# INSTITUTE COMPUTER CENTRE

https://iitr.ac.in/Centres/Institute%20Computer%20Centre/home.html

# Institute Computer Centre (ICC): History

Roorkee University Computer Centre (1978)

**+**

Information Superhighway Centre (1996)

# Team ICC

**Prof. Sateesh K. Peddoju**

Head, ICC

**Dr. N. K. Gupta**
System Programmer

**Mr. Mukesh Kumar**
System Programmer

**Dr. Sanjeev Shukla**
Sr. Scientific Officer

**Mr. Kausik Chattopadhyay**
Technical Officer III

**Mr. Sandeep Sharma**
Technical Officer I (on Deputation)

**Dr. Usha Banerjee**
Sr. Sc. Officer (On Contract)

ICC is having a dedicated team to support campus community. The team is consisting of System Programmers, Scientific Officers, Technical Officers, Technical staff members, Resident engineers, etc.

# Our Services to Campus Community

Computing & Cloud Resources

Scientific & Engineering Software

Email Services

Internet and Intranet Services
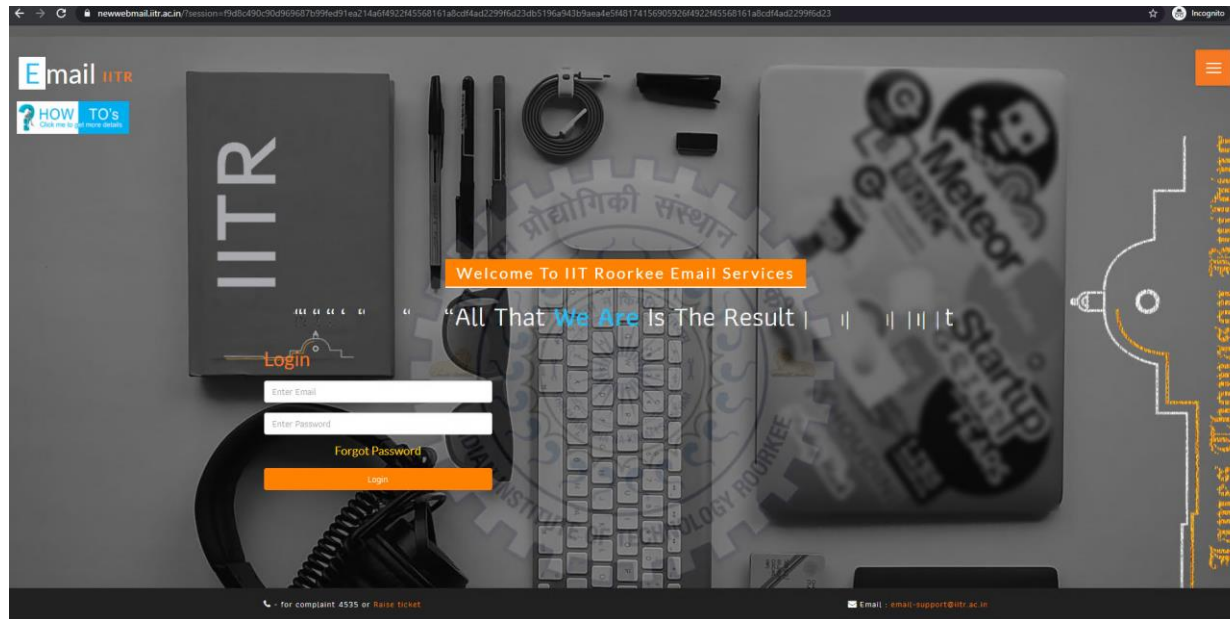
Website Development & Support

Communications

Online Teaching and Examinations Platforms
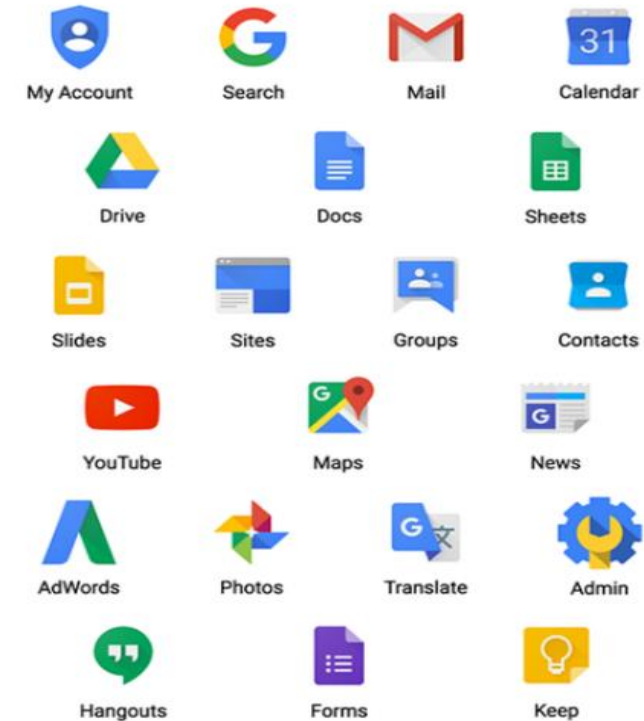
Video Conferencing Services

Services by ICC: **Email Service**

# Services by ICC: **Email services**



## For Staff

## For Students

**Contact: email-support@iitr.ac.in**

Services by ICC: **Software Resources**

# Services by ICC: **Software Resources** Portal: https://srp.iitr.ac.in/

- Scientific & Engineering Software

  https://iitr.ac.in/Centres/Institute%20Computer%20Centre/Software.html
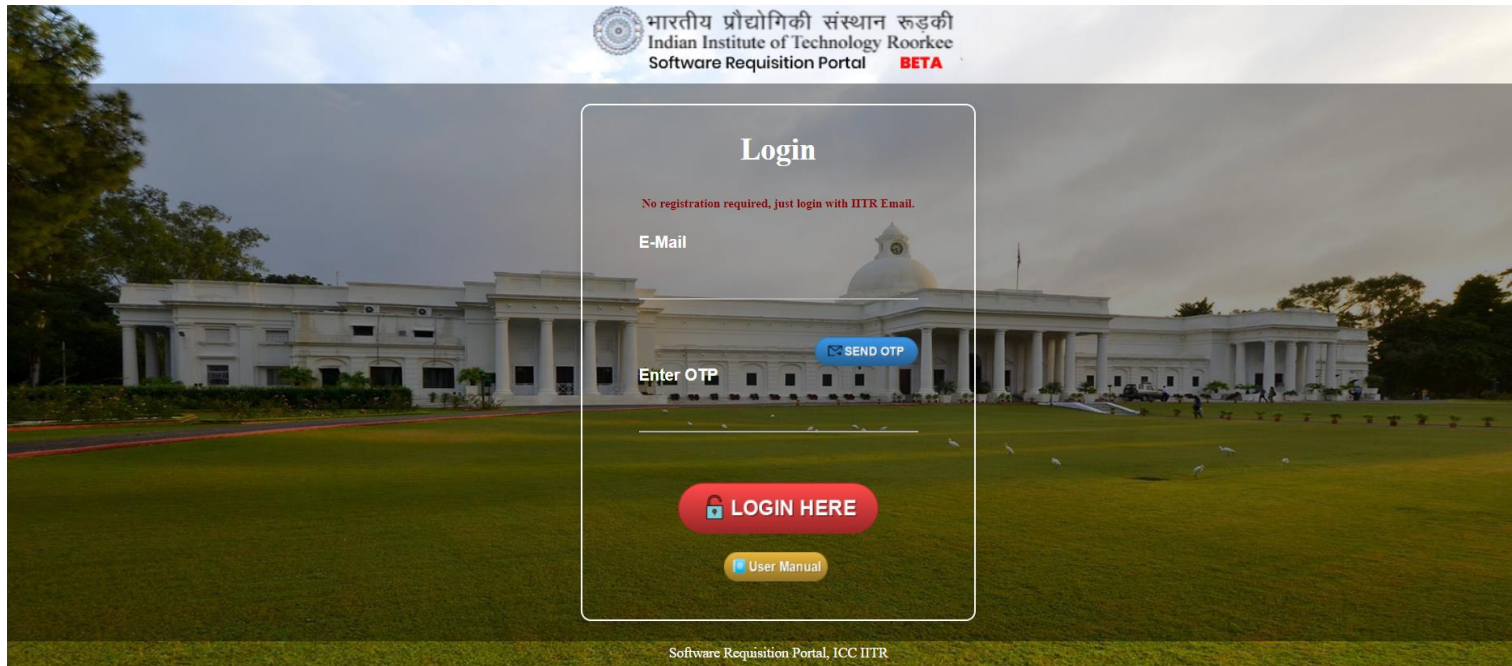


**Contact:** software-support@iitr.ac.in

# Services by ICC: **Computing Resources**

AI/ML/DL/Data Sciences

Material Sciences

Computational Fluid Dynamics

Computational Biology

Nanotechnology

Smart Infrastructure & Sustainable Cities

Climate Change

Energy Systems
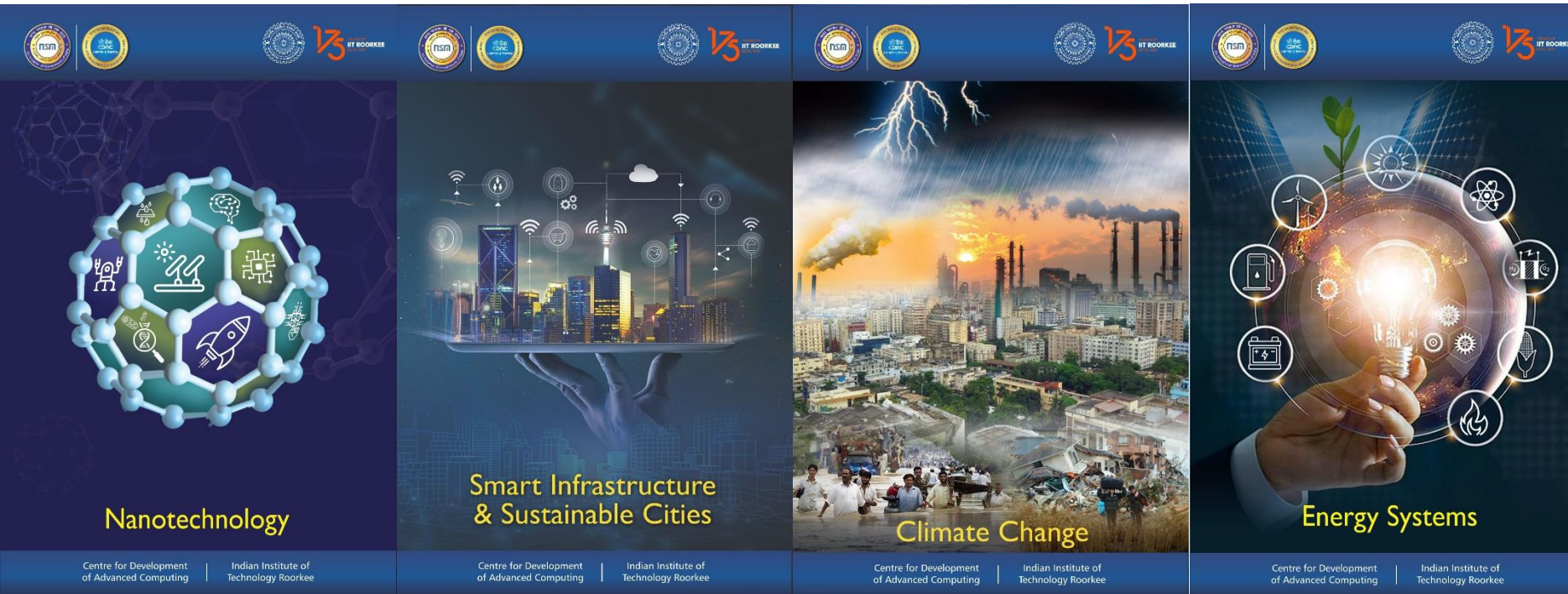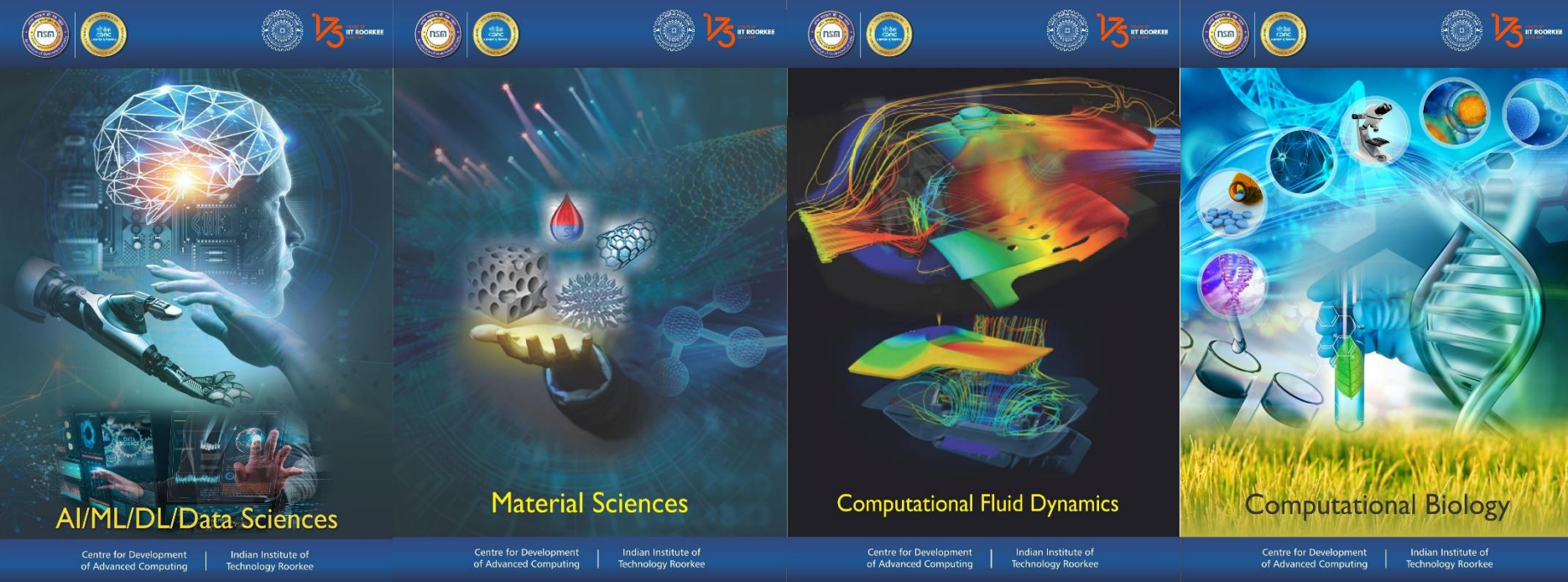
PARAM Ganga
(www.hpc.iitr.ac.in)

# PARAM Ganga (www.hpc.iitr.ac.in)

➢ PARAM Ganga – High-Performance Computing (HPC) system under the NSM has been established at IIT Roorkee.

➢ The supercomputer PARAM Ganga is based on a heterogeneous and hybrid configuration of Intel Xeon Cascade lake processors, and NVIDIA Tesla V100. There are 312 (CPU+GPU+HM) nodes with a total peak computing capacity of **1.67 (CPU+GPU+HM) PFLOPS performance**.

➢ The cluster consists of compute nodes connected with the Mellanox (HDR) InfiniBand interconnect network. The system uses the Lustre parallel file system and operating system is CentOS 7.x.

# PARAM Ganga - System Configuration

## System Specifications

| | |
|---|---|
| **Theoretical Peak Floating-point Performance Total (Rpeak)** | 1.67 PFLOPS |
| **Base Specifications (Compute Nodes)** | 2 X Intel Xeon Cascadelake 8268, 24 Cores, 2.9 GHz, Processors per node, 192 GB Memory, 480 GB SSD |
| **Master/Service/Login Nodes** | 20 nos. |
| **CPU only Compute Nodes (Memory)** | 214 nos. (192GB) |
| **GPU Compute Nodes (Memory)** | 20 (192 GB) |
| **High Memory Compute Nodes** | 78 nos. (768GB) |
| **Total Memory** | 104.832 TB |
| **Interconnect** | Primary: 100Gbps Mellanox Infiniband Interconnect network 100% non blocking, fat tree topology<br><br>Secondary: 10G/1G Ethernet Network Management network: 1G Ethernet |

### CPU Only Compute Nodes

+ 214 Nodes
+ 10272 Cores
+ Compute power of Rpeak 953.2 TFLOPS
+ Each Node with
  + 2 X Intel Xeon Cascadelake 8268, 24 cores, 2.9 GHz, processors
  + 192 GB memory
  + 480 GB SSD

### GPU Compute Nodes

+ 20 Nodes
+ 800 CPU Cores
+ 204800 CUDA Cores
+ Rpeak CPU 64 TFLOPS + GPU 312 TF
+ Each Node with
  + 2 X Intel Xeon Cascadelake 6248, 20 cores, 2.5 GHz, processors
  + 192 GB Memory
  + 2 x NVIDIA V100 SXM2 GPU Cards
  + 480 GB SSD

### High Memory Compute Nodes

+ 78 Nodes
+ 3744 Cores
+ Compute power of Rpeak 347.33 TFLOPS
+ Each Node with
  + 2 X Intel Xeon Cascadelake 8268, 24 cores, 2.9 GHz, processors
  + 768 GB Memory
  + 480 GB SSD

# Workstations with GPU @ RS LAB

## https://rap.iitr.ac.in

- ICC has conducive compute environment with good ambience and central air conditioning.

- Dedicated systems with specialized software/hardware required for students of B.Tech/M.Tech and PhD scholars during their Projects/dissertation/thesis period in the research Scholar Lab at ICC

- With remote access facility on 365x24x7 basis.

- Scientific and engineering software licenses being served through servers at ICC.

**20 Nos. High End Workstation HP Z8 G4**
- 2xIntel Xeon 5120, 2.2GHz, 24MHz 14C CPU
- 96GB(6x16GB)DDR4 2666 ECC REG
- 6TB 7200 SATA HDD ; 512 GB SSD
- NVIDIA Quadro P5000 16GB Graphic
- HP Remote Graphics SW (RGS)
- HP Z24nf G2 Display

**5 Nos. Mid Range Workstation HP  Z8 G4**
- 2xIntel Xeon 4114, 2.2GHz, 24MHz 10C CPU
- 64GB(4x16GB)DDR4 2666ECC RAM
- 4TB 7200 SATA  HDD; 512GB SSD
- NVIDIA Quadro P2000 5GB
- HP Remote Graphics SW (RGS)
- HP Z24nf G2 Display
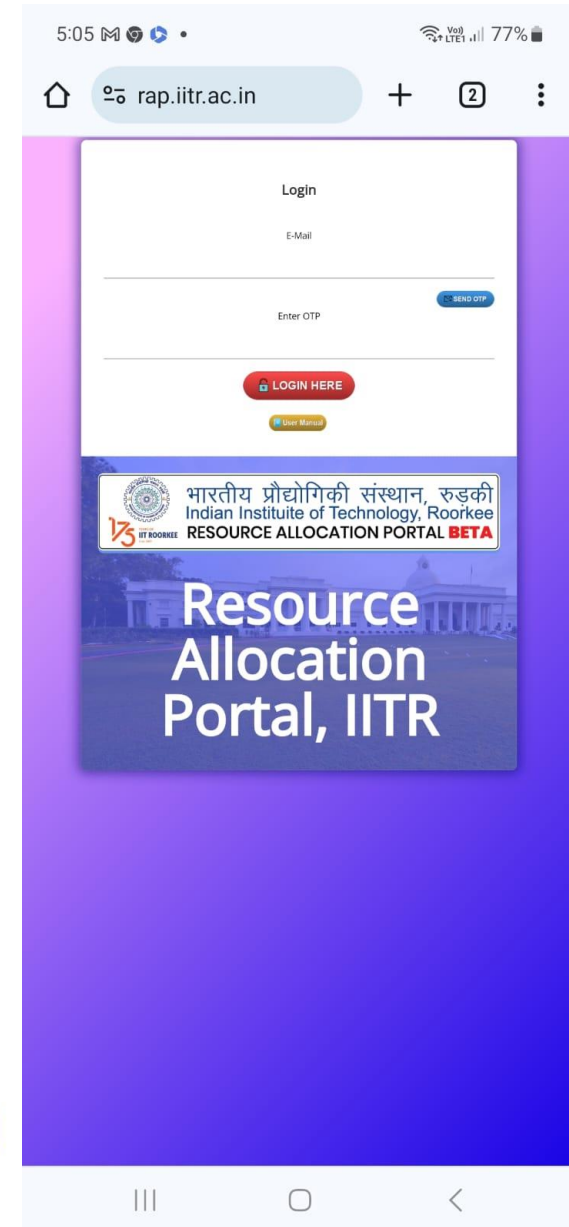
Services by ICC: **Network Resources**

# Network Connectivity

- IIT Roorkee main campus: **20 Gbps** leased line link (Railtel) of National Knowledge Network (NKN) from NIC under MHRD Government of India initiative.
- IIT Roorkee Saharanpur campus: bandwidth is 1Gbps. (upgradation going on).
- IIT Roorkee GNEC campus: through PGCIL 90 Mbps P2P Closed User Group (CUG) leased link with IIT Roorkee main campus data centre. (upgradation proposed)

## Existing Hostel Network:

All Hostels have LAN connectivity with CAT-6A cabeling. Now, **WiFi** enabled.

Simply raise a ticket at

https://network-support.iitr.ac.in/

Other details are available at https://www.iitr.ac.in/support/faq/

You may write to in case there's no response from the team:

network-support@iitr.ac.in

# Channel i

https://newchanneli.iitr.ac.in



For Channel i account send e-mail to
website-support@iitr.ac.in

Services by ICC: **Online Meetings/Classes Tools**
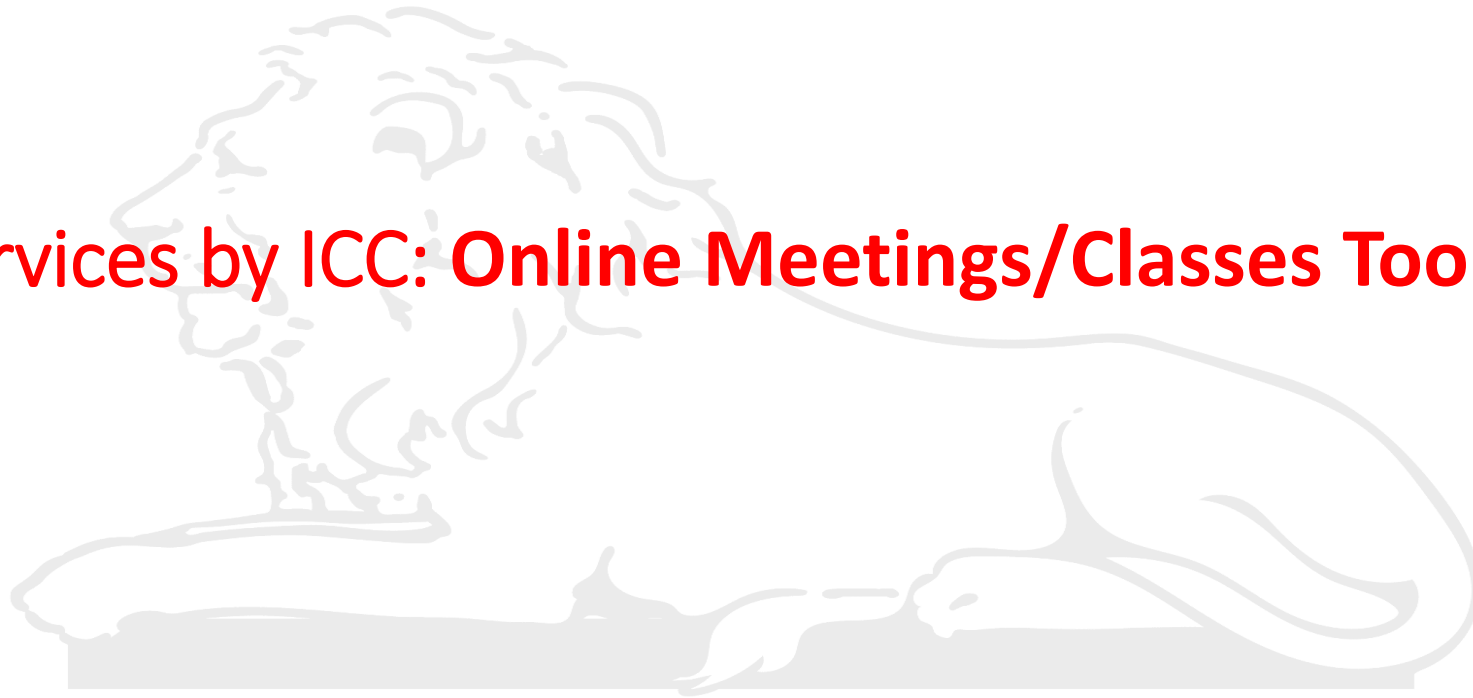
# Microsoft Teams

## as a single platform for attending online classes, video meeting & collaboration

# https://www.iitr.ac.in/msteams
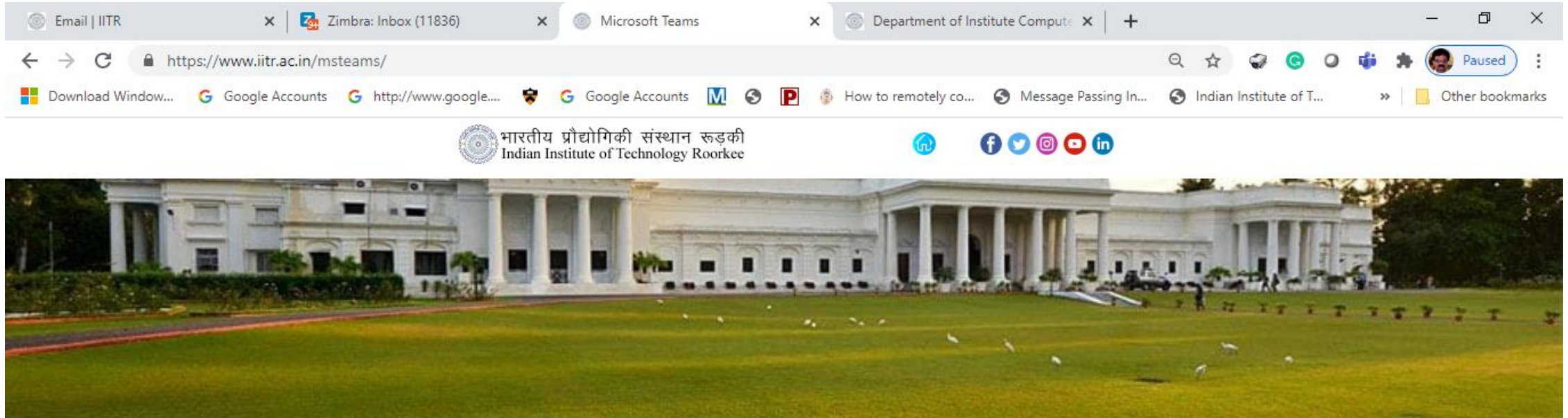


**Contact: msteams-support@iitr.ac.in**

# Services by ICC: **IT Systems Security**

# Email services: an example

**From:** Email Support <partnerships-175@iitr.ac.in>
**Date:** 23 July 2022 at 7:46:47 AM IST
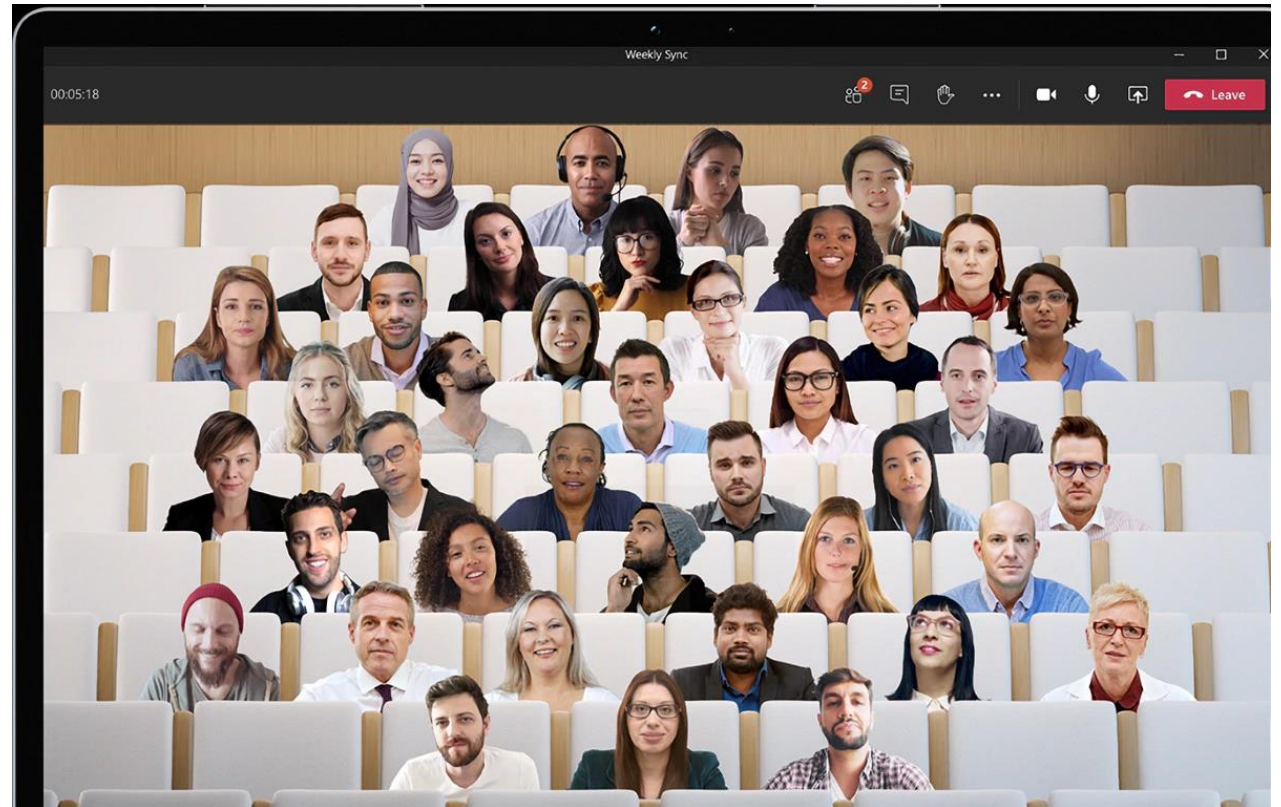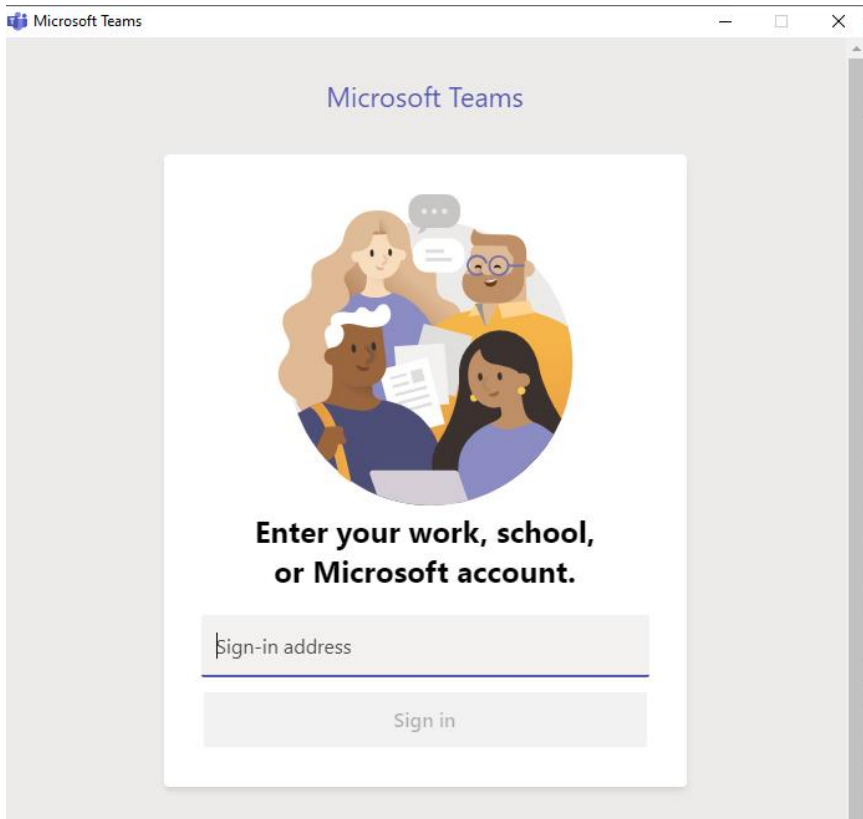**Subject: IIT Roorkee - Staff/Student**

IIT Roorkee - Staff/Student and all visitors to sign in

भारतीय प्रौद्योगिकी संस्थान रुड़की
Indian Institute of Technology Roorkee

Dear User,

A news item titled "OHS REQUEST - Students, staff and all visitors to sign in " has been posted on the Indian Institute of Technology Portal.

View news item

Please note this email has been sent from an unmonitored inbox. Please do not reply.

Your email address is associated to an account in Indian Institute of Technology . If you have received this email in error please contact the school directly. For legal or spam concerns please email support@iitr.ac.in
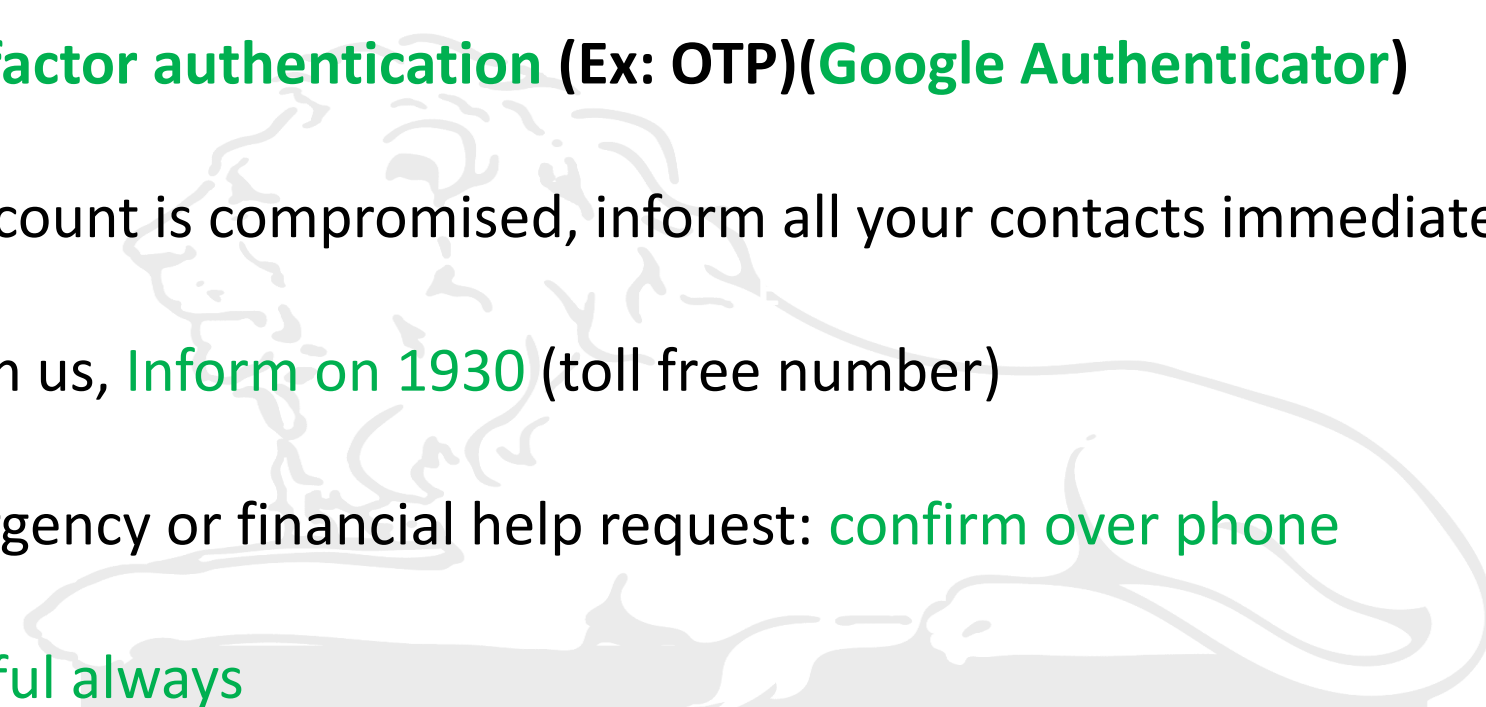This email has been automatically generated.

Compass and the associated logos are trademarks used under licence by Compass Education.

Request you all to maintain cyber hygiene and compliance so that internal ids are not compromised and do not become vehicles for such phishing attempts.

Resources:
https://www.iitr.ac.in/support/email/

- Avoid clicking on links in any e-mail unless it is from a trusted source

- Do not reply to e-mails soliciting personal information

- Never share password / OTP / ID cards / Bank details / Credit Cards/etc.

- Never remember passwords on non-personal system

- Sign off immediately after use from non personal computers

- Beware of online Lotteries / Loan offers / Video Calls / Free Gifts / etc.

- Use **complex password** and change it periodically (typically every 6 months)

- Use **two factor authentication (Ex: OTP)(Google Authenticator)**

- If your account is compromised, inform all your contacts immediately

  - Inform us, Inform on 1930 (toll free number)

- Any emergency or financial help request: confirm over phone

- Be watchful always

# ETHICAL AND LEGAL USE OF SOFTWARE AND ITS COMPLIANCE

1. During your affiliation with IIT Roorkee, you should **never use unauthorized/pirated copies of any software or media** which are in breach of copyright.

2. Now as an informed user, you should understand that such a violation has following implications:

    (i) Violation of Intellectual Property (IP) rights and possible **legal consequences** on account of wilful non-compliance

    (ii) Unauthorized/pirated software are most likely to **contain malware and ransomware** infecting other devices in the network, which may lead to future losses and thefts

    (iii) Even for an authorized software license, the terms of end-user license agreement should be adhered to. **An academic license is meant for academic use only** i.e., teaching and research and not for any commercial use. This violation of license agreement also falls under category of wilful non-compliance with legal implications.

3. You are expected never to install and use pirated/unauthorized software on any device under your administrative control. You should not indulge in any act that may be construed as use of pirated software.

Reach Us!

# Contact us!

## Single Link to
## Raise your Ticket/Request:

**https://www.iitr.ac.in/iccsupport/**

**Contact: +91 – 1332 - 284444**

## Write to us:

- **email-support@iitr.ac.in**

- **msteams-support@iitr.ac.in**

- **network-support@iitr.ac.in**

- **website-support@iitr.ac.in**

- **gangasupport@iitr.ac.in**

- **software-support@iitr.ac.in**

head.icc@iitr.ac.in ✉

**I I T ROORKEE**

# Thanks