

<b>Date of Event</b>	<b>15.01.2022</b>
<b>Name and Type of Event</b>	<b>Knowledge Manthan on</b>  1. Tunneling: Issues and Challenges In Context Of NATM & TBM Tunnels 2. Voice Search: To Enhance User Experience Of Website
<b>Conducted by</b>	Dr. Anupam Kumari
<b>Number of Participants</b>	<b>35</b>

The Resource person **Prof. Kumar Shubham** and **Prof. Rakhi Chakraborty** are Assistant Professor of the School of Engineering and IT, ARKA JAIN University, Jamshedpur.

The speaker gave informative and illuminating lecture with valuable content. The session was very valuable for Faculties, Researcher and Students.

The tunnel boring machine (TBM) operates with slurry pressures that are not significantly above water pressures. ... It will be injected under high pressure into the front chamber of the tunnel boring machine (TBM) to balance earth and water pressures and carry the excavated material back to the surface.

Modern technology has paved the way for multi-functional devices like the smartwatch and the smartphone. Computers are increasingly faster, more portable, and higher-powered than ever before. With all of these revolutions, technology has also made our lives easier, faster, better, and more fun.

#### **About the Speaker:-**

The Resource person **Prof. Kumar Shubham** is Assistant Professor of the School of Engineering and IT, ARKA JAIN University, Jamshedpur

The Resource person **Prof. Rakhi Chakraborty** is Assistant Professor of the School of Engineering and IT, ARKA JAIN University, Jamshedpur

## Venue and Participants:-

Knowledge Manthan was conducted online on Google Meet Platform. **Total participants attended were 35**

## Event Poster

**JGI** | **ARKA JAIN University**  
Jharkhand (Jamshedpur)

ORGANIZED BY DEPARTMENT OF ENGINEERING

# KNOWLEDGE MANTHAN

DATE: 15th January 2022  
FOR: Faculty and B.Tech Students

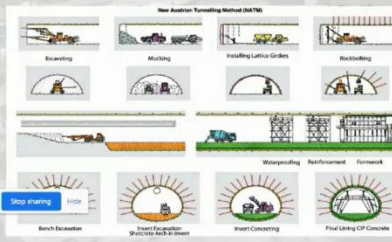
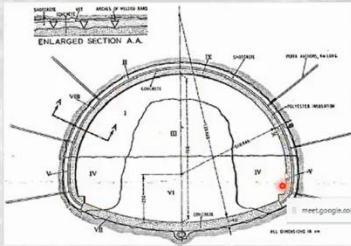
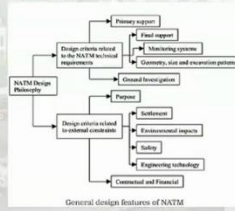
Prof. Kumar Shubham on the topic  
Tunneling: Issues and Challenges  
in context of NATM & TBM Tunnels

Prof. Rakhi Chakraborty on the topic  
VOICE SEARCH: to enhance user  
experience of website

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## 6. NATM TUNNELING PROCESS

- The New Austrian Tunneling Method (NATM), also known as the sequential excavation method, gained recognition during the tunneling operations in the Austrian Alps.
- The technique proved to be very useful in sophisticated and diversified geological conditions where forecasting of the rock mass is difficult due to rapidly changing geology.



KUMAR SHUBHAM

## Knowledge Manthan (2022-01-14 at 22:44 GMT-8)



Pre-emptive measures such as repairing of cracks before start of tunneling under the building

Widening of foundation of affected portion

Evacuation of building prior to tunnelling

Slabs, arches, columns etc. were supported using staging (such as cup lock system, use of tie rods, temporary or permanent propping, wrapping of columns etc.) up to 25 meters on either sides of tunnel.



KUMAR SHUBHAM

## knowledge Manthan Session 15<sup>th</sup> January,2022

Rakhi Chakraborty  
Assistant Professor  
Department of Engineering  
Arka Jain University, Jamshedpur



Rakhi Chakraborty

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Rakhi Chakraborty

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