and the development of Supercapacitors. Dr. Grewal's research involves developing bio-inspired superhydrophobic self-cleaning metallic and polymer surfaces with tuned wetting, adhesion, and frictional properties through advanced materials and processing techniques. Dr. Tiwari works on the development of other solar thermal technologies, namely, photovoltaic thermal (PVT) greenhouse drying systems, PVT greenhouse heating systems, PVT greenhouse biogas heating systems, solar still, PVT air collectors, PVT air collector integrated drying systems, passive cooling of the building, and solar adsorption cooling systems.





**Dr. V.M. Rajesh**, assistant professor from the Department of Chemical Engineering, was invited by the School of Chemical Engineering, University of Campinas, Brazil, to collaborate on a project, the Development of enzymatic microreactors for the commercial-scale production of biodiesel from waste oils.



**Dr. Rohit Singh**, assistant professor from the Department of Electrical Engineering, has been selected for INSA Visiting Scientist Fellowship for FY 2021 – 2022 to visit IIT Patna for two months.



**The Department of Mechanical Engineering** secured external funding of 60 Lakhs from various agencies, including the Naval Research Board (NRB), Department of Science and Technology (DST SERB, Core Grant), and Scientific and Useful Profound Research Advancement (SUPRA, SERB DST). It published 45 papers in Top Tier Journals. The School secured external funding of 284 lakhs.

## New labs set up in the School of Engineering

### Department: Civil Engineering

**Lab: Agriculture Water Management Laboratory** (Supported through Funds received in Department of Science and Technology, Govt. of India Sponsored Project)

**Description:** The Department of Civil Engineering has developed the Agriculture water management experimental field laboratory inside the Shiv Nadar University campus, including an extensive field facility for experimentation on agricultural water management. The field plots are equipped with drip irrigation systems and are being used to experiment with regulated deficit irrigation (RDI) regimes. The facility is also equipped with various field research instruments such as automatic weather station, soil moisture equipment, leaf area index meter, chlorophyll content index meter, leaf porometer, spectroradiometer, and infrared radiometer to monitor the soil and crop parameters in the crops grown (wheat and rice) in the lab.

## Department: Mechanical Engineering

### Lab: Solar Energy UG Lab

**Description:** The main aim of the lab is to provide knowledge on the importance of vastly available solar energy and its capabilities for various applications. The equipment like flat plate collector, evacuated tube collector, and solar cooker are used to train the undergraduate students. The research aims to develop and achieve self-sustainable, eco-friendly solar energy systems for various applications. Research on solar integrated cooling, Solar Desalination, Thermal Energy Storage, and Solar drying is carried out.

## Department: Chemical Engineering

### Labs:

**Intensity Lab:** The lab is dedicated to research in process intensification techniques. Particularly, emulsion polymerization, pulsating heat pipe, and macromixing are investigated.

**Soft Matter Lab:** In this lab, fluid and particle dynamics at a micro-scale are studied. Of most interest is the visualization of internal fluid flow in an evaporating drop to investigate internal fluid convection and particle transportation.

**Polymer Materials Research Lab:** Polymer Materials Research lab is in the genesis stage focusing primarily on research in the field of polymer membranes, films and coatings.

**Complex Fluids Lab:** The laboratory is dedicated to understand the complex fluid flows and hydrodynamic instabilities encountered and includes various flow experiments and mathematical analyses.

**Energy and Environmental Sustainability Lab:** This lab is dedicated to utilize the agro-industrial solid waste and food waste obtained from the food mess, restaurants etc. for various purposes such as production of bio oil using thermochemical conversion methods and wastewater treatment. Further the bio-oil is upgraded to bio-diesel and value added chemicals to make it more refined for direct use.

**Waste to wealth lab:** This lab is dedicated for bioenergy production from thermochemical conversion process and then characterize the different forms of energy including biochar, bio oil, and syngas.



## School of Management and Entrepreneurship

The School of Management and Entrepreneurship (SME) houses programs embedded with a flavor of theoretical rigour blended with critical thinking. Built on the vision to challenge and merge the polarities of academic theory and practical business, it instills a strong foundation in business fundamentals in its students. It develops an ability to apply this learning across real business scenarios.

The School thrives on the interplay of ideas across its program offerings, undergraduate, master, and doctoral programs to empower learners with the critical skills of the future: meta-learning or learning to learn. The School believes in fostering the development of future-ready global leaders adept at fuelling innovative, pertinent, and implementable solutions for the challenges posed by the new digital economy of the future. The graduates emerge as practicing theoreticians.

Our vision for SMEs is to challenge and merge the polarities of academic theory and practical business. We embed a flavor of theoretical rigor blended with critical thinking across all our programs. This instills in our students a strong foundation in business fundamentals, with the ability to apply this learning across the spectrum of real business scenarios. Therefore, our graduates emerge as practicing theoreticians.

You will find this theme across all programs- our Bachelor of Management Studies, our MBA offerings, or our Ph.D. in Management.

In addition, to ensure a seamless continuum across the learning spectrum, we encourage a healthy exchange of concepts, topics, and ideas across the SME programs and learner community. This interplay of ideas across our undergrad, post-grad, and fellowship programs empowers our learners with the critical skills of the future – meta-learning or, in other words, “learning to learn.” Irrespective of what you have learned so far, you will always stay ahead of the curve if you can be a good meta-learner.

Finally, we foresee the need to develop not mere literacy but the expertise to control the reins of the ubiquitous juggernaut – the Digital Economy Platform. This is the platform of tomorrow on which all strategies and transactions of future business will be conceived. So, we want to create entrepreneurs and managers who can successfully navigate digital economy platforms to introduce tomorrow’s vision into action today. We want to nurture you to be Leaders of the Digital Economy.

- Economics and Public Policy
- Decision Sciences, Operations Management, and Information Systems
- Marketing Management
- Organization Behaviour and Human Resource Management
- Finance, Accounting and Control
- General Management
- Strategy and Entrepreneurship

The School of Management and Entrepreneurship (SME) inspires the creation of decision-makers who understand the importance of creating value not just for the private sector business world but also for society, in government, not-for-profit, and other public sector enterprises. The School nurtures inspiring entrepreneurs and managers who can successfully navigate digital economy platforms to introduce tomorrow’s vision into action today.

## SME – Highlights of the Year

The academic year was exciting with new collaborations, school awards, department seminar series, stimulating talks by distinguished industry professionals, graduates, student achievement, and welcoming new experts on the advisory board.

Shiv Nadar Institute of Eminence brings on-board **Dr. Pradeep Chintagunta** and **Dr. Raghu Sundaram** as advisory council members of the School of Management & Entrepreneurship who will guide and advise the school on its research and other strategic missions.

### **MBA Executive Program selected as the MBA Executive Program of the Year 2021 by Silicon India**

The award recognizes the School's commitment to offering advanced methods of pursuing an MBA for executives in a flexible and blended mode and to propel working professional careers with a comprehensive suite of contemporary curricula powered by world-class faculty.

## New programs launched

**The MBA (Online Program)** is designed to empower young working professionals with the knowledge and skills to become confident leaders who can turn volatility into opportunity. With an overwhelming focus on emerging technologies and strategy in a digital world, the program will set participants up for successful careers in a highly complex business world.

**The MBA Executive program (MBAx)** is designed to develop experienced executives to move beyond functional expertise to become exceptional cross-functional leaders who align business activities with strategic goals.

**MSBA program** is designed to develop a holistic understanding of businesses, identify data-driven business insights and solutions, and develop business intelligence to refine and optimize business operations. The program emulates the vision of SNU to nurture path-shapers of tomorrow who will lead the future of work globally.

### **Industry–Oriented Curriculum Innovation**

Pedagogical Innovations are a crucial component of the School. In encouraging the concept of *Learning by Doing*, new programs were introduced in BMS and MBA programs.

**THE VENTURE LAB (TVL)** is an innovation laboratory that cultivates entrepreneurial acumen and enables students to translate their ideas into a real businesses. Supported by the expertise of eminent faculty and business leaders, the University's research-driven interdisciplinary ecosystem provides opportunities to discover and sharpen newer ideas 24x7. The course offers the opportunity to learn business by doing inside THE VENTURE LAB.

**InQube 2021**, the School initiated a business quiz, business case, and simulation contest 2021 to reach out to the best of the Undergraduate student population in India who possess business and managerial acumen and promote the SNU brand. The response was very encouraging. By 2022, InQube will be national, and there is a plan to enroll 15,000+ students from 200+ institutions in the prelims.





## School of Natural Sciences

The School of Natural Sciences (SNS) is a pioneering effort for creating and disseminating knowledge in the field of natural sciences under the aegis of Shiv Nadar Institute of Eminence. The faculty and students collaborate to think, discover and learn to unfold answers to some of the most challenging questions.

The programs offered by the departments are structured to reflect multidisciplinary thinking as the key to discoveries and provide students with an outstanding, well-rounded education by synthesizing broad and strong interdisciplinary foundations with solid training in their selected discipline. The students have the opportunity to experience the rich, new knowledge that often exists at the interface of two disciplines.

The School thrives on Research Excellence. A combination of pedagogy in the classroom with mentored research supervision and freedom and encouragement to work on diverse and eclectic research areas allows students to fruitfully engage with their research interests and place themselves in a broader network of knowledge creation.

The School also runs some of the University's key research centers that operate in data analytics and computation, advanced materials, informatics, and translational biology. The research is enabled by the many state-of-the-art laboratories and computational facilities established in the School. The School is proud to have a team of internationally recognized faculty with a passion for research and teaching. They create an academic environment that value and rewards innovation, bold ideas, freedom of inquiry, and the search for truth.

## SNS– Highlights of the Year

Cutting-edge research and publications, along with the continuous flow of extramural grants, have always been the strength of the School. The year was enriched with successful assignments, student research, faculty collaboration, accolades, scholarship, and doctoral students securing post-doctoral positions in some leading Universities.

### Center of Excellence in Epigenetics (CoEE)

The vision for the Center of Excellence in Epigenetics at SNU is to build upon an interdisciplinary synergy generated during the first decade of its existence at IISER Pune. To bring together a group of established as well as young investigators with expertise in diverse fields, including Molecular Genetics, Biochemistry, Molecular Cell Biology, Developmental Biology, Neurobiology, Genomics, Proteomics, and Computational Biology, to formulate and test a set of novel and exciting hypotheses in the field of Epigenetics. In particular, the center is focused on epigenetic modifications underlying various biologically important phenomena and their role in gene expression, development, regeneration, diseases, evolution, and adaptation. Pro-Chancellor Mr. Shikhar Malhotra inaugurated the center on May 27, 2022 and Dr. Sanjeev Galande is leading the center.





**Dr. Bimlesh Lochab became the Second Indian woman scientist to be elected as a Royal Society of Chemistry Fellow.**

A professor at the Department of Chemistry, Dr. Lochab, has joined the prestigious ranks of eminent scientists to be elected as a Fellow of the Royal Society of Chemistry (RSC), UK. The world's leading chemistry community invited her through its 'Fellow of the Royal Society of Chemistry (FRSC)' scheme, which identifies outstanding individuals in the chemical sciences for their significant contributions.

**Department of Chemistry is ranked 26 in the Nature Index 2022 Table. The rank is among the Chemistry Departments across the Country.**

**The Department of Chemistry launches three B.Sc. specializations in Chemistry**

The School announced introducing academic specializations to their existing B.Sc. (Research) degree in Chemistry - Chemical Biology, Computational Chemistry, and Materials Chemistry. This will allow students to gain extra depth of experience and knowledge through rigorous training in chemistry and related transferable skills – which will put them in a solid position to apply for various jobs.



**Dr. Priyanka Grover**, Associate Professor, Department of Mathematics, is conferred with the prestigious associateship and has become an associate of the Indian Academy of Sciences. The Associate's program was initiated in 1983 to recognize talented young scientists working in India and encourage them to get involved in the activities of IASC and engage them in interactions with the Indian Science community. Nominations are by the academy fellows, and quality of work is the sole criterion for selection, emphasizing the proven record of independent research work. The term of associateship is three years.



**Dr. Richa Priyadarshini**, Associate Professor, Department of Life Sciences, an eminent microbiologist, environmentalist, and ecologist, has won the Environment and Social Development Association (ESDA) Green Leadership Award 2021 at the World Environment Summit, where she presented her work.



**Professor Sanjeev Galande** is elected as a member of the international consortium 'STOMICS' (spatial transcriptomics).



**Dr. Rohini Garg**, Associate Professor, Department of Life Sciences, is selected as a core-committee member of the Indian National Young Academy of Sciences (INYAS) from 2021-2023. Currently, INYAS has 95 members from various disciplines with the vision to promote Science Education and outreach, encouragement for networking among young scientists, support young scientists in career independence, engagement in interdisciplinary & intergenerational scientific dialogues, boost science capacity in the country and collaborate with other young academies of the world.



**Dr. Bimlesh Lochab receives the prestigious Chemical Research Society of India bronze award**

Dr. Lochab, from the department of Chemistry, has been awarded the prestigious Chemical Research Society of India (CRSI) Bronze Award for the year 2021 in recognition of her contribution to research in the field of chemistry. Dr. Lochab is one of the first scientists in India to work in the field of sustainable or waste-derived Lithium-Sulfur batteries. Her research has been acclaimed globally, and her work has been published in the prestigious and specialized scientific journal Energy Storage Materials (Elsevier). The Chemical Research Society of India (CRSI) awards Bronze, Silver, and Gold medals to recognize Indian researchers who have contributed significantly at various levels in Chemistry.

# ADMISSIONS

## Detail of students for the Academic Session 2021-22

### Undergraduate

A. School of Engineering (SoE)					
Bachelor of Technology					
Department/Major	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	Total
Chemical Engineering	23	20	17	12	72
Civil Engineering	18	18	8	8	52
Computer Science and Engineering	123	157	103	56	439
Electrical and Electronics Engineering	47	32	32	24	135
Electronics and Communication Engineering	110	101	54	49	314
Mechanical Engineering	69	79	40	27	215
Total A					1227
B. School of Humanities and Social Sciences (SHSS)					
Bachelor of Arts (Research)					
English	20	30	15	20	85
History	19	15	4	5	43
International Relations	21	28	21	5	75
Sociology	22	19	6	10	57
Bachelor of Science (Research)					
Economics	24	42	23	23	112
Economics and Finance*	38	45	-	-	83
Total B					455
C. School of Natural Sciences (SNS)					
Bachelor of Science (Research)					
Biotechnology	30	34	28	14	106
Chemistry	14	8	15	5	42
Mathematics	17	22	19	11	69
Physics	26	29	18	27	100
Total C					317
D. School of Management and Entrepreneurship (SME)					
Bachelor of Management Studies					
	114	99	45	33	291
Total D					291
Grand Total (A+B+C+D)					2290



**Post Graduate (& Integrated)**

A. School of Engineering (SoE)						
Master of Technology						
Department/Major	1 <sup>st</sup> Year		2 <sup>nd</sup> Year		Total	
Civil Engineering	-		10		10	
Mechanical Engineering	-		1		1	
Total A					11	
B. School of Humanities and Social Sciences (SHSS)						
Master of Arts						
	1 <sup>st</sup> Year		2 <sup>nd</sup> Year		Total	
English	8		10		18	
Master of Fine Arts	15		8		23	
Master of Design	14		16		30	
Master of Science						
Economics	10		25		35	
Water Science and Policy	2		11		13	
Total B					119	
C. School of Natural Sciences (SNS)						
Integrated						
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	Total
Integrated M.Sc. & Ph.D.						
Chemistry	6	3	-	-	-	9
Integrated B.Sc. & M.Sc. (Research)						
Chemistry	-	-	-	4	1	5
Total C					14	
D. School of Management and Entrepreneurship (SME)						
	1 <sup>st</sup>		2 <sup>nd</sup>		Total	
Master of Business Administration (MBA)	46		46		92	
MBA (Executive)	10		11		21	
Total D					113	
E. Academy of Continuing Education (ACE)						
MBA (Online)	235		-		235	
Total E					235	
Grand Total (A+B+C+D+E)					492	

**Doctor of Philosophy**

A. School of Engineering (SoE)					
Doctor of Philosophy					
Department/Major	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	Total
Chemical Engineering	3	5	-	1	9
Civil Engineering	8	3	7	5	23
Computer Science and Engineering	-	3	-	7	10
Electrical Engineering	5	3	1	4	13
Electrical Engineering (PT)	1	-	-	-	1
Electronics and Communication Engineering	1	5	1	7	14
Mechanical Engineering	12	5	8	5	30
Mechanical Engineering (PT)	1	-	-	-	1
Integrated M.Tech. & Ph.D.	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Mechanical Engineering	-	-	-	-	1
Total A					102
B. School of Humanities and Social Sciences (SHSS)					
Doctor of Philosophy					
Economics	6	3	4	4	17
English	-	2	-	1	3
History	3	3	3	-	9
International Relations and Governance Studies	3	2	-	-	5
Sociology	5	3	2	7	17
Total B					51
C. School of Natural Sciences (SNS)					
Doctor of Philosophy					
Bioinformatics	-	-	1	1	2
Chemistry	14	12	11	12	49
Life Sciences	14	9	6	31	60
Mathematics	9	4	11	11	35
Physics	11	16	7	18	52
Total C					198
D. School of Management and Entrepreneurship (SME)					
Doctor of Philosophy					
Management	6	2	4	3	15
Management (PT)	-	-	-	2	2
Total D					17
Grand Total (A+B+C+D)					368

<b>UG</b>	<b>2290</b>
<b>PG &amp; Integrated</b>	<b>492</b>
<b>Ph.D.</b>	<b>368</b>
<b>Grand Total</b>	<b>3150</b>

- **Bachelor of Science (Research)-Economics and Finance program jointly offered by the School of Humanities & Social Sciences (SoHSS) & School of Management & Entrepreneurship (SoME)**
- **Including 235 PG students - MBA (Online)/SME**
- **Including 448 students who graduated (in the month of May 2022)**



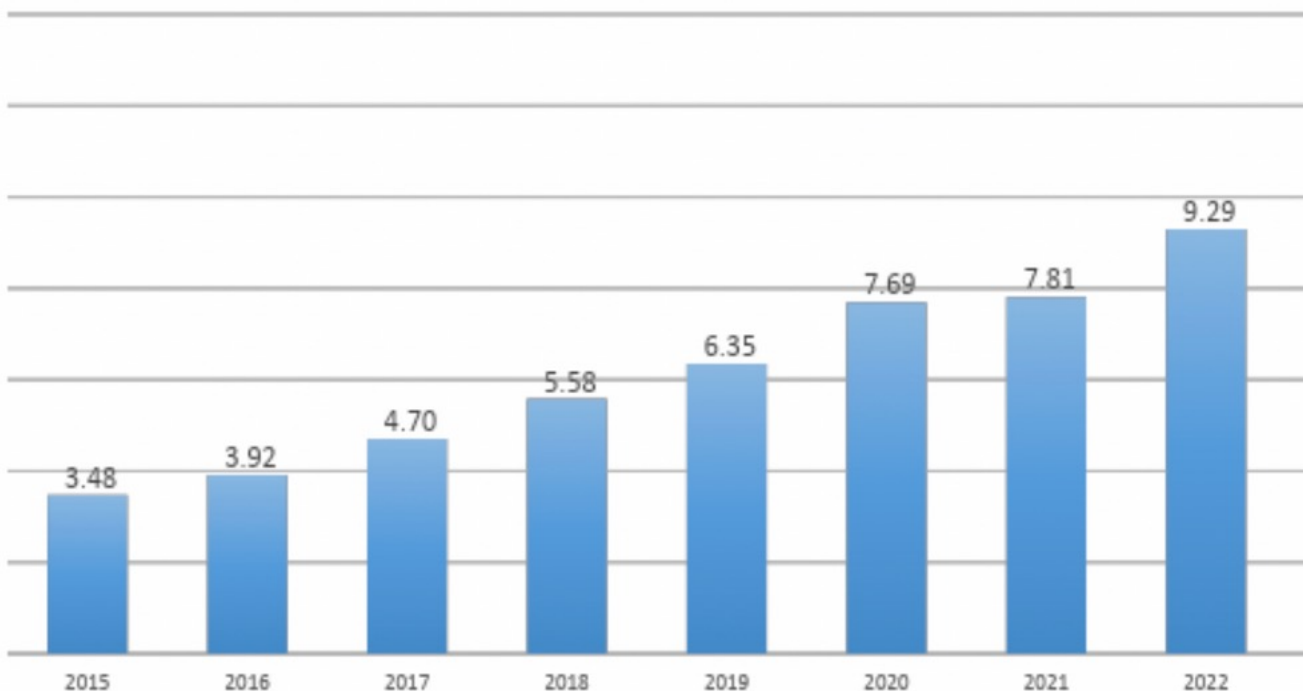
# STUDENT PLACEMENT

Shiv Nadar University emphasizes individual freedom, diversity, and academic brilliance through education. Every year, our students reach new and more significant milestones, thereby taking the Institute closer to its aim of creating a comprehensive, research-focused, and globally competitive education.

Over the years, graduate students have received employment offers from some of the best names in the industry. With each passing year, the institute has raised the bar higher.

This year, the institute witnessed a stellar placement season, with about 94.3 % of the batch receiving industry and academic offers during the academic year. Students received offers from many leading organizations, including Accenture, Adani Enterprise Ltd., Adobe, Airtel, American Express, Capgemini, Cushman & Wakefield, Deloitte, DE Shaw, Genpact, Google, Goldman Sachs, HCL Technologies, HSBC, HP Enterprises, IBM India, IQVIA, Ken Research, KPMG, Larsen & Toubro Technology Services Ltd., Lowe's India, Microsoft, Morgan Stanley, Publicis Sapient, Schindler, Tata Technologies, WNS Global Services, amongst others.

## Average Salary YoY





## GRADUATION CLASS (2021-22)

### AT A GLANCE

Students Graduated	446
Students Pursuing Job	295
Students Pursuing Higher Studies	76
Students Pursuing Entrepreneurship	7

## PLACEMENT STATISTICS (2021-22)

### AT A GLANCE

Overall employment partners Since inception	>> 500 +
Total organizations visited for recruitment in AY 2021-22	138
Average Salary Offered	9.29 Lacs
Median Salary Offered	8.00 Lacs
Highest Salary Offered	29.25 Lacs
Average salary for Top 20% Placements	15.71 lacs
Average salary for Top 50% Placements	12.42 Lacs
Average salary for Engineering Students	10.79 lacs
Average salary for MBA Students	8.40 lacs

Global Top Companies  
Where You Can Spot

**SHIV NADAR**  
UNIVERSITY  
DELHI NCR

ALUMNI



Notable Universities  
Where You Can Spot

**SHIV NADAR**  
UNIVERSITY  
DELHI NCR

ALUMNI



## Higher Education

**Students received admission offers: 88 (SOE : 17, SHSS: 25, SNS:42, SME :4)**

**Abroad : 67 | India: 21**

**Notable Universities Abroad:** University of Illinois Chicago, University of Pittsburgh, Oregon State University, University of Leeds, Rutgers University, Columbia University, Carnegie Mellon University, Indiana State University, Johns Hopkins University, University of Pennsylvania, King's University, Northeastern University, London School of Economics and Political Science, Delft University of Technology, Arizona State University etc.

**Notable Universities India:** Tata institute of Social sciences, Ashoka Univeristy, Xavier School of Management, IIM Banglore, ICFAI Business School, IMT Ghaziabad, Jawaharlal Nehru Centre for Advanced Scientific Research, etc.

# ATAL INCUBATION CENTRE

Shiv Nadar AIC Research Foundation (SNARF) and the Atal Incubation Centre were established in 2017 under the Atal Innovation Mission as an initiative by NITI Aayog, Government of India. The Incubation Centre is an active knowledge and resource catalyst to foster innovation, entrepreneurship, and cradle start-ups. Since its inception, the Centre has become a start-up hub offering expertise, mentorship, the infrastructure of co-working spaces, and a full spectrum of business resources, including hiring and legal assistance, seed money, and mentorship from distinguished industry stalwarts. The overall synergetic research and technology resources of Shiv Nadar Institute of Eminence make AIC conducive for Technology startups to thrive.

The campus has advanced lab infrastructure/facilities, knowledge, and motivation to drive entrepreneurial spirit and stimulate innovation via startup ideas. AIC closely works with the student body -Entrepreneurship Cell (E-Cell) to encourage and create an entrepreneurship culture in the university.

Six years of the center's establishment have witnessed creativity and ideas pulsating with novelty, compelling solutions, scalability potential, and well-rounded teams. The Center has recently received two significant grants – Rs. 4.26 crore from start-up India Seed fund for three years; and Rs. 2.5 crore from Startin UP Start-up policy for five years.

The Center launched the fifth edition of its 'venture challenge' in association with HCL Technologies and Dassault Systems. It received over 290 applications from young entrepreneurs across the country in Agritech; Edtech; Healthtech; Spacetech; Women-Led Startups; EV & Power Batteries; Life Science; Additive Manufacturing; Robot and Robotic Process Automation; Industry 4.0 or Any Other disruptive technologies sectors.



## Some key events of the year

Date	Name of the Training/Event	Attendees	Session Type	Speakers
27 July 2021	Startup Prelude 2021	50+	Induction and training	Sanjeev Bikhchandani, Founder of Naukri.com.
3 Aug 2021	Startup Prelude 2021	50+	Induction and training	Rakesh Munnanooru, Founder of Whistledrive
7 Sep 2021	Build Your Start-up with the Power of Visuals	25+	Mentor session	Sarika Gulati Gupta, Founder of Reel on Social
10 Sep 2021	Building a Compelling Pitch Deck	25+	Mentor session	Chetan Bhatia, Founder of Honest Create.
14 Sep 2021	Women in the Startup Ecosystem	50+	Panel Discussion	Preeti Chaudhary, LinkedIn Local Anila Choraria – Ministry of MSME Dr.Lakshmi Jagannathan, DER-BI Foundation Gandhali Samant, GitHub Pooja Bhatia Vasaikar, CLP, RTTP, Patent Agent, Innovation-Technology Transfer Office Foundation for Innovation Technology Transfer
1 Oct 2021	Best Hiring Practices for Start-ups	30+	Mentor session	Mr. Vaibhav Singh, Managing Director, VLS Sourcing Private Limited
22 Oct 2021	Launch of Idea Xchange	100+	Networking event and startup showcase	NA
27 Oct 2021	OKRs for Startups: Understanding the Key Goals & Objectives	30+	Mentor session	Maya Sadasivan, Life Skills Facilitator - Leadership Coach, Tata Elxsi
17 Nov 2021	AIC Pre-Incubation & Hot-desk Orientation	50+	Training session	Vasishta Chary, Driving Pan India Initiatives at Headstart.
18 Nov 2021	Execution Strategy & Implementation of OKRs for Startup Success	50+	Mentor session	Mr. Tushar Vadera, Leading investments at Headstarters Investor Circle.
30 Nov 2021	Visit of Mr. Amitabh Kant, CEO - NITI Aayog, Government of India	150+	Interactive	NA



2 Dec 2021	Visit of Gautham S, Microsoft Innovation Program Lead and Headstart Director	100+	Interactive	NA
28 December 2021	Startup Talk Series Session 1	40+	An interactive session of the founders with the students	Siddhant Bajpai, Founder, Andromeida
29 December 2021	Startup Talk Series Session 1	40+	An interactive session of the founders with the students	Anirudh Sharma, Founder, QuarkMe
30 December 2021	Startup Talk Series Session 1	35+	An interactive session of the founders with the students	Yug Dave, Founder, MyEra
14 Jan 2022	Determine the valuation of your startup	25+	Speed mentoring	Dr. Shalu Kalra, Associate Professor, Shiv Nadar University
21 Jan 2022	Innovations and compliances for startups	25+	Speed mentoring	<a href="#">Mukesh Chandra Kestwal</a> , Senior Program Manager at <a href="#">Headstart Network Foundation</a>
22 Jan 2022	B2B Sales: Acquiring the first 50 customers	45+	Speed mentoring	Anupreet Singh, Director of Sales, Slintel Prakhar Jain, Senior Director of Global Sales, Whatfix
31 Jan 2022	Value Vs. Profitability for Startups	12+	Speed mentoring	Dr. Raghupathy M.B., Associate Professor, SME, Shiv Nadar University Delhi NCR.
5 Feb 2022	Go-to marketing strategies to uplift your business.	25+	Speed mentoring	Achyut Chandra, Lead - Open Innovation, HCL Technologies
17 Feb 2022	Opportunity valley for tech startups: funding and scalability	50+	Panel Discussion	Visa Ray, Investment Team, Special Invest Tushar Vadera, Lead, Headstart Investor Circle Akhilesh Agarwal, AVP, Pi Ventures
25 Feb 2022	Democratization of Financial Services and Opportunities for Fintech.	15+	Speed mentoring	Dr. Ph.D., Assistant Professor, Dept. of Finance, Accounting and Control, SME, Shiv Nadar University, Delhi NCR.

28 Feb 2022	Structuring the financial & legal compliances	20+	Speed mentoring	Ankit Manglik, Senior Partner, GRANDMARK & Associates
3 Mar 2022	Transforming Startups and the Opportunity in New India	50+	Panel Discussion	Rahul Gulati, Program Manager, Github  Karuna Kanwar, Program Manager, iHUB  Anubhav Tiwari, Head- Deep-tech & Medtech Incubator, CIE IIT Hyderabad  Anupam Pandey, Incubation and Program, CIE at IIT Hyderabad
4 <sup>th</sup> April to 07 <sup>th</sup> April 2022	Venture Challenge 5.0 Pitch Sessions	60+	Pitching by the shortlisted startups	NA
7 May 2022	Venture Challenge 5.0 "Big Pitch"	40+	Idea showcase and pitching	Total Panelists: 29  The curated set of Panel consists of investors, entrepreneurs, and experts from various organizations like HCL Tech, STMicroelectronics, Dassault Systemes, Headstart, Anthill Venture, Blume Venture, GrowX Ventures, Pi Ventures, and speciale.
17 June 2022	IDEX Innovators Meet	25+	Networking and awareness	Samridh, Program Executive, DIO, Ministry of Defence  Sheeba Khan, CEO, Shiv Nadar AIC

# INFRASTRUCTURE

The University continues to create a residential experience for students which is second to none. The academic year saw the launch of a new state-of-the-art auditorium with the latest acoustic features. Another key project soon to be launched is the 40,000 sq feet student activity center. It has a tinkering lab, music and theatre studios, seminar rooms, and much more. Our new auditorium, a cricket ground, the mathematics library, and two more hostels will add to the rich campus life.

# GOVERNANCE

Until August 3, 2022, the University had the following governance structure

## Court

Composition of Court		
S. No.	Name of the Members	Designation
1	Mr. Shiv Nadar	Chancellor, SNU and Chairperson of the Court
2	Mr. Shikhar Malhotra	Pro-Chancellor – Member
3	Dr. Rupamanjari Ghosh (till 31.01.2022) Dr. Ananya Mukherjee (w.e.f. 31.01.2022)	Vice-Chancellor – Ex-officio Member
4	Dr. S. Sankar Sastry	Member
5	Dr. N. Balakrishnan	Member
6	Dr. Ashok Misra	Member
7	Dr. Nikhil Sinha	Member
8	Dr. Srikant M. Datar	Member
9	Mr. Alok Ranjan	Member
10	Mr. Sudhir Naudiyal	Registrar – Non- Member Secretary

## Executive Council

Composition of Executive Council		
S. No.	Name of the Members	Designation
1	Mr. Shiv Nadar	Chancellor, SNU and Chairperson of the EC
2	Mr. Shikhar Malhotra	Pro-Chancellor, Member
3	Dr. Rupamanjari Ghosh (till 31.01.2022) Dr. Ananya Mukherjee (w.e.f. 31.01.2022)	Vice-Chancellor, Member
4	Mr. Pawan K. Danwar	Member
5	Mr. D.K. Srivastava	Member
6	Mr. Saurav Adhikari	Member
7	Mr. Sudhir Naudiyal	Registrar – Non- Member Secretary

**Academic Council**

Composition of Academic Council		
S. No.	Name of the Members	Designation
1	Dr. Rupamanjari Ghosh (till 30.01.2022) Dr. Ananya Mukherjee (w.e.f. 31.01.2022)	Vice-Chancellor - Chairperson
2	Col. Gopal Karunakaran (Retd.)	Executive Director
3	Dr. Bibek Banerjee	Dean, School of Management and Entrepreneurship, SoME; Dean, Academy of Continuing Education; Director, Strategic Planning
4	Dr. Sandeep Sen	Dean, School of Engineering, SoE; Senior Professor, Computer Science & Engineering
5	Dr. Suneet Tuli	Dean, Research & Partnerships, Professor, Electrical Engineering
6	Dr. Ajay Dandekar	Chairperson, Center for Public Affairs and Critical Theory (C-PACT)
7	Dr. Dinkar Prasad	Associate Director (Academics), SoE; Professor & Head, Department of Electrical Engineering, SoE
8	Dr. Amber Habib	Professor and Head, Department of Mathematics, SoNS
9	Maj. General G. Jaishankar (Retd.)	Director, Student Affairs
10	Dr. Rajat Kathuria	Dean, School of Humanities and Social Sciences, SoHSS
11	Dr. Sankar Dhar	Professor & Head, Department of Physics, SoNS
12	Dr. Sanjeev Galande	Dean, School of Natural Sciences, SoNS; Head, Department of Life Sciences, SoNS
13	Dr. Parthapratim Munshi	Associate Professor & Head, Department of Chemistry, SoNS
14	Dr. J.P. Gupta	Distinguished Professor, Department of Chemical Engineering, SoE
15	Dr. Saroj Kaushik	Distinguished Professor & Head, Department of Computer Science and Engineering, SoE
16	Prof. Shahid Jamal	Professor & Head, Department of Communication, SoHSS
17	Dr. Jaya Menon	Professor & Head, Department of History, SoHSS
18	Dr. Yasmeen Arif	Professor & Head, Department of Sociology, SoHSS
19	Dr. Sambudha Sen	Professor & Head, Department of English, SoHSS
20	Dr. Partha Chatterjee	Professor & Head, Department of Economics, SoHSS
21	Dr. Harpreet Singh	Associate Professor & Head, Department of Mechanical Engineering, SoE
22	Dr. Shibashis Chatterjee	Professor & Head, Department of International Relations and Governance Studies, SoHSS
23	Dr. Ghanshyam Pal	Associate Professor & Head, Department of Civil Engineering, SoE
24	Prof. Atul Bhalla	Professor & Head, Department of Art & Performing Arts, SoHSS
25	Mr. Sudhir Naudiyal	Registrar - Non- Member Secretary



# THE JOURNEY TO SUSTAINABILITY

**Shiv Nadar Institution of Eminence is fully committed to the UN Sustainable Development Goals (SDGs). We have embraced a four-pronged strategy for SDGs through teaching, research, our core institutional practices, and partnerships.**

At the heart of the agenda 2030 are five critical dimensions - people, prosperity, planet, partnership, and peace, also known as the 5Ps'. This overarching framework of agenda 2030 and Sustainable Development Goals (SDGs) has driven Shiv Nadar University to leap into the sustainability movement.

We are integrating the idea of sustainability on campus in many ways – teaching and learning, research, institutional practices, advocacy, and partnerships. The idea behind this approach is the belief that for sustainability to thrive, it must become mainstream and interwoven into the university policy and strategy. At Shiv Nadar, we have positioned ourselves as a platform and hub for innovation, critical thinking, and creatively nurturing future leaders, entrepreneurs, researchers, and individuals who can make a difference. The social impact is thus, built into much of the research and teaching at the university.

*According to research at the Stockholm resilience center, four of the nine planetary boundaries have now been crossed due to human activity. These include climate change, loss of biosphere integrity, land-system change, and altered biogeochemical cycles (phosphorus and nitrogen). The scientists call two of these, climate change and biosphere integrity, "core boundaries." Significantly altering these "core boundaries" would "drive the Earth System into a new state."*

At the microcosm of the university, we are taking steps to respect these planetary boundaries and honing a future generation who can live and thrive on the idea of sustainability.

To highlight some examples,

## 1. Committed to preserving the biodiversity on campus

Spread over 300 acres; the campus is a rich habitat of flora and fauna. At the university, we have recorded 277 vascular plant species belonging to 277 genera and 62 families, of which several species are new records for the state of Uttar Pradesh. The campus is also rich in faunal diversity, characterized by a mixture of wetlands and terrestrial species, mammals, aves, reptiles, amphibians, fishes, molluscs, annelids, and insects, including 35 butterflies species. These findings and discoveries are published in books for posterity to facilitate research. We have been able to eco-restore a 10.4 acres land into a rich biodiversity thematic botanic garden that is first of its kind in northern India, conceptualized and established to increase awareness about various plants and conserve them in their unique germplasm for education and research. The garden has 3000 plants in the main garden and 12 theme gardens belonging to 805 taxa (691 plant species, 2 subspecies and 112 varieties including hybrid and cultivated varieties).

- <https://unfoundation.org/blog/post/the-sustainable-development-goals-in-2019-people-planet-prosperity-in-focus/>
- <https://www.stockholmresilience.org/research/research-news/2015-01-15-planetary-boundaries---an-update.html>

## 2. Dadri development project

Dadri development project (DPP) is a roadmap of how the university can participate in the progress of the community in which it is located. This commitment is shared by the university leadership, staff, and students and is instilled in the core of the university's academic mission.

## 3. Robust Environment, Health, and Safety (EHS) policy

The university has an active and robust EHS policy with the idea of embedding sustainability in its institutional practices. The policy aims to make effective and efficient use of university resources; minimize any adverse environmental impact; comply with relevant legislation, and encourage the university community to develop a sustainable approach to their work and lifestyle. The EHS policy applies at each stage of development of academics and extracurricular activities as well as services, from research to full-scale operation, in all its domains. It applies to every step in the life cycle of the process and services, i.e., a cradle-to-grave assessment. Recognizing our community as an important asset, we are committed to providing safe and healthy working conditions for students, teachers, researchers, staff, and those visiting the campus.

# ISO Certification – EHS Management 28



**Environment  
Management System**



**Occupational  
Health & Safety  
Management System**

**Continuation Assessment Audit by the Accreditation Body was held on 6-7<sup>th</sup> Jan 2022**



#### 4. Energy, water, and food waste management

We have initiated concrete measures to monitor and reduce carbon footprint on campus. For example, in saving energy, water, and paper; reducing food wastage; organic food practices; increasing the use of alternative energy; running sustainable transport, concrete steps to a no-plastic campus, and tree plantation, and water conservation, to name a few. We have collaborated with the Shiv Nadar Foundation to develop a comprehensive ESG framework for the university and launch programs in this area.

#### 5. Celebrating SDG Goal 17 – Partnerships provide a pathway to sustainability

While spearheading the movement of sustainability on campus and in the adjoining community, we intend to take the lead in SDG 17 by collaborating actively with higher education institutions, organizations, and community to facilitate knowledge transfer, research, and good practices.

- The Department of Chemical Engineering has collaborated with local industries, including Kawatra paper mills, Dadri, Kings international Ltd, Unnao (Leather industry), and nearby restaurants to help them find sustainable and eco-friendly solutions for waste management and convert waste into energy.
- The Agricultural Water Management field laboratory has been established by the Department of Civil Engineering to address critical issues in agricultural water management and the food and water security nexus. The Ministry of Water Resources and the Ministry of Agriculture & Farmers' Welfare, Government of India, have marked these research areas as of national importance. These areas are also aligned with the focus of the government's national missions on more crop per drop (increasing water use efficiency), har khet ko pani (increasing the cultivated area under irrigation), and Goal 4 (Improving water use efficiency by 20%) and Goal 5 (promotion of basin level integrated water resources management) of the National Water Mission. The Government of India and the university co-funded the lab to serve as a state-of-the-art research facility in water management. It has an extensive crop experimentation facility equipped with a drip irrigation system and research equipment facility for monitoring crop and soil parameters. Work is underway to develop a farmer laboratory for soil and irrigation water testing, and dissemination of weather data for use by local farmers. Also funded by the Government of India, the lead faculty is developing AI-based decision-support systems for improved water use efficiency under a regulated deficit drip irrigation regime in the backdrop of climate change. This project will provide water-saving solutions for the two widely grown and consumed crops, rice and wheat.
- Dr. Ankit Gupta, assistant professor, department of Mechanical Engineering, in collaboration with his team (Rakesh Rayapureddi, Vaibhav Sehgal, and Amith Palacherla), has created the integrated autonomous paddy stubble reaper with the baler to offer a practical solution to the traditional problem of stubble burning - the inherent cause for air pollution in north India during the winter months. *Given its feasibility to tackle (and resolve) an age-old menace, the innovation got traction and was received favorably by all stakeholders.*

## Future Plans and Initiatives

The university continues to innovate and create solutions to issues of sustainability. Here are some of the plans and initiatives in progress,

- To document the journey of Shiv Nadar University towards contributing to sustainable development goals
- To evolve the Shiv Nadar University campus as a living lab
- PNG connections for all residents, dining halls, clubs, etc., are in progress and set to be achieved by the end of the year
- Concrete measures to enhance solar power from the current capacity of 400KW to 2000KW, which will lead to huge savings on electricity reduction in carbon footprint
- Review, analysis, and refurbishment of laboratories for the safety of operations and environmental conservation
- Revival of compost plant and enhancement of capacity from 200 kg to 400 kg
- Waste paper recycling and product development
- Tree Plantation
- Carbon neutral efforts and computation







**SHIV NADAR**  
— UNIVERSITY —  
DELHI NCR

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