

# Chouksey Engineering College

## Civil Engineering Department Achievements

### 2021-2022

A Webinar on Tunnel Engineering-“An Overview and Challenges” 13 January 2022.

**CHOUKSEY GROUP OF COLLEGES**  
B.TECH, M.TECH, MBA, PHARMACY, B.COM, B.SC, PGDCA, BHMS

**21 YEARS**  
EXCELLENCE IN TECHNICAL EDUCATION

**DEPARTMENT OF CIVIL ENGINEERING**  
Organized

**ONE DAY WEBINAR ON**  
**TUNNEL ENGINEERING- AN OVERVIEW & CHALLENGES**

REC Dr. Harsh Verma is presenting

**Presentation Overview**

- 1. About CSIR-CIMFR Bilaspur Research Centre
- 2. Tunnel Engineering: Background and present status
  - 1. Importance
    - 1. Underground construction and Tunneling in India
    - 2. Rock as engineering material: Rock Mechanics
    - 3. Steps in tunnel engineering
      - 1. Alignment survey
      - 2. Geological Investigation
      - 3. Design of Tunnel
    - 4. Tunnel Construction
      - 1. Rock Mass Characterization: EMB, Q-System, GSI, FMO
      - 2. Excavation: DDM and TBM
      - 3. Support installation: Various types of support, SRL, I.R.C, Shotcrete, SFRS
      - 4. Geotechnical Instrumentation: Structure health monitoring
    - 5. Ventilation and Lighting

11:12 AM | One Day Workshop on "...

13-01-2022

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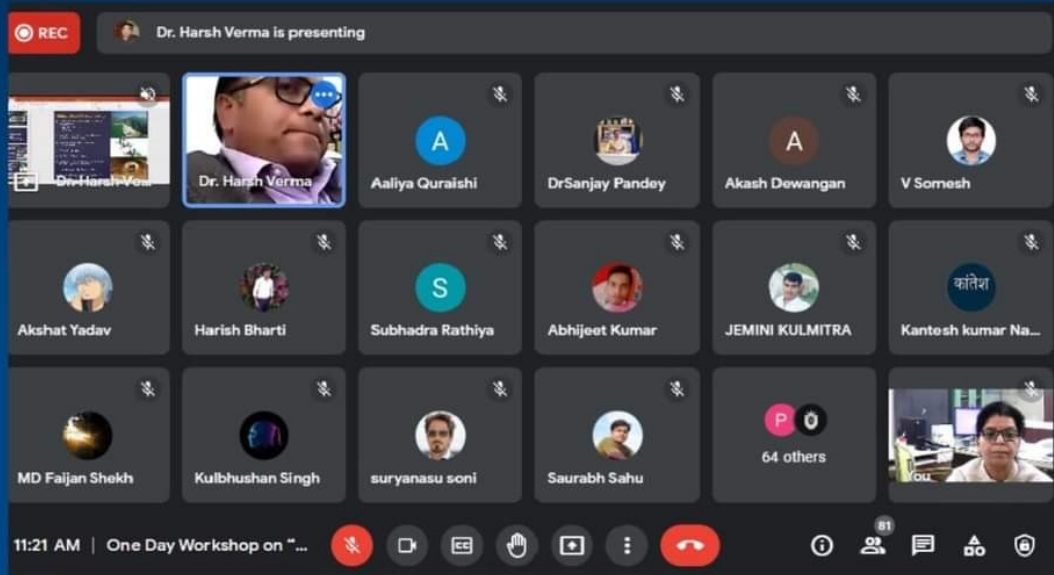
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**Rock Mechanics & Rock Engineering**

Study of mechanical behavior of rock and rock masses: compared to geology, it is that branch of mechanics concerned with the response of rock and rock masses to the force fields of their physical environment.

**Intact Rock:** Intact rock refers to the unfractured blocks between discontinuities in a typical rock mass. It is unfractured blocks between discontinuities in a typical rock mass.

**Rock Mass:** refers to in situ rock together with its discontinuities and weathering profile.

Rock Mass = Rock Materials + Rock Discontinuities

Dr. Harsh Verma

66 others

11:48 AM | One Day Workshop on "...

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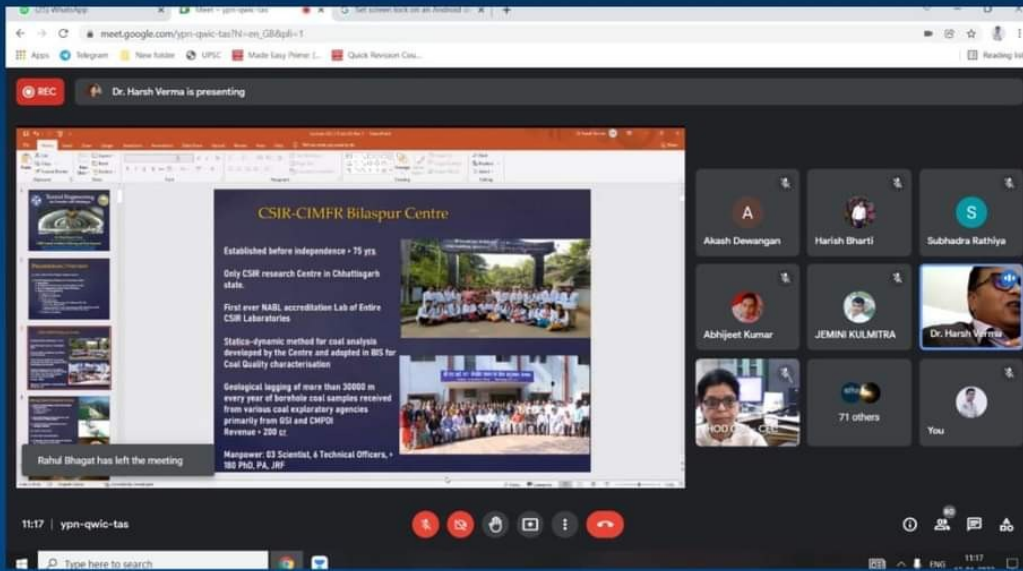


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Rank	Name	Length	Region	Region	State	Year of Opening
1	Zoji-la Tunnel	14.2 km.	Srinagar	Kargil	J & K	2018
2	Sela Tunnel	12.04 km.	Tawang	garocho	Arunachal Pradesh	2022
3	Dr. Spanta Prasad Munderjan Tunnel	9.28 km.	Jammu	Srinagar	J & K	2017
4	Rohang Tunnel reopened coal tunnel	8.8 km.	Leh	Merak	Himachal Pradesh	2020
5	Banhal Qaizgar Road Tunnel	8.5 km.	Banhal	Qaizgar	J & K	2021

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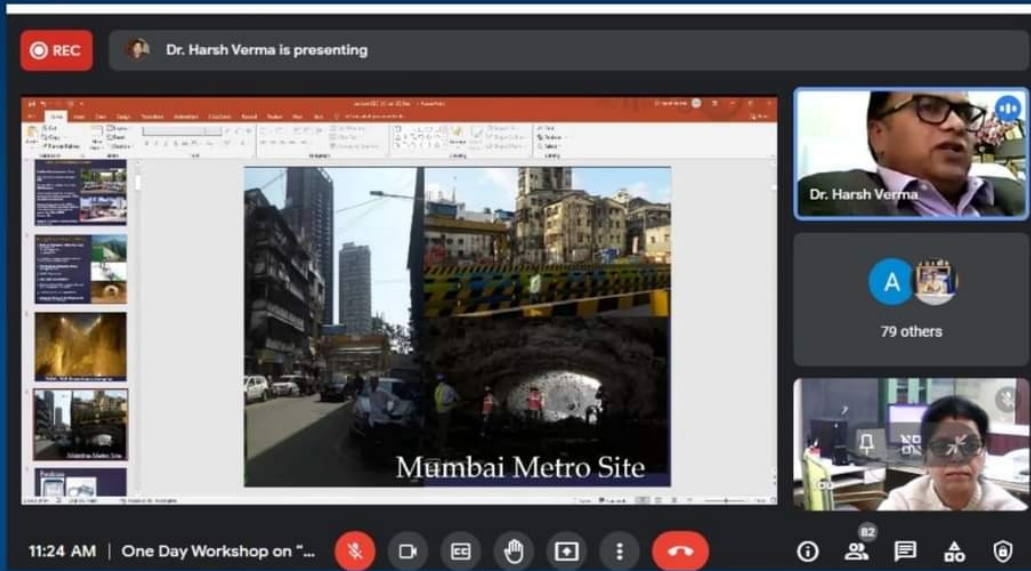
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