



Indian Institute of Technology Guwahati  
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Ministry of Education  
Government of India



PROF. T. G.  
SITHARAM

CHAIRMAN,  
ALL INDIA COUNCIL FOR  
TECHNICAL EDUCATION  
(AICTE)

MAJOR INITIATIVES & ACHIEVEMENTS

2019 - 2022





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## Prof. T. G. Sitharam

Chairman, AICTE

Prof. (Dr.) T G Sitharam took over as Chairman, All India Council of Technical Education (AICTE), Govt of India on December 21, 2022.

He was the Director of Indian Institute of Technology Guwahati, Assam for 3.5 years (from July 2019 to December, 2022).

He Obtained his B.E.(Civil Engineering) from University of Mysore; Master's from Indian Institute of Science, Bangalore in 1986 and Ph.D. from University of Waterloo, Ontario, Canada in 1991.

Currently, he is also the Chairman, Board of Governors at CIT, Kokrajhar and Chairman, Board of Management of North East Regional Institute of Science and Technology (NERIST), Nirjuli, Arunachala Pradesh.





## Major Initiatives

- Virtual Research Centre for Multidisciplinary Research programs
- Signed MoU with Mehta Family Foundation for establishing Mehta Family School of Data Science and Artificial Intelligence with undergraduate programmes
- MoU with Mehta Family Foundation for establishing Jyoti & Bhupat Mehta School of Health Sciences & Technology
- MoU with Govt. of Assam to set-up Assam Advance Health Innovation Institute (AAHII)
- Focus on Resource Generation & Finance; Public Relation, Branding & Ranking (PRBR)
- Guidelines for inviting Visiting/Practicing/Distinguished Professors as Faculty
- Launched Monthly Newsletter 'Vijnapti'
- IITG Holistic Wellness Center Inauguration
- Northeast Institution Heads' Conclave conducted on 17th-18th Feb 2020 with participation from Directors and VCs of 8 prominent Northeast NITs and CFTIs



## Major Initiatives

- New Guidelines for Awards: Best Thesis Award for all PG and Ph.D. students in all Depts, Best Alumni Award, Best Teacher/Research Awards for Faculty, Award for Best Performing Employee/Support Staff
- Northeast Research Conclave 2022 organized and attended by Hon. MoE, Govt. of India; Hon. CM, Govt. of Assam; Hon. MoE, Govt. of Assam; Hon. MoS, for Education Govt. of India and other eminent personalities. 7,000 participant delegates, 150 Academic Institutions and over 100 Startups/MSMEs/Industries - Research & Innovation Exhibition
- Inauguration of 'Centre for Disaster Management and Research' (CDMR), state-of-the-art Centre for Nanotechnology (CNT), Centre for Indian Knowledge System (CIKS), India's First Drone Airport 'AHOM Droneports'
- Launched Centre for Intelligent Cyber-Physical Systems (CICPS), aimed at developing indigenous technologies
- Collaboration with Assam Government in Water Resource Management, Disaster Management etc.
- Inauguration of Australia India Water Centre (AIWC)
- Joint Degree Programmes





## Academic Achievements



- 2nd (India), 37th (Global) Best University in India based on Citations per Faculty (CPF)
- NIRF Ranking 2021 - 7th Rank in Engineering Category & 8th Rank in Overall Category
- QS world ranking rose from #470 to #384
- Improved Overall World Ranking to #350 in Nature Index Rating & Ranked within Top 10 in India Overall + 4 subjects
- Ranked 5th among IITs in Top 100 world universities (Petroleum Engineering)
- 'THE' Impact Global Ranking 2021 - Ranked under Top 200 Globally in SDG4, SDG7, SDG9 & under Top 400 Globally in SDG6, SDG10
- 3rd in Swachhata Ranking 2019 among HEIs





## Academic Initiatives



- Best Masters & PhD Thesis Award (research work) introduced (2020-2021)
- First to introduce course on MS (Research) - E-Mobility
- Established School of Business & rolled out MBA programme
- Launched new B.Tech program in Data Science & AI
- Launched Masters in Liberal Arts under Dept of HSS
- Introduced course of Sustainable Development Goals (SDG) for B.Tech students
- Created online learning and examination platforms
- Constituted High Level Committee to provide guidelines for improving online teaching, learning and evaluation experience of faculty and students



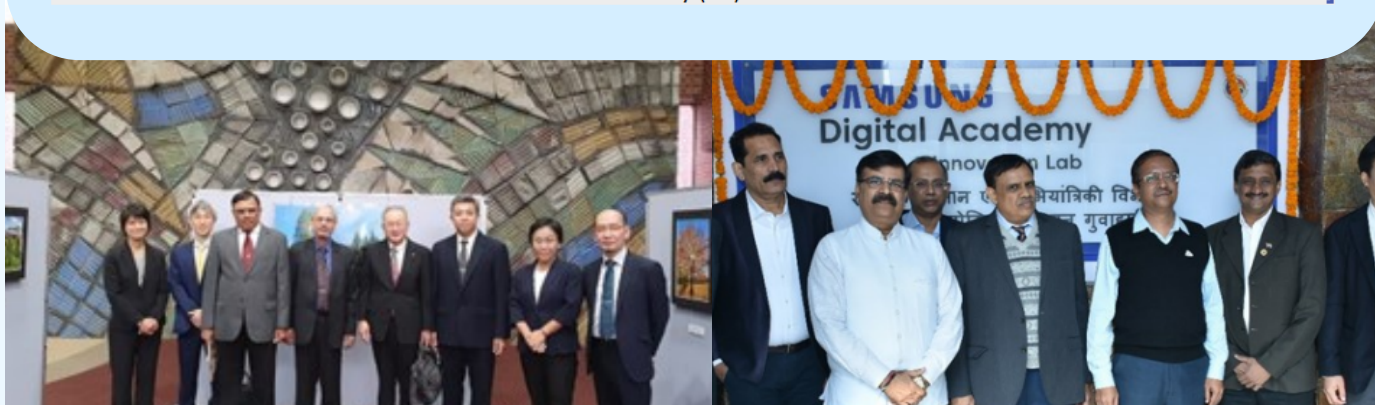


## External Relations Initiatives



- International Students' Day 2022 celebrated in Nov 2022
- In collaboration with SAIL, organized International Students' Day on 12th November 2021. Attended by 35 international students from Syria, Ethiopia, Seychelles, Sudan, Cameroon & Spain (2021-2022)
- Visit of High Commissioner of Australia to India and French Delegation to pave way for academic & scientific research collaboration (2021-2022)

YEAR	Number of MoUs/MoAs	Institutions & Organizations
2019 - 2020	9	Gifu University (Japan), Suzuki Motor Corporation (Japan), Sherubtse College, Royal University of Bhutan (Bhutan), National Institute for Materials Science (Japan), Chonnam National University (South Korea), NXP India Private Limited, Kyoto Institute of Technology (Japan), Erasmus+ Agreement with University of Iceland
2020 - 2021	15	University of Nottingham (UK), Ecole Centrale de Nantes (France), Gifu University (Japan), Kagawa University (Japan), Stockholm University (Sweden), University of Central Lancashire (UK), University of Connecticut (USA) and more
2021 - 2022	10	University of Technology Sydney (Australia), Institute of Physical & Chemical Research RIKEN (Japan), Gachon University (South Korea), UFSC (Brazil), University of Glasgow (UK), University of St Andrews (Scotland), India Japan Laboratory KEIO University (Japan), Bahir Dar Institute of Technology (Ethiopia), NTT AT (Japan), Durham University (UK)
2022	4	PARISTECH (France), Kanazawa University (Japan), Aalto University (Japan), London South Bank University (UK)



## External Relations Initiatives



- Joint Masters & PhD programme (2020-2021) - Gifu University (Japan): MTech in Food Science & Technology, PhD Mechanical Engineering; Heidelberg University of Germany, BSBE - PhD Bioinformatics; Curtin University Australia - PhD Civil Engineering; PhD program with National Institute of Material Science, IIT BHU Varanasi and Shantou University (China)
- 8 Foreign student intake for full time courses, 14 IITG students selected for foreign university exchange/internship program (2020-2021)
- 23 Distinguished Foreign Academicians appointed for collaborative research and technology development with IITG faculty and students (2020-2021)
- Silver Jubilee Celebrations organized for 25 years of impactful existence - September 2019
- 6 MoUs & MoAs related to COVID related collaboration - COVID 19 vaccine development collaboration with Hester Biosciences Limited, Ahmedabad; COVID 19 Diagnostic Kits Development collaboration with RR Animal Healthcare



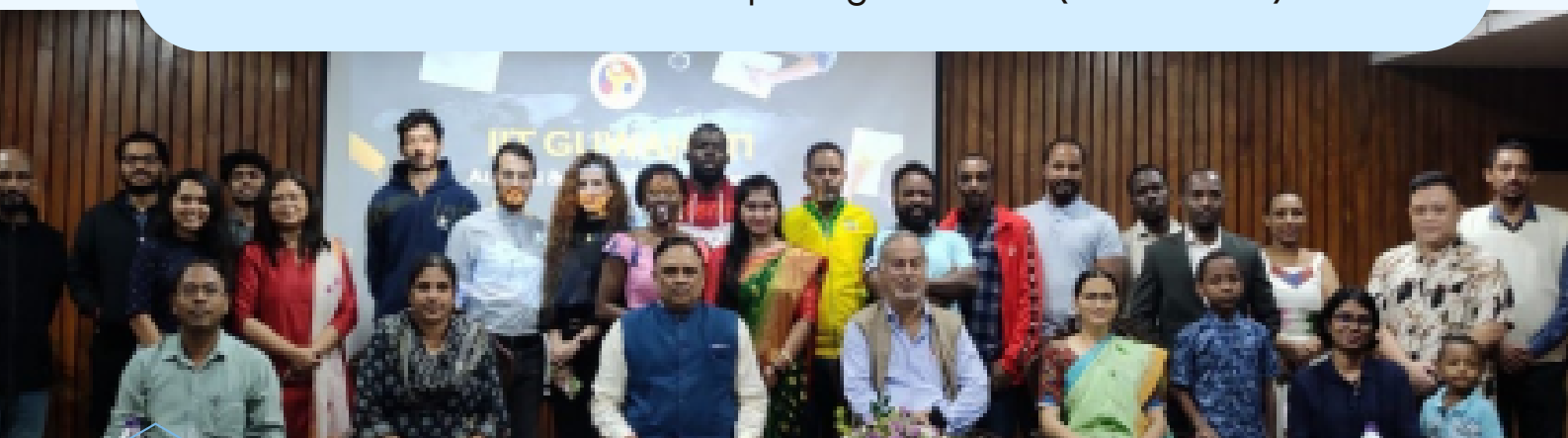


# External Relations Initiatives

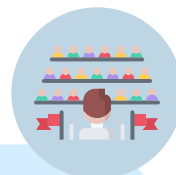


## Alumni Connect

- Alumni Award 2020 introduced after 25 years and ceremony conducted online, and recipients included senior professional from Amazon, CUREFIT cofounder & teaching expertise from Virginia Tech (USA)
- Alumni Award 2022 -
  - Distinguished Alumni award felicitated to Prof. Jitesh H. Panchal, Professor (ME), Purdue University & Prof. Vishal Monga, Professor (EE, CS) Pennsylvania State University
  - Young Alumni Achiever Award felicitated to Ms. Richa Singh, Co-Founder & CEO, YourDOST & Dr. Deepjyoti Deka, Senior Scientist, Los Alamos National Laboratory, USA
- Alumni Award 2021 conducted online, and recipients of the award facilitated by Director IITG included Distinguished Alumni Award awarded to CEO (ClearTax) & Young Alumni Achiever Award to Alum Faculty at Shantou University
- Launch of Alumni Portal - March 2022
- Launch of Alumni Mentorship Program 3.0.2 (2019-2020)



# External Relations Initiatives



## Conferences Organized

- ISANAYA 2020; IEEE 34th International Conference on VLSI Design & 20th International Conference on Embedded Design; NEMA VI; NE Green Summit'20; 8th International Conference on Fluid Mechanics & Power; ASMC'20; Online Workshops on 3D Printing, High Energy Physics, Cosmology, Thernostic Devices; Entrepreneurship Development Program and more
- MACRO 2020, ICANN 2021, Advances in Algal Research 2021, FICS 2020, CRSI National Symposium in Chemistry NSC28, 18th IEEE Council International Conference INDICON 2021, VETOMAC 2021, HWWE 2021, NATCOSEB XX, ACODS 2022, Gramotthan 2021, ICCAQM 2021, Graduate Research Meet 2021
- International Webinars and Symposiums on Carbon Capture & Sequestration, Linguistic Issues in Speech Processing of under resourced languages, Art of Story Telling, Indian Nanoelectronics Users' Programme, Tibeto-Burman Linguistics, INA & Hill Tribes of Northeast India, Drone based Construction, Climate Governance, Cloud Computing Hydroecological modelling for Himalayan Rivers, Software Skill Development for Advance Manufacturing, , Flow Cytometry

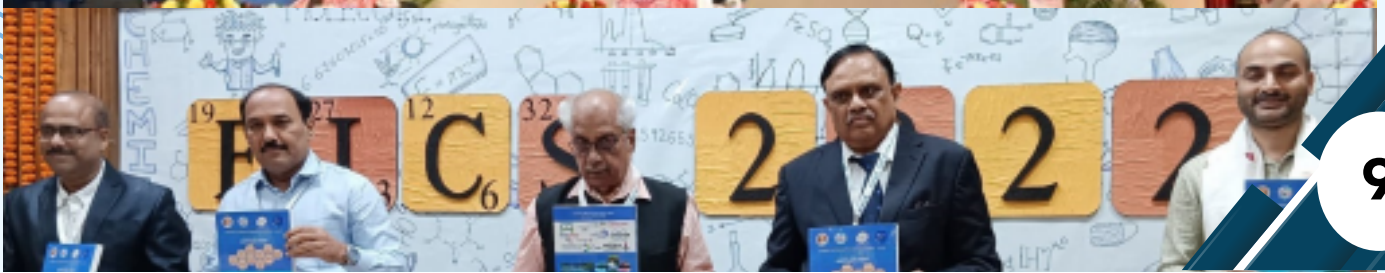




## Research & Development



- IIT Guwahati Research Park (IITGRP) established to encourage innovative thinking and collaboration with Industry
  - conducted 6 training programmes, 6 conferences/seminars & 4 events on Startups, Innovation Exhibition & Model Presentation, Hackathon & Technical presentation; 1st ever Research & Industrial Conclave organized in Jan 2022
- Office of Dean Industrial Interactions & Special Initiatives (II&SI) established to proliferate research infrastructure & enhancing industry collaboration
  - Intellectual Property Rights (IPR) Cell office established covering IPR for all students
- New Generation Innovation & Entrepreneurship Development Centre (NewGen IEDC) funded 45 project proposals on innovative technologies till Feb 2022
- E&ICT Academy initiative of MEITY provided skill training to faculty in recent trends in engineering & ICT applications; successfully trained 17,678 participants
- Northeast Centre for Biological Sciences and Healthcare Engineering (NECBH) has conducted 14 workshops and Training programs and connected over 1000 researchers from 59 different institutions of Northeast and 144 institutions across India. More than 125 articles, 11 book chapters were published and 4 patents filed with the support of NECBH



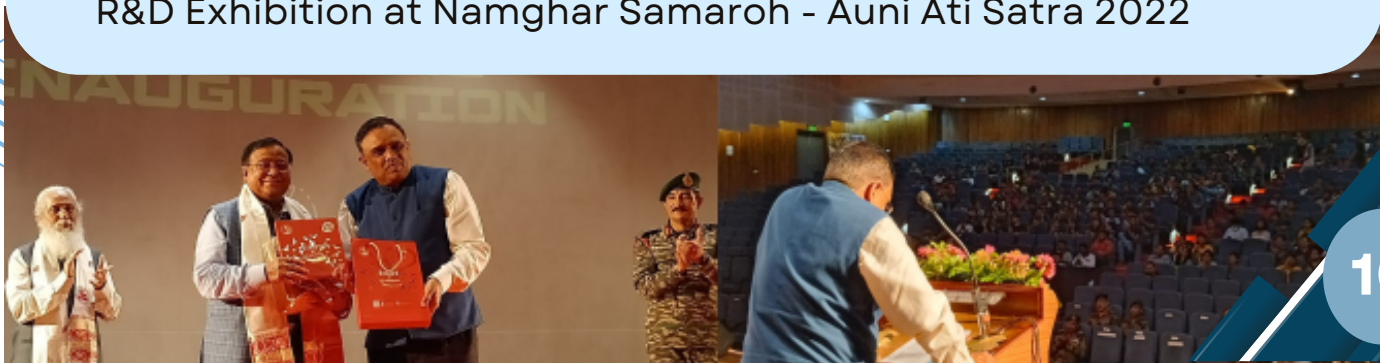
## Research & Development



- In collaboration with DSIR established TePP Outreach cum Cluster Innovation Centre (TOCIC) to promote innovation in the Northeast under the PRISM scheme
- Technology Incubation Centre (TIC) continues to grow with 15 incubatees & 2 virtual incubatees active with 11 already graduating from TIC
  - As part of Numaligarh Refinery Limited MoU 1st Student Startup Setup at TIC
  - Women Startup Programme WSP3.0 connected women led incubated ventures for growth support
- BioNEST at CFN-IITG led innovations in areas of Biomaterials, Industrial Biotech, and Diagnostics
- Extensive Product Development undertaken, and multiple Patents received in the domains of nanotechnology, biotechnology, mechanical engineering, materials science etc.

### R&D Initiatives - 2022

- Mega Projects submitted for funding: DONER (208.4 Cr); MoE (395.25 Cr); SATHI (79.32 Cr); MoHUA (143.11 Cr); NEDFI (1.52 Cr)
- 56 New Sponsored Research Projects led by faculty with specific domain expertise registered with total sanctioned value of Rs. 49.61 Crore
- 285 Sponsored Projects are ongoing
- Research MoUs/MoAs signed with CRTDH, IAESPH, B.S. University of Informatics & Radioelectronics; SIMATS, DBT, Ekaterra Research & Development India Pvt, OIL
- Events Organized - Taiwan India 2022 Exchange; Japanese Food & Agriculture Delegation; InvenTiv 2022 (All IIT R&D Fair); R&D Exhibition at Namghar Samaroh - Auni Ati Satra 2022





# Research & Development



## R&D Initiatives 2021 - 2022

- 10 Major Projects funded by DEITY, MEITY, DBT, ICMR, DSIR, DST, Oil India etc. onboarded with total cost of Rs. 25 Crores +
- More than 131 Sponsored Research Projects led by faculty with specific domain expertise with total cost of Rs. 118.19 Crores+
- 83 Sponsored Research Projects were completed
- II&SI: 7 Technology Transfer Innovations Registered
- 55 new Patent applications received of which 11 Patents Granted
- 195 Consultancy Projects received with sanctioned value of Rs. 11.64 Cr
- Research MoUs/MoAs signed with Dept of Biotechnology; Pollution Control Board Assam & GMC; Panchayat & Rural Development, Assam; NERLDC & POSCO; CARI, Kolkata; Oil India Limited; CPRI, Bangalore; HPCL; I-Hub Foundation for Cobotics (IHFC); C-CAMP; Wageningen University
- Events Organized - Orientation Program, Research and Innovation Exhibition, Visit by CBC Corporation India, Northeast Research Conclave (NERC 2022), Launch of Guwahati Declaration, IIT Woman Faculty Research & Innovation Award



# Research & Development



## R&D Initiatives 2020-2021

- 8 Major Research Projects funded by DBT, SERB, DST, MoEFCC, MEITY etc. onboarded with total cost of Rs. 36 Crores +
- More than 68 Research Projects led by faculty with specific domain expertise with total cost of Rs. 30 Crores+
- 153 Consultancy Projects with sanctioned value of Rs. 11 Cr
- 38 COVID19 Projects implemented
- Research MoUs/MoAs with - IITB (Digital Gatimarg), JV Micronics, Dept of BioTechnology (Govt of India), Vikram Sarabhai Space Centre (VSSC), Umeandus Technologies India, IIT Roorkee, C-CAMP, MEITY, Northeast Frontier Railway and more
- Events Organized - COVID19 Grand Idea Challenge, Virtual Outreach Day, Virtual Research Meeting on Robotics, Drones & Automation, 3D & 4D Printing, App Software Development



**SPILD™**

**COVID-19 RT-qPCR Detection Kit**

**Kit Content:**

- 2KRT-qPCR MasterMix
- RT-qPCR Calibration dye
- Covid-19 Primers/Probes
- Positive Control
- Negative Extraction Control
- Nuclease-Free Water



(Jointly Developed by IIT Guwahati & RR Animal Health Care)



# Research & Development



## R&D Initiatives 2020-2021

- II&SI - Technology Transfer (9) Registered: BSBE Dept - Antimicrobial formulation as disinfectant & hand sanitizer, Silk based gel for wound care; NANO Dept - Latent Finger Detection Method, Portable Ammonia Detection Method, Portable Nerve Gas Agent Detection Method; ME Dept - Porous Radiant Burner and more
- **6 MoUs & MoAs signed with -**
  - Hester Bioscience Limited, Ahmedabad to develop Antibody ELISA Kits against poultry diseases
  - NHAI for dissemination of civil engineering expertise for road infrastructure development
  - DSIR, Ministry of Science & Technology for operating PRISM Scheme
  - Qsentience UG for training students for leadership roles in electric vehicles industry
  - India Accelerator
  - Wipro Enterprises



# Research & Development



## R&D Initiatives 2019 - 2020

- 12 Major Research Projects funded by MHRD, SERB, DST, DEITY, ICMR etc. onboarded with total cost of Rs. 14 Crores
- More than 45 Major Consultancy Projects led by faculty with specific domain expertise with total cost of Rs. 8 Crores
- Events led by faculty expertise conducted with total cost of more than Rs. 1 Crore





## COVID19 Lockdown Initiatives

- Development of life saving equipment for Assam State and Guwahati Medical College and Hospital (GMCH)
- All employees contributed one day salary for month of Apr'20 towards PM Cares Fund (Rs. 36 Lakh)
- DRT constituted for prevention and mitigation within campus
- Online Yoga Classes for faculty, staff and students to boost immunity and reduce stress
- 'YourDost' online platform made available to all students, staff, faculty & community
- Holistic Wellness Centre established
- Collaborated with Hester Biosciences Ltd to develop vaccine against COVID-19
- Developed low-cost diagnostic kits (RT-PCR, RNA Isolation, Viral Transport Media) in association with RR Animal Healthcare Ltd & GMCH
- Developed low cost UVC LED system to disinfect areas (Scientists beyond Borders)
- Developed affordable antiviral/antibacterial spray based coating for personal protective equipment
- Developed 3D printed ear guard for use along with face masks for frontline healthcare workers



## COVID19 Lockdown Initiatives

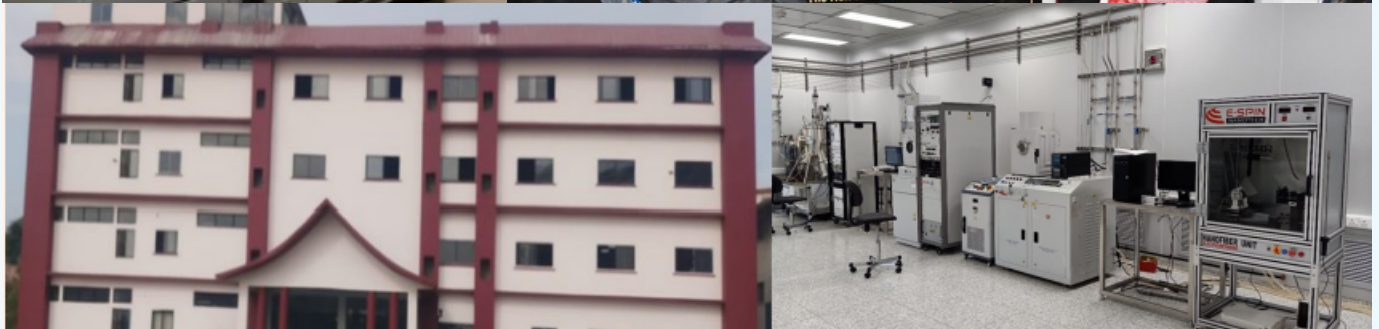
- Students developed low-cost intubation boxes
- Designed and developed Bamboo Hospital furniture range
- In collaboration with Duke-NUS Singapore, carried out data driven state wise assessment of COVID19 situation
- Injection molding of Face Shields
- IITG Alumni's startup, Marut Dronetech Pvt Ltd, developed and deployed drones for spraying disinfectants in public spaces
- Faculty developed APP - ShinyApp for statistical forecasting of COVID19 infections
- Development of disinfectant tunnel
- Developed prototype of remotely operated Food and Medicine Delivery apparatus for COVID19 Isolation Wards in collaboration with Yantrabot Technologies Pvt Ltd.
- COVID19 Related R&D 2020 - 2021:
  - 4 Expert Faculty Publications and 2 Faculty Patents Filed
  - 3 COVID19 dedicated funded, faculty led Research Projects





## Infrastructure Initiatives

- Installation of a Hybrid Supercomputing facility 'Paramkamrupa' with compute power of 850 TF under NSM
- HEFA Funded Infrastructure Expansion Projects
- Major Instruments Facilities established with state of the art advanced instruments and equipment
- Research Park Building
- Installation of 1MW Grid connected SPV Rooftop Power Panels





# Photo Gallery





# Photo Gallery







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