



IISc
INDIAN INSTITUTE OF SCIENCE

OPEN DAY



LIVE EXPERIMENTS

POPULAR SCIENCE LECTURES

SCIENTIFIC DEMOS

EXHIBITIONS

23RD MARCH 2019
SATURDAY | 9 AM - 5 PM



Indian Institute of Science



KIDS ZONE OPEN DAY

Demonstration of basic science experiments

Venue : Old Aerospace Building, Opp. Choksi Hall

Date : 23rd March, 2019

Time : 9:30 AM to 4:30 PM

Contact details

kidszoneiisc@gmail.com

OPEN DAY



IISc
INDIAN INSTITUTE OF SCIENCE

MESSAGE FROM THE DIRECTOR, IISc

The Indian Institute of Science (IISc) was conceived and founded by Shri Jamsetji Nusserwanji Tata, whose birthday on the 3rd of March, is celebrated in IISc as Founder's Day. The 28th of February is celebrated all across India as the National Science Day to commemorate the anniversary of the discovery of the Raman Effect, whose discoverer, Sir C V Raman, was a former Director of IISc.

It is in conjunction with these days that, each year, IISc holds an Open Day during which its portals are open for the public to observe first-hand the activities of the Institute. This year again, the Institute welcomes you on Saturday, the 23rd of March 2019, to Explore, Experience, and Enjoy the wonders of scientific and technological research and innovation at IISc, Bengaluru.

DID YOU KNOW?

The idea of having an Open Day in IISc was suggested in 1948. This was one of the recommendations made by the Egerton Committee that was formed soon after independence to review the activities of the Institute. This was conceived of as a day on which industrialists could visit departments and seek technical advice and know-how.

The first ever Open Day, as we know it today, was held on 3rd March 1977.

AEROSPACE ENGINEERING (AE)

- UAVs for different purposes
- UAV Control
- Flow Instabilities, Transition & Turbulence
- Rocket Launch Demo
- Hypersonic Flows
- Rocket Launch Pad Flows & Acoustics
- Vibrating Plate mode shape under PZT Actuation
- Structural Health Monitoring using Acoustic wave propagation
- Ultrasound in Inspection of Structures
- Computer Simulation of Material Fracture
- Materials with Memory
- Design of Composite Structures
- Damage Tolerance Analysis
- Computational Fluid Dynamics
- Fuel Injector droplet sizing
- Laser Visualization inside gas turbine combustors

ARCHIVES AND PUBLICATIONS CELL (APC)

- Poster display: “JN TATA” in the Reception Hall, Main Building, IISc
- Visit IIScPress stall for Books and Gifts, IIScPress Books, Centenary Medallion, Key Chain, Pen Drive, Mugs, Snippets and Post cards from Archives, Jute Bags, etc.,

BIOCHEMISTRY (BC)

- DNA: The code of nature
- Understanding genomic instability
- Guardians of genome
- Cure to the incurable: cancer-origin and therapy
- What are heat shock proteins and how do they protect our cells
- How does a cell fight foreigners?
- Know the parasites: Little monsters within us
- Enigmatic enzymes and vivacious viruses: lessons from baffling biological stories
- How to make vaccines?
- The road to next generation drugs: Microbes coming to help where synthetic drugs chemistry fails
- Extraction and bioassays of plant and fungal natural products

CENTR FOR ATMOSPHERIC AND OCEANIC SCIENCES (CAOS)

- Posters and videos on Atmosphere, Ocean and Climate
- Demonstrations: Clouds
- Demonstrations: Stratified fluids
- Demonstration: Vortices in Fluids
- Demonstrations: Dye patterns

CENTRE FOR BIOSYSTEMS SCIENCE AND ENGINEERING (BSSE)

- Take Someone's free will with Human-Human Interface
- Everything goes with the flow, Why not cells?
- Eternal colors of nature
- Feel the cell and its inner world!
- Build your AFM
- Many more showcasing a blend of Biology and Engineering to thrill the inner curiosity and tinkerer!

CENTRE FOR BRAIN RESEARCH (CBR)

DEMONSTRATIONS AND ACTIVITIES

- How we do cognitive test
- Visualizing genetic variations in DNA
- On field activities for population-based studies
- Get to know a neurological disease

POSTERS ON THE FOLLOWING TOPICS

- What is dementia and why study dementia
- Description of two longitudinal studies (one rural and another urban) on dementia
- Neuroimaging techniques
- GenomeINDIA: a large whole genome sequencing project to develop a reference genome for India

CENTRE FOR CRYOGENIC TECHNOLOGY (CCT)

- Cryo bazooka
- Magnetic levitation
- Lenz's law
- Resistance Vs Temperature
- Wavelength Vs Temperature
- Hoeffler's Tube
- Boyle's law
- Charle's Law
- Gay-Lussac's law
- Property changes at cryogenic temperatures

CENTRE FOR EARTH SCIENCES (CE α S)

- **Rocks and Minerals Pavilion:** Showcasing of Gem Stones, Ophiolites sequence with Rock samples: Thin section observation with multi-headed microscope
- **Fossil Pavilion:** Cretaceous Fossils
- **Fossil hunt**
- **Geophysics Pavilion**
- **GIS & Remote Sensing**
- **A cool display of the evolutionary history of life on Earth**
- **Demonstration of different geological features such as folds, faults etc. on a desktop**
- **Quiz Program**

CENTRE FOR ECOLOGICAL SCIENCES (CES)

- General presentations describing research at CES
- Exhibits of live animals and preserved specimens
- Games to test your knowledge of nature
- Documentary screenings at 11 am, 1 pm, and 3 pm
- Two Nature walks (10 am and 4 pm - Please assemble at CES)
- Outdoor treasure hunts through the eyes of a field ecologist (10 am, 12 noon, 2 pm and 4 pm- All treasure hunts will begin from CES)
- Teaching of field ecology techniques like navigating with gps and tracking animals with radio telemetry

CENTRE FOR HIGH ENERGY PHYSICS (CHEP)

POSTER DISPLAYS

- Large Hadron Collider
- The Standard Model
- Monte Carlo simulations
- Quantum Computing
- String theory and gravity
- Dark matter

VIDEO PRESENTATIONS

- Gravitational Waves
- Neutrinos
- Large Hadron Collider
- Quantum Computing
- Dark matter direct detection
- Fermi- LAT

CENTRE FOR INFECTIOUS DISEASES RESEARCH (CIDR)

- Display of posters on various infectious diseases of relevance at present
- Display of posters on important work in CIDR
- Display of infected and normal small animals used in research on Infectious Diseases
- Relay of video on the working practices in a BSL3 lab
- Microscopy

CENTRE FOR INFRASTRUCTURE, SUSTAINABLE TRANSPORTATION AND URBAN PLANNING (CiSTUP)

- Traffic Game
- Quiz
- Traffic Models display
- Puzzles
- Videos relating to transportation

CENTRE FOR NANOSCIENCE AND ENGINEERING (CeNSE)

- Periscope
- Kaleidoscope
- Motor principal
- Electric motor
- Unconventional energy demo
- Thermal power
- Hydro power
- Temperature indicator
- Shocking coil
- Chemical tree
- Chemical garden
- Fountain
- Magic water
- Micro thruster - demo
- IOT- monitoring system

- Body phone
- Smoke detector/ alarm
- Virtual eye
- Ultrasonic liquid detector
- Punching Bag
- Lead & fros
- Solar car racing
- Total internal refraction
- Optical waveguides
- Thermal imaging
- Acoustic levitation
- Quiz on nano science
- Super-hydrophobic surface
- Gyro measurement
- Meter to nano meter posters

CENTRE FOR NEUROSCIENCES (CNS)+ PRIMATE RESEARCH LABORATORY (PRL)

DEMONSTRATIONS

- Mind-gym
- Human Brain anatomy
- Ames windows Illusion
- Luminance Illusion
- Endless wormhole
- Laser cavity
- Demonstration of Optogenetics
- A learning related task
- A hologram presentation (3-D presentation of neuron, spines etc.)
- The Cockroach Dance
- You will do as I do
- Visualizing neural spikes in cockroaches:
- Stimulate your brain - TMS Demo
- Attention please - Covert attention task

- Cognitive workout - Brain-Machine Interface
- Genie in the bottle
- Citizens of the city of Brain

POSTERS

- Neurodegenerative disorders and Alzheimer's disease
- How do we pay Attention
- How do we move
- How does the brain develop
- How do evolutionarily conserved molecular building blocks from fruit flies also make a system as complex as a mouse brain
- How do neurons communicate with each other and how is this machinery is built at a molecular level
- How do we remember and how do we forget
- How do we see objects
- Posters detailing the large-scale population studies being undertaken by CBR and CNS to study neurodegenerative diseases in India

CENTRE FOR PRODUCT DESIGN AND MANUFACTURING (CPDM)

- Annual design show - RIPPLES
- Life Box - For preservation of organs during transportation
- Connected Modular motorized systems controller for industry 4.0
- CleaneRAT - IOT powered sewer inspection and declogging system
- Robotic Arm with manual teaching controls for warehouse automation.
- Solar Water Purifier through heating followed by evaporative cooling and remineralization without any reliance on grid power
- Dhvani - Hearing therapy process on a digital platform
- Design mockups, scaled models
- Live demonstrations, interactive installations
- Design gallery and exclusive CPDM merchandise store

CENTRE FOR SUSTAINABLE TECHNOLOGIES (CST)

- Live demonstration of Biomass-Gasifier, leaf based biogas plants and building integrated photovoltaic
- Showcasing new technologies for Grey water treatment, plasma activated water based plant growth system and ozone producing reactor
- Workshop for kids: “Roshni” a DIY kit for lighting using ‘end of life’ materials and low cost simple solution to overcome harmful radiation from commercial LEDs
- Posters and models demonstrating on-going status of research in different sectors of sustainability at CST
- Photowalk to highlight glorious past and impact made by various technologies of CST on society

CHEMICAL ENGINEERING (CE)

- “Back of the Spoon” Outlook of Coanda Effect
- Can Surface tension beat Gravity
- Diy Microscope
- Magnets
- Pattern formation in Granular Media
- Rod Climbing Effect
- Drinking word
- Leidenfrost Effect
- Basic Laws of Thermodynamics
- Measuring the Humidity
- Atomic and Molecular level of any Macroscopic behaviour
- Baking soda vinegar fire extinguishers
- Electromagnets
- Lemon Batteries
- Impact of Hydrological Cycle on Rain Water Harvesting

- The Brachistochrone Curve
- Disappearing of Glass Beads
- Self Siphoning Beads of a Metal Chain
- Disappearing of Glass Beads
- Bhaskara's Perpetual Wheel of Water and Sand
- Flow of Sands through a stand pipe

CIVIL ENGINEERING (C*i*E)

STRUCTURAL ENGINEERING

- Demonstration of multi-component earthquake simulation
- Demonstration of shake table
- Demonstration of various experiments in dynamics lab
- Demonstration of pseudo dynamic testing on reaction wall system
- Demonstration of fracture mechanics-based experiments on concrete
- Demonstration of use of acoustic emission to study fracture behaviour of concrete
- Demonstration of uniaxial and biaxial fatigue testing machines

GEOTECHNICAL ENGINEERING

- Poster Presentation on seismic zone and earthquake
- Demonstration of shaking table
- Plate Tectonics model
- Shock waves assisted pile driving
- Simulations of dam and foundation failure using Plaxis
- Demonstration of large cyclic triaxial testing system
- Effect of different shape and sizes of foundations
- Site amplification and liquefaction demonstration
- Resonant column cum cyclic triaxial instrument

TRANSPORTATION ENGINEERING

- Need for Steel Flyover/ Elevated Corridor - A discussion
- Demonstration of Dynamic Traffic Assignment models
- Game theoretic applications in Transportation engineering
- Study on health impact assessment from transportation perspective
- Modelling crowd dynamics in mass religious gatherings - Challenges
- Application of agent- based modelling techniques to

simulate traffic movement

- A comparative analysis of the Smart City policy reforms and their impact on sustainable urban mobility

WATER RESOURCES & ENVIRONMENTAL ENGINEERING

- Animation of transient flow into porous media using numerical methods
- Multiscale persistence in Rainfall and Streamflow
- Spectral-spatial classification of hyper -spectral data
- Demonstration of Smart Water Lab
- Presentation: Earth from Space
- Inter-comparison of GRACE data over India
- Sensor Network Based cyclic physical infrastructure for continuous monitoring of water distribution network
- Parameter estimation of coastal phreatic aquifer near Mukka (Karnataka, India)
- Suggested parameterization choices in the weather research and Forecasting (WRF) model for extreme rainfall event simulation in India
- Four decades of microwave satellite soil moisture sensors

GENERAL QUIZ

COMPUTATIONAL AND DATA SCIENCES (CDS)

- Lab Demos
- Poster display
- Talk by experts
- Quizzes
- Puzzles
- Fun Games

COMPUTER SCIENCE AND AUTOMATION (CSA)

- Interactive Demos
- Technical Quiz
- Coding:
 - Game of Codes
 - Bet to code
- Lab Demonstrations
- Keynotes
- Posters about the current work

DIVECHA CENTRE FOR CLIMATE CHANGE (DCCC)

EXPERIMENTS

- IR absorption by CO₂: greenhouse effect demonstration
- Laser beam propagation through the atmosphere: effects of scattering and turbulence
- Real time measurement of black carbon particles
- Real time, size segregated measurement of aerosols
- Particle counter
- Simple experiment to show the influence of surface heating on vertical wind
- Simple experiment to show the inefficiency of incandescent lamps
- Water Quality testing
- Interactive demo of 3D forest scan
- Dual axis solar tracker
- Climate Change Quiz
- Microbes through a microscope

POSTERS

- Application of Drones for effective pesticide spraying
- ACO₂ and global warming
- AAerosol instrumentation
- AClouds
- AFlouride and Arsenic contamination in water
- ASulphate and radionuclide contamination in water
- A20 kW PV System at Library
- AElectric Mobility in India: Progress and Challenges
- AGlacier Mass Balance
- AHimalayan Glaciers

ELECTRICAL COMMUNICATION ENGINEERING (ECE)

TALKS & QUIZ

VENUE: G J HALL

- Optics and Photonics Applications Lecture OPAL by Prof. T. Srinivas

OPTICS AND PHOTONICS APPLICATIONS QUIZ

4 SESSIONS:

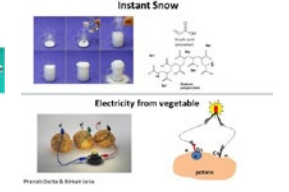
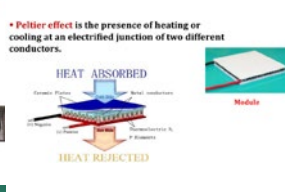
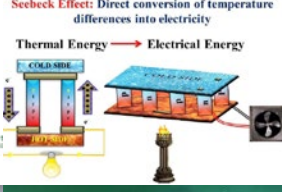
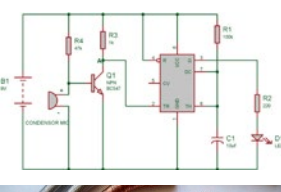
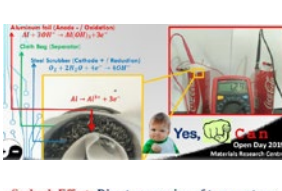
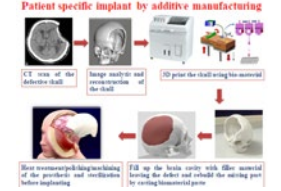
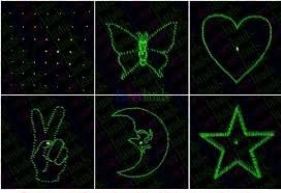
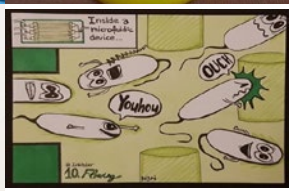
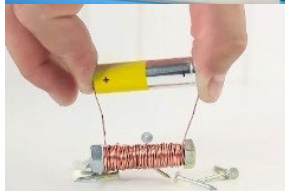
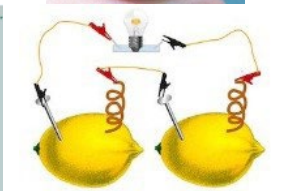
- OPAQ1 - School level 15 mins forenoon
- OPAQ2 - College level 15 mins forenoon
- OPAQ3 - School level 15 mins afternoon
- OPAQ4 - College level 15 mins afternoon

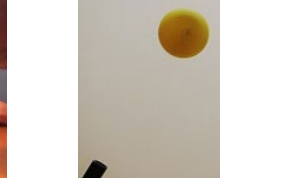
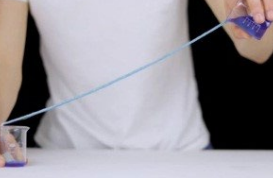
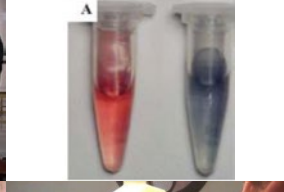
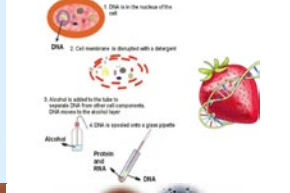
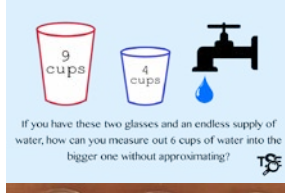
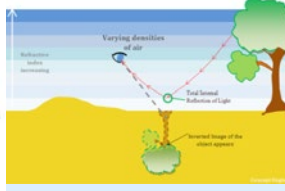
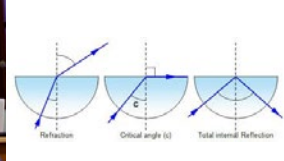
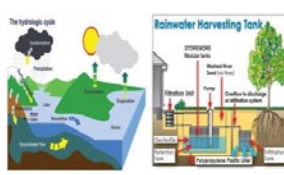
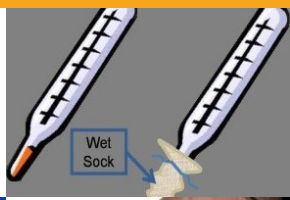
DEMOS & DISPLAYS

- **Basic Optics and Applications (School level) by T Srinivas and team**
- **Optical Sensors (College level) by T Srinivas and team**
- **Quantum Communications (Advanced level) by T Srinivas and team**

DEMOS

- **Spatial Modulation by K V S Hari and team**
- **Poster Presentation - Applications of Nonlinear Optics by Varun Raghunathan**
- **Distributed computation with Finite Bit Exchanges by Chandra R Murthy and team**





Sand Production

Mirror Maze

Egg Suit

Vibrations of Plates

ELECTRICAL ENGINEERING (EE)

DSP LAB

- Real time hand Gesture recognition system
- Wavelet based Image denoising using shrinkage algorithms
- Real time image/video processing on PYNQ- Z2 board

HIGH VOLTAGE LAB

- Local air breakdown along surface (Lichtenberg figures)
- Ion thrusters and arc inception-quenching
- Lightning simulation
- Simulation of damages due to lightning currents

POWER ELECTRONICS

- 3D Reconstruction using RGB and Depth images

COMPUTER VISION LAB (CVL)

- Demo of the Tesla coil

MILE LAB

- Human-Human Interface
- Auditory Illusion
- Large vocabulary speech recognition for Tamil

SPECTRUM LAB

- Glaucoma prescreening with the help of a mobile phone
- Motion magnification
- Image Processing on the mobile phone
- Real-world speech denoising
- Text-to-speech synthesis for Indian languages
- Neuromorphic cameras and 3-D scanning

LEAP LAB

- How quickly can you learn a new language
- Identify the number of talkers in an audio snippet.
- Speak to me - we will profile you !
- Learning without an expert ?

SPIRE LAB

- How fast can you sketch a vowel?
- Detect ALS by speaking to your phone
- How good is your pronunciation?
- Speak to me in the right tone
- Can you fool the computer by mimicking the celebrity voice?
- Binaural audio

ELECTRONIC SYSTEMS ENGINEERING (ESE)

PROJECT DISPLAY

- Sky Dragon(Birds Eye view of IISc)
- Padmapada(National award winning project on robotics)
- Neuromorphic camera Display
- Exoskeleton(Medical emergency handling Robot)
- Invisibility Cloak
- Foot Count without Battery
- Live B.P measurement without Battery
- Air monitoring Watch
- Documentary on Science Fiction (Se-Fi) Zone

INORGANIC AND PHYSICAL CHEMISTRY (IPC)

- Dry ice forming fumes
- Chemical Garden, Elephant Toothpaste
- Magnet & Tonner experiment
- Ink in Milk
- Thunderstorm in a test tube
- Dark room exp.
- Fireworks ignited by ice
- Glass blowing experiments
- Fluorescence
- Tricks with match sticks
- Ping pong ball with liquid Nitrogen
- Traffic Light
- Water Candles
- Polymer OLED
- Fiber formation from Polymer
- Lightning of Lava Lamp

- Interfacial Polymerisation
- Laser Experiment
- Bleeding Heart
- Ignition, extinguishment
- Chemical Garden
- Changing Color
- Chemical Cut Demonstration
- Lava Lamp (for decoration, live demonstration)
- + A few posters explaining the science behind these results like: metal complex formation in (1), Crystallisation in (3), etc

INSTRUMENTATION AND APPLIED PHYSICS (IAP)

Total internal reflection-based experiments and diffraction-based experiments

- Total internal reflection
- Diffraction

INTERDISCIPLINARY CENTRE FOR WATER RESEARCH (ICW_αR)

POSTERS & ANIMATIONS

- Monsoon Low pressure Systems
- Climate change impact on water
- Wastewater Treatment
- Isotopes in Hydrology

MODELS

- Water to your home and beyond
- Urban Floods

PICTURES

- Wastewater Treatment
- Water Treatment
- Urban Flood Model

GAMES

- Water Hacks: A gaming zone of water
- Mathematical Puzzles

JRD TATA MEMORIAL LIBRARY (LIB)

- Library tour
- An exhibit displaying library services and holdings
- An exhibit displaying major online resources subscribed by IISc
- An exhibit displaying ORCID service
- An exhibit displaying most prolific authors of IISc during 2018
- Handout giving general information about the library
- PPT based demonstration about the library, ePrints@IISc, and etd@IISc
- Quiz competition for the visitors

MANAGEMENT STUDIES (MS)

- **MAD Adds** - A unique Business Game on products and their prices
- **QUIZ MANIA** - Quiz on business and Indian economy related topics

MATERIALS RESEARCH CENTRE (MRC)

- Isolation of DNA from Strawberry
- 3D printing for biomedical devices and tissue engineering
- Zinc-based rechargeable battery systems
- Making Battery from daily products
- Chemoluminescence
- Detection of Adulterated milk
- Microbial Organisms in the air, food and water
- Computer vision based Image processing
- Clapping circuit
- Seebeck and Peltier effect
- Making of artificial silk from Cotton wool
- Electromagnetic Train
- Free energy generator

MATHEMATICS (MA)

- Quiz Session (Time: 9 a.m to 12:30 p.m)
- Panel Discussion (Time: 2:30 p.m to 3:30 p.m)
- Talk to Professor (Time: 4:00 p.m to 5:00 p.m)
- Documentary/Screen-cast
 - Session 1: 11:00 a.m to 12:30 p.m
 - Session 2: 3:00 p.m to 4:00 p.m
- Treasure Hunt
 - Session 1: 9:30 a.m to 12:30 p.m
 - Session 2: 2:00 p.m to 5:00 p.m
- Games (Time: 9:30 a.m to 12:30 p.m and 2:00 p.m to 5:00 p.m)
- Demonstrations (Time: 9:30 a.m to 12:30 p.m and 2:00 p.m to 5:00 p.m)

MECHANICAL ENGINEERING (ME)

- Quiz
- Competitions (e.g. Mirror maze, Egg Suit, Paper Tower)
- Posters and demos of ongoing research
- Cybicle (Reverse Cycle)
- Live Science demos (e.g. Water Rockets, Acoustics, Robots, Compliant Mechanism)

MICROBIOLOGY AND CELL BIOLOGY (MCB)

- **Microbiology-** We will illustrate bacterial growth on the agar-plates also there will be posters to reveal the emergence of the antibiotic resistance and its impact on the society
- **Virology-** Life-cycle of viruses such as HIV and HCV, in the human body will be displayed using posters
- **Model Organisms-** Demonstration of experimental animals such as *C. elegans*, rabbit, mouse, and their significance in experimental biology will be emphasised along with the posters
- **Molecular Biology-** Display of the DNA gels together with the protein gels
- **Cell Biology and Cancer Biology-** Cell division, vesicular trafficking will be displayed either using posters or PowerPoint presentations. Posters and models will

be used to demonstrate the formation, spread, and treatment of various cancer

- **Plant Biology-** experiments on plants as a model organism to study growth and development and also the impact of microbes on plant growth will be demonstrated using posters and presentations

MOLECULAR BIOPHYSICS UNIT (MBU)

- Demonstration of X-ray diffraction by protein crystals
- Visualizing Protein 3D structures in Virtual Reality (VR)
- Crossword, Pictionary and Jumbled words
- Physical models of biomolecules
- Intro to protein structure and NMR
- Interface of chemistry and biology
- Neuron model
- Protein Origami
- Lego blocks of Amino acids
- Model of Protein structure
- Sighting the crystals

MOLECULAR REPRODUCTION DEVELOPMENT AND GENETICS (MRDG)

- Posters showcasing the scientific research of the Department
- Displays centered around cancer, developmental biology, genetics, cell signaling, reproductive biology, aging and metabolism and structural biology
- Models/static displays of cells, plates, cultures etc. with video
- Interactive games

ORGANIC CHEMISTRY (OC)

- H_2 -Balloon
- Bleeding Vegetables/Burning Ice
- Iodine Crackers
- Fireball in hand/Gun cotton
- Turning Cu into gold
- Dancing Sodium
- Thermochromic System & Solvatochromism
- Cabbage pH color change
- Borax glue
- Magic mud or NEW or Chemiluminescence
- MB-Sugar color change
- Nylon experiment

PHYSICS (PHY)

- Anti-theft scanner
- Levitation of magnetic spinning top
- Measurement of speed of light using microwave oven
- Conservation of electromagnetic angular momentum
- Eddy current brakes
- Gravitational Lens
- Telsa coil
- Light and shadows
- Stroboscopic effect
- Sand Pool
- Ferrofluid
- Maglev train
- Angular momentum
- Standing waves using sand particles
- Thermoelectric windmill

- LED in liquid nitrogen
- Lenz's law
- Touch me not circuit
- Gas flow sensor
- Models from ISRO
- Electrical Theremin
- Mercury Precession
- Tidal Locking

ROBERT BOSCH CENTRE FOR CYBER PHYSICAL SYSTEMS (CPS)

- Walking Robot
 - How the Robot Walks
 - How the Robot Learns to Walk
- Smart Poles with Drone Ports
 - Drone Port with Charging Pad

SOLID STATE AND STRUCTURAL CHEMISTRY UNIT (SSCU)

- Chemical Traffic Light
- Bleeding heart, Ginie in a bottle, Metal flower
- Elephant toothpaste, Magic milk
- Tindal effect
- Instant snow, Electricity from potato
- Preparation of Nylon and Rayon
- Chemical Clock, Colour Show
- Dry ice colour show
- Golden rain
- The Jumping Ring
- Young's double slit experiment

SUPERCOMPUTER EDUCATION AND RESEARCH CENTRE (SERC)

- SERC Museum of of Computer Hardware Archives!
- Posters on History of Computer Devices
- Videos on Inside a Supercomputer Centre
- Presentations, Demos and Videos on Supercomputing for Science, Engineering & Society

NATIONAL INSTITUTE OF ADVANCED STUDIES (NIAS)

LIVE PROJECTS OF SCHOOL STUDENTS

- Measuring noise pollution
- Drone for farmers
- Smart stick for the visually impaired
- Sleep pattern research
- Voice controlled vehicle
- Disorders of the adrenaline gland
- Floating waste cleaner
- CO2 to Oxygen converter
- Effect of music ragas on human brain
- ... and more

TAKE PART IN EXCITING CHALLENGES

- Rapid Chess
- Fast Cubing
- Math Blitz
- ... and more

LEARN ABOUT NIAS EDUCATION FOR THE GIFTED AND TALENTED CHILDREN

- How to join a NIAS Advanced Learning Centre?
- How to make your school a NIAS Advanced Learning Centre?
- What goes on at a NIAS ALC?
- ...and more

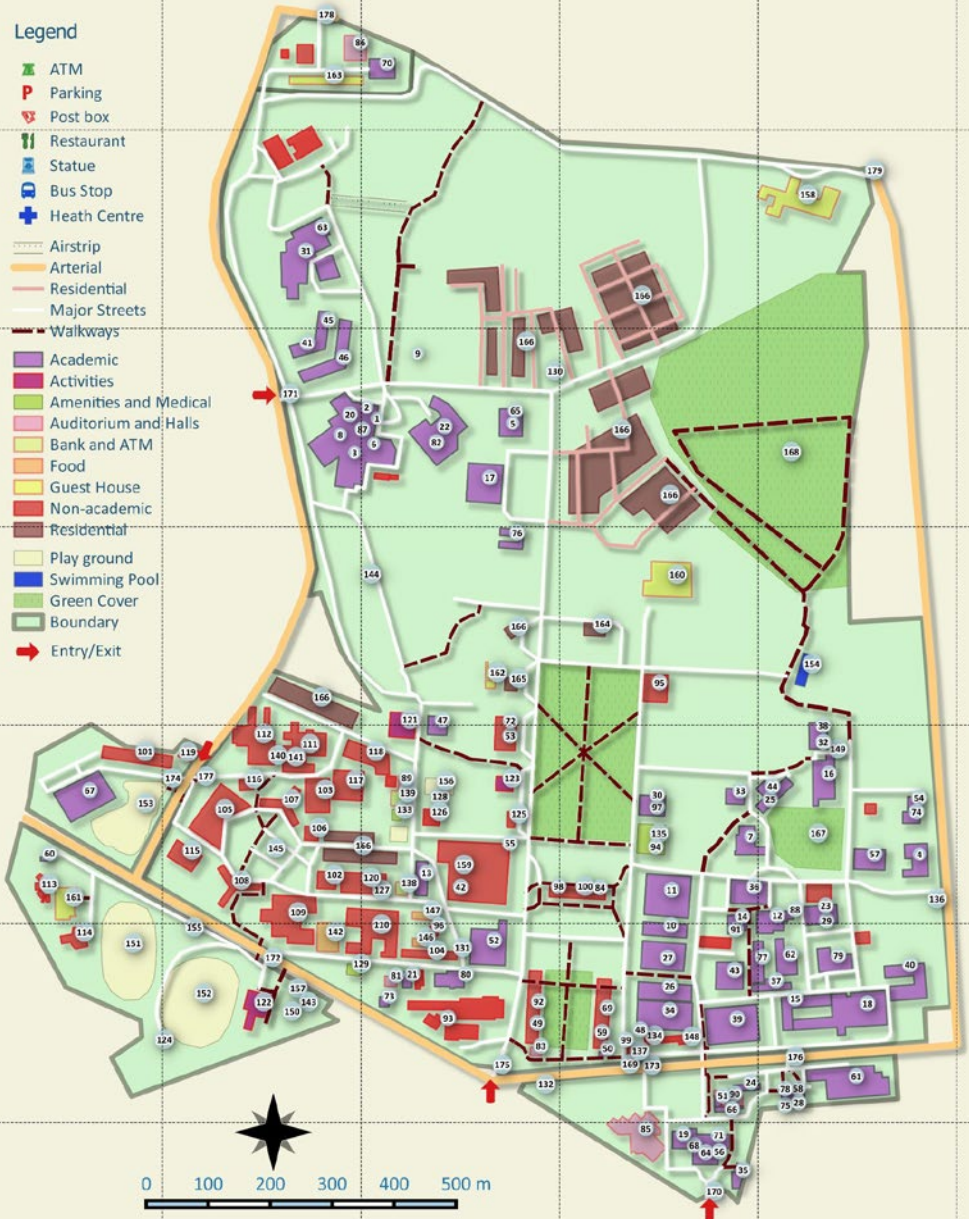
ICTS-TIFR

- Showcasing science exhibits and activity kits at the IISc Raman Building (ICTS-TIFR, old Physics building at IISc)



Legend

- ATM
- Parking
- Post box
- Restaurant
- Statue
- Bus Stop
- Health Centre
- Airstrip
- Arterial
- Residential
- Major Streets
- Walkways
- Academic
- Activities
- Amenities and Medical
- Auditorium and Halls
- Bank and ATM
- Food
- Guest House
- Non-academic
- Residential
- Play ground
- Swimming Pool
- Green Cover
- Boundary
- Entry/Exit



Academics

Division of Biological Sciences

- 1 Division of Biological Sciences
- 2 Biochemistry
- 3 Centre for Ecological Sciences
- 4 Centre for Infectious Disease and Biosafety Lab
- 5 Centre for Neuro Sciences
- 6 Microbiology & Cell Biology
- 7 Molecular Biophysics
- 8 Molecular Reproduction, Development & Genetics

Division of Chemical Sciences

- 9 New Chemical Sciences Division (U/C)
- 10 Department of Organic Chemistry
- 11 Inorganic and Physical Chemistry
- 12 Materials Research Center
- 13 NMR Research Centre
- 14 Solid State & Structural Chemistry Unit (SSCU)

Division of Electrical Sciences

- 15 Computer Science and Automation
- 16 Department of Electronic Systems Engineering
- 17 Department of Electrical Communication Engineering
- 18 Electrical Engineering

Division of Interdisciplinary Research

- 19 Center for Infrastructure, Sustainable Transportation and Urban Planning (CISTUP)
- 20 Centre for Biosystems Science and Engineering (BSSE)
- 21 Centre for Contemporary Studies
- 22 Centre for Nano Science and Engineering (CeNSE)
- 23 Department of Computational and Data Sciences (CDS)
- 24 Department of Management Studies
- 25 IISc Mathematics Initiative (IMI)
- 26 Interdisciplinary Centre for Energy Research (ICER)
- 27 Interdisciplinary Centre for Water Research (ICWaR)
- 28 Robert Bosch Centre for Cyber Physical Systems (RBCCPS)
- 29 Supercomputer Education and Research Centre

Division of Mechanical Sciences

- 30 Advanced Facility for Microscopy and Microanalysis (AFMM)
- 31 Department of Aerospace Engineering
- 32 Centre for Atmospheric and Oceanic Sciences
- 33 Centre for Earth Sciences
- 34 Centre for Product Design & Manufacturing
- 35 Centre for Sustainable Technologies (formerly ASTRA)
- 36 Chemical Engineering
- 37 Civil Engineering
- 38 Divecha Centre for Climate Change
- 39 Department of Materials Engineering
- 40 Mechanical Engineering

Division of Physical & Mathematical Sciences

- 41 Astronomy and Astrophysics Programme
- 42 Centre for Cryogenic Technology
- 43 Department of Instrumentation and Applied Physics
- 44 Department of Mathematics
- 45 Centre for High Energy Physics
- 46 Department of Physics

Centres under the Director

- 47 Archives and Publication Cell
- 48 Centre for Counselling and Support
- 49 Center for Sponsored Schemes and Projects (CSSP)
- 50 Centre for Continuing Education
- 51 Centre for Scientific & Industrial Consultancy
- 52 JRD Tata Memorial Library
- 53 Office of Development & Alumni Affairs (ODAA) & Office of International Relations

Activities

- 121 Faculty Club
- 122 Gymkhana
- 123 IISc Alumni Association
- 124 Student Amenities Center (SAC)
- 125 Students' Council
- 126 Tata Memorial Club

Non-academic - Admin

- 92 DIGITS
- 93 Administrative Offices
- 94 Customer Care Center for Water Supply and Sewerage System
- 95 Garden and Nursery
- 96 Hostel Office
- 97 Official Language Unit
- 98 Public Relations Office
- 99 Security Office
- 100 Main Building

Non-academic - Hostels

- 101 Aryabhata Married Apartments
- 102 Ashwini
- 103 Bharani
- 104 E Block
- 105 Kaveri Married Apartments
- 106 Kritihika
- 107 Mrigasira (LM-Block)
- 108 N-Block
- 109 New Boys Hostel
- 110 New Girls Hostel
- 111 New Hostel Complex - Block 2
- 112 New Hostel Complex - Block 1
- 113 P Block
- 114 Post Doctoral (PD) Block
- 115 R Block

- 116 Ramanujam Married Apartments

- 117 Rohini

- 118 S Block
- 119 Studio Apartments
- 120 U Block

Amenities and Medical

- 127 Bicycle Repair Shop
- 128 Crèche
- 129 Health Centre
- 130 Shopping Plaza
- 131 Medical Store
- 132 Science Institute Post Office
- 133 Shubhodaya Child Care Centre
- 134 Tata Book House
- 135 BSNL Customer Service Centre
- 136 BSNL Telephone Exchange

Sports

- 150 Basketball Court
- 151 Gymkhana Grounds
- 152 Gymkhana Pitch
- 153 KV School Playground
- 154 Swimming Pool
- 155 Tennis Court
- 156 TMC Playground
- 157 Volley Ball Court

Auditorium and Halls

- 81 CCS Seminar Hall
- 82 CeNSE Auditorium
- 83 Choksi Hall
- 84 Faculty Hall | Tower Building
- 85 JN Tata Auditorium
- 86 JRD Tata Auditorium, NIAS
- 87 Main Auditorium, New Biological Sciences Building
- 88 MRC Auditorium
- 89 Old Amenities Hall
- 90 Satish Dhawan Auditorium
- 91 SSCU Auditorium

Residential

- 164 Director's Bungalow
- 165 JNC President's House
- 166 Quarters
- 167 CES Mini-forest
- 168 Jubilee Gardens

Centres, Labs, Facilities and Offices

- 54 Central Animal Facility
- 55 Central Purchase and Stores
- 56 Centre for Brain Research
- 57 Combustion, Gasification and Propulsion Laboratory
- 58 Entrepreneurship Centre, SID
- 59 GATE Office
- 60 Government High School
- 61 High Voltage Engineering
- 62 Hydraulics Lab
- 63 IISc - ISRO Space Technology Cell
- 64 Innovation Center, Society for Innovation and Development (SID)
- 65 International Centre for Theoretical Sciences (ICTS)
- 66 Karnataka State Council for Science and Technology (KSCST)
- 67 Kendriya Vidyalaya IISc
- 68 Kishor Vaigyanik Protsahan Yojana (KVPY)
- 69 Lecture Hall Complex
- 70 National Institute of Advanced Studies (NIAS)
- 71 Office of Intellectual Property and Technology Licensing
- 72 Office of International Relations
- 73 Open Circuit Wind Tunnel
- 74 Primate Research Laboratory
- 75 Science Media Center at IISc
- 76 Signal Processing Lab, ECE
- 77 Soil Mechanics Laboratory
- 78 Spectroscopy Analytical Test Facility
- 79 Structures Lab
- 80 Undergraduate Office

Bank and ATM

- 137 ATM - Canara Bank & SBI
- 138 Canara Bank
- 139 State Bank of India

Food

- 140 A Mess
- 141 B Mess
- 142 C & D Mess
- 143 Gymkhana Cafe
- 144 Hotel Nisarga
- 145 Sarvam Complex
- 146 Kabini Canteen
- 147 Nisara
- 148 Prakruti
- 149 Snack Centre, DESE/CEDT

Guest House

- 158 Centenary Visitors House
- 159 Hoysala Guest House
- 160 Main Guest House
- 161 Jawahar Visitors House
- 162 JNC Guest House
- 163 NIAS Guest House

Entry - Exit

- 169 ATM / Security Gate
- 170 Circle Maramma Gate
- 171 D Gate
- 172 Gymkhana Gate
- 173 JN Tata Auditorium Gate
- 174 KV Gate
- 175 Main Gate
- 176 Management Studies Gate
- 177 Mattikere Road Gate
- 178 NIAS Gate
- 179 Ramaiah College, New BEL Road Gate

