



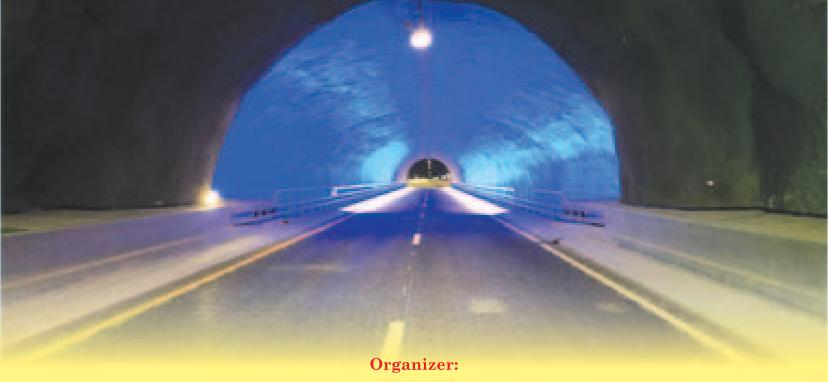




# International Seminar

on

# ADVANCES IN DESIGN, CONSTRUCTION AND OPERATION OF TUNNELS 19-20 April, 2023 At Vedanta Building Auditorium, DIT University, Mussoorie- Diversion Road, Village Makkawala, Dehradun, India



Ministry of Road Transport and Highways, Govt. of India

Organizing Partners: Indian Roads Congress (IRC) World Road Association (PIARC)



Supported by: Govt. of Uttrakhand





#### **Advanced Technology** & Engineering Services (Consultancy Division)



- · 2D & 3D Numerical Analysis and Design-(Geotechnical)
  - Underground Metro Stations
  - Underground Powerhouse Cavern and interconnecting tunnels/adits
  - Seepage and stability analysis and design of Tailing Dams and Earthen Dams
  - Tunnel Design & Analysis
  - Hill Slope Stability & Landslide Mitigation
  - Foundation Design & Analysis
- Soil, Rock & Construction Material Testing (NABL Accreditation No. TC 7287)
- All major field Geotechnical Investigations
- Non-destructive Health Monitoring of Civil Structures (NABL Accreditation No. TC-9342)
- Geophysical Surveys for infrastructure projects
- Toposurvey and Geological Survey and surface mapping



# IoT based Instrumentation & **Monitoring for Tunnels**

- VW Sensor / MEMS IPIs
- Digital Wireless Data Logger (LoRa)
- Gateway / Data Logger
- Embedded Nodes for TBM Segment Monitoring
- AIDA Artificial Intelligence Data Analytics Software

#### NATM - Tunnel (I & M)

VW Piezometer / MPPX / Pressure Cell / LC / IPIs / Optical Targets / Stress Cell

#### **Portal Instrumentation**

 MEMS IPI / Piezometer / Wireless Nodes & Gateway













For further information, please contact us:

E-mail: delhi@aimil.com | Tel: 91-11-6131 0244 | www.aimil.com

- Delhi (H.O.) Mumbai Bengaluru Kolkata Chennai Vadodara
- Hyderabad Chandigarh Guwahati Bhubaneswar Indore
- Nagpur Pune Bangladesh Lucknow Kochi Thiruvananthapuram

# International Seminar on Advances in Design, Construction and Operation of Tunnels

#### Organizer:

#### Ministry of Road Transport and Highways, Govt. of India

An Apex Organisation under the Central Government, is entrusted with the task of formulating and administering, in consultation with other Central Ministries/Departments, State Governments/UT Administrations, organisations and individuals, policies for Road Transport, National Highways and Transport Research with a view to increase the mobility and efficiency of the road transport system in the country.

#### Organizing Partner:

#### **Indian Roads Congress**

The Indian Roads Congress (IRC) is the Apex Body of Highway Engineers & Professionals in the country working in close collaboration with the Ministry of Road Transport & Highways, New Delhi. IRC was setup in 1934 and the Engineers working in Central/ State Govt. Dept. viz, MoRTH; NHAI; NHIDCL; BRO; MES, NRRDA; CPWD; MoRD; MoUD, State/UT PWDs; PSUs; IITs & Engineering Colleges; Research Organizations; Contractors; Consultants, etc. are members of IRC. IRC is presently having membership of 18870 engineers.

The main objective of IRC is to set up/formulate Standards, Codes, Specifications, Manuals etc. for adoption by Central / State Govt. road agencies to construct and maintain sustainable road infrastructure for overall development of the country. In addition, IRC also organize various events viz, Mid-Term Council Meetings; Annual Sessions; International Seminars; Regional Workshops; etc at various locations in India in order to disseminate and propagate technical knowledge and make highway professionals aware about current state of art practices, specifications, guidelines, cutting-edge environmental friendly technology, etc.

#### World Road Association (PIARC)

The World Road Association (PIARC) is a non-for-profit organization established in 1909. The Association aims to improve international co-operation and to foster progress in the field of roads and road transport. More than 100 years after it was established, the Association continues to foster and facilitate Global discussion and knowledge sharing on roads and road transport. The Association now boasts 125 Government Members worldwide and retains consultative status to the Economic and Social Council of the United Nations. The Vision of the Association is to be the world leader in the exchange of knowledge on roads and road transport policy and practices within an integrated sustainable transport context.

#### Supported by:

#### Public Works Department (P.W.D), Government of Uttrakahand:

Lok NirmanVibhag popularly known as P.W.D. has a legacy of more than 130 years. P.W.D. is responsible for construction, maintenance and planning of roads, bridges and Govt. Buildings. In view of strategic location of Uttarakhand bordering China/Tibet & Nepal, the responsibility of P.W.D. is vital.

#### INTERNATIONAL TUNNELLING AND UNDERGROUND SPACE ASSOCIATION (ITA):

Founded in 1974 by the initiative of nineteen Nations, the INTERNATIONAL TUNNELING AND UNDERGROUND SPACE ASSOCIATION (ITA). Its aims are:

- > to encourage the use of the subsurface for the benefit of public, environment & sustainable development and
- > to promote advances in planning, design, construction, maintenance and safety of tunnels and underground space, by bringing together information thereon and by studying questions related thereto.
- Since then, ITA has considerably developed. Presently, ITA gathers 78 Member Nations and 266 Corporate or individual Affiliate Members.

The General Assembly, which met annually, resolves all questions concerning the organisation and conducts of the affairs of the Association; it shall approve the budget of receipts and expenditure, and appoint and organise all Committees of the Association; it shall decide on the admission of new adhering national organisation and of the new affiliate member.

The General Assembly is hosted by a Member Nation at the occasion of the yearly World Tunnel Congress.

#### पीवीवीएसएस रवि प्रसाद

महानिदेशक (सड़क विकास) एवं विशेष सचिव

#### **PVVSS RAVI PRASAD**

Director General (Road Development) & Special Secretary Tel.: 011-23739088

E-mail: dgrdss-rth@nic.in





Invitation

भारत सरकार सड़क परिवहन एवं राजमार्ग मंत्रालय 1, संसद मार्ग, नई दिल्ली-110001 Government of India Ministry of Road Transport & Highway Transport Bhawan 1, Parliament Street, New Delhi-110001



**PVVSS Ravi Prasad** 

Dear Colleague,

It gives me immense pleasure in informing you that Ministry of Road Transport & Highways is organizing an International Seminar on "Advances in Design, Construction and Operation of Tunnels" in co-operation with the Indian Road Congress & World Road Association (PIARC) with the support of Govt. of Uttrakhand & International Tunneling and Underground Space Association on 19<sup>th</sup> & 20<sup>th</sup> April, 2023 at DIT University, Mussoorie-Diversion Road, Village Makkawala, Dehradun (Uttrakhand), (India).

In this International Seminar, representatives from various Central Govt. Departments and State PWDs, PSUs, IITs, Engineering Colleges, Contractors, Consultants etc., will participate and discuss various current issues/problems in construction of tunnels and deliberate on practical solutions to overcome these issues besides bringing forth innovative ideas towards Construction and Rehabilitation of tunnels. A good number of delegates from developed countries are also likely to participate in this International Seminar which will give exposure to international best practices in design, construction and rehabilitation of tunnels.

I cordially invite you to this International Seminar at Dehradun (India) and look forward to your active participation in the deliberations.

With Best Wishes.

(Ravi Prasad)



#### SANJAY KUMAR NIRMAL SECRETARY GENERAL, IRC



भारतीय सड्क काँग्रेस

कामा कोटि मार्ग, सेक्टर-6

रामा कृष्णा पुरम, नई दिल्ली-110 022 ( भारत)

INDIAN ROADS CONGRESS

Kama Koti Marg, Sector-6, R.K. Puram, New Delhi-110 022 (INDIA) Tele.: +91 112618 5303

E-mail: secygen.irc@gov.in



Sanjay Kumar Nirmal

#### Dear Colleague,

On behalf of the Indian Roads Congress, I would like to welcome you all to the International Seminar on "Advances in Design, Construction and Operation of Tunnels" being organised by the Indian Roads Congress on behalf of Ministry of Road Transport and Highways on 19<sup>th</sup> & 20<sup>th</sup> April, 2023. We do anticipate a very interesting Seminar with a lot of exciting presentations and likely interaction amongst the delegates.

Tunnels are very practical alternatives to cross physical obstructions or traverse through physical barriers such as mountains or snow bound areas and also in urban scenario to overcome the problem of RoW availability, congestion, pollution, etc. Road tunnel helps to reduce the distance between two locations, promote tourism & development of that particular area and also a boon against the fight with global warming. Many developed countries have adopted tunnelling as the most feasible option for quite some time. Currently, India is one of the fastest growing markets for tunnels and for Expressways, National Highways and high-density corridors passing through mountain ranges the option of tunnel is generally more viable taking into account overall benefit as compared with conventional hill road. So, there is a need to organise an International Seminar on 'Advances in Design, Construction and Operation of Tunnels' for the benefit of Highways Professionals, Government Officers, Designers, Consultants, Researchers, Academicians, Students & Research Scholars, Material & Machinery Manufacturers, Device Manufactures, etc across the globe.

(S.K. Nirmal)

 $4 \hspace{1cm}$  International Seminar

#### **ABOUT THE SEMINAR**

The Tunnels are very practical alternatives to cross physical obstructions or traverse through physical barriers, such as, mountains or snow bound areas and also in urban scenario to overcome the problem of RoW availability, congestion, pollution, etc. Road tunnel helps to reduce the distance between two locations, promote tourism & development of that particular area and also a boon against the fight with global warming. Many developed countries have adopted tunnelling as the most feasible option for quite some time. Currently, India is one of the fastest growing markets for tunnels and for Expressways, National Highways and high-density corridors passing through mountain ranges. The option of tunnel is generally more viable taking into account overall benefit as compared with conventional hill road. So, there is a need to organize an International Seminar on 'Advances in Design, Construction and Operation of Tunnels' for the benefit of Highways Professionals, Government Officers, Designers, Consultants, Researchers, Academicians, Students & Research Scholars, Material & Machinery Manufacturers, Device Manufactures, etc. across the globe.





DIT University, Mussoorie-Diversion Road, Village Makkawala, Dehradun (Uttrakhand), India

#### HOW TO REACH DEHRADUN

#### **&** By Air:

- Nearest Airport: Dehradun (DED) (also known as Jolly Grant Airport)
  - ➤ Areal Distance from Delhi ~205 km
  - > Travel time from Delhi ~ 1 Hour
  - ➤ Dehradun Airport to Hotel Jaypee Residency-55 km by road (~1 Hour travel time)
  - ➤ Dehradun Airport to DIT University 40 km by road(~50 min. travel time)

#### **❖** By Rail:

- Nearest Rly Station: Dehradun (DDN)
  - ➤ Travel time from Delhi ~ 5-1/2 Hours
  - ▶ Delhi Airport (T-3) to New Delhi Railway Station(NDLS)~21 km by road (~50 min. travel time)
  - ➤ Dehradun Rly Stn. To Hotel Jaypee Residency- 28 km by Road (~1 Hour)
  - ➤ Dehradun Railway Stn. to DIT University 12.4 km by Road (~35 Minutes)

#### **&** By Road:

- ➤ Distance from Delhi ~ 248 km
- > Travel Time from Delhi ~ 5 Hours

#### Note:

(i) A help desk has been planned at the Dehradun Airport and Railway Station.

#### 3.1 Direct Flights from Delhi to Dehradun

- 1. Alliance Air -6.20-07.20 IST Non-stop
- 2. Alliance Air -12.30-13.30 IST Non-stop
- 3. Indigo 8.20-09.15 IST Non-stop
- 4. Indigo 13.55-15.00 IST Non-stop
- 5. Indigo 16.55-17.45 IST Non-stop
- 6. Indigo 18.15-19.05 IST Non-stop
- 7. Vistara 14.00- 14.50 IST Non-stop

#### 3.2 Delhi to Dehradun Train Details:

| Train | Train Name     | From | Dep.  | Date  | То  | Arr.  | Date  | Travel |
|-------|----------------|------|-------|-------|-----|-------|-------|--------|
| 12055 | DDN JANSHTBDI  | NDLS | 15.20 | 16-04 | DDN | 21.10 | 16-04 | 05.50  |
| 12401 | KOTA DDN EXP   | NZM  | 23.50 | 16-04 | DDN | 05.45 | 17-04 | 05.55  |
| 12017 | DDN SHTBDI EXP | NDLS | 06.45 | 16-04 | DDN | 12.55 | 16-04 | 06.10  |
| 14317 | INDB DDN EXP   | NZM  | 11.40 | 16-04 | DDN | 19.45 | 16-04 | 08.05  |
| 14041 | MUSSOORIE EXP  | DLI  | 22.25 | 16-04 | DDN | 08.25 | 17-04 | 10.00  |

IRCTC Official link for Train Ticket Booking: https://www.irctc.co.in/nget/train-search

# PROGRAM-AT-A-GLANCE

| Tuesday, the 18 <sup>th</sup> | April, 2023  |
|-------------------------------|--|
| 16.00-17.00                   | Press Conference   |
| 17.00-20.00                   | Registration   |
| Wednesday, the 1              | 9 <sup>th</sup> April, 2023  |
| 08.00-10.00                   | Registration   |
| 10.00-11.30                   | Inaugural Session  |
| 11.30-12.00                   | High Tea   |
| Parallel Sessions:            | : (A) Design & Construction (B) Operation, Safety and Maintenance  |
| 12.00-13.30                   | <ol> <li>Session-2A:Conceptual Planning &amp; Design for Road Tunnels</li> <li>Presentation on "Design of the Tunnel as a System (Dutch Approach) by Mr. Ronald Mante (PIARC TC4.4 WG2-leader, Netherlands)</li> <li>Presentation on "Challenges in Conceptual Planning and Design for Road Tunnels in India" by Mr. Deepak Goel &amp; Mr. Prashant Navalakha (ILF India)</li> <li>Presentation on "Planning and Design of Underwater Tunnel across Brahmaputra" by Mr. R K Dhiman, Mr. Rahul Gupta &amp; Mr. Shwetabh Singh (India)</li> </ol>                      |
| 12.00-13.30                   | <ol> <li>Session-2B: Ventilation and Fire Protection</li> <li>Presentation on "Ventilation Design and Strategy for Specific Geographic Challenges" by Mr. Peter Sturm (Graz University of Technology, PIARC TC4.4 WG4 Leader, Austria)</li> <li>Presentation on "Particularities of Ventilation Design and Installations in High Mountain Tunnels" by Mr. Frédéric Waymel (Egis, PIARC TC4.4 WG4 Member, France)</li> <li>Presentation on "Fire Protection" by Mr. Nalin Doshi, Vimal Fire Controls Pvt. Ltd. (India)</li> </ol>                                     |
| 13.30-14.30                   | Lunch Break  |
| 14.30-16.00                   | <ol> <li>Session-3A: Geotechnical and Geophysical Investigation</li> <li>Presentation on "Geotechnical Investigations for Road Tunnel Projects" by Dr. Manoj Verman (India)</li> <li>Presentation on "Geomechanical Investigations for Long Tunnels in Mountainous Area" by Mr. Bernard Falconnat (Egis, PIARC TC4.4 member, France):</li> <li>Presentation on "Geophysical Investigations for Road Tunnels" by Dr. V.M. Tiwari, NGRI (India)</li> </ol>   |
| 14.30-16.00                   | <ol> <li>Session-3B: Sustainable Road Tunnel Operation</li> <li>Presentation on "Sustainable Design for Road Tunnels - How Small Decisions during Planning Phase Can Impact the Operational Costs During Tunnel Life Cycle" by Mr. Ricardo Miranda (PIARC TC4.4 Member, ITACOSUF Member, Brazil)</li> <li>Presentation on "Consideration of Sustainable Aspects for a Positive Energy Road Tunnel" by Rene List (PIARC TC4.4 Member, Austria)</li> <li>Presentation on "Sustainable Road Tunnels" by Mr. George Mavroyeni (PIARC TC4.4 member, Australia)</li> </ol> |
| 16.00-16.30                   | Tea/Coffee Break   |
| 16.30-18.00                   | <ol> <li>Session 4A: Latest Developments in Tunnel Construction</li> <li>Presentation on "NATM Tunnelling Incl. Instrumentation &amp; Monitoring" by Speaker from ITA</li> <li>Presentation on "Permanent Lining Material" by Speaker from ITA</li> <li>Presentation on "TBM Tunnels incl. Instrumentation &amp; Monitring" by Mr. Nitin Garg, Director - Business Development, Herrenknecht India Pvt. Ltd.</li> </ol>  |

| 10.00.10.00        |  |
|--------------------|--|
| 16.30-18.00        | Session 4B: Safety Issues  |
|                    | 1. Presentation on "Tunnel Lighting Systems" by Mr. Pierre Longtin (PIARC TC4.4 Member, Canada-Quebec)   |
|                    | 2. Presentation on "Self-evacuation Process incl. Reduced Mobility Users" by Mr. Helene<br>Mongeot (PIARC TC4.4 & ITA Cosuf Member, France)  |
|                    | 3. Presentation on "New Digital Approaches for Safe Operation of Tunnels" by Mr. Arild Søvik (PIARC TC4.4 & ITA Cosuf Member, Norway)  |
| 19.00 onwards      | Cultural Programme   |
| 20.00 onwards      | Dinner   |
| Thursday, the 20th | $^{ m h}$ April, $2023$  |
| 10.00-11.30        | Session 5A: Contractual Issues / Risk Management   |
|                    | 1. Presentation on "Extra Ordinary Geological Occurrences (EGOs)" by Mr. Matthias Neuschwander (ITA WG3 leader, Switzerland)   |
|                    | 2. Presentation on "Contractual Issues & Risk Management- Atal Tunnel" by Col. Parikshit Mehra, BRO (India)  |
|                    | 3. Presentation on "Contractual Issues" by Mr. Arnold Dix (President, ITA)   |
| 10.00-11.30        | Session 5B: Risk Management  |
|                    | 1. Presentation on "Risk-Based Decision Making" by Mr. Bernhard Kohl (PIARC TC4.4 member, Austria)   |
|                    | 2. Presentation on "Implementation of "Safety Management Systems": An Innovative Approach Dedicated to Safe Road Tunnels Operation" by Mr. Helene Mongeot (PIARC TC4.4 & ITA Cosuf member, France) |
|                    | 3. Presentation on "Alternative Fuels and Propulsion Systems Impact on Safety and Operation" by Peter Sturm (To be announced)  |
| 11.30-12.00        | Tea/Coffee Break   |
| 12.00-13.30        | Session-6A: Case Studies on Road/Rail Tunnel Projects -Part 1  |
|                    | 1. Presentation on "Brahmputra Underwater Tunel"   |
|                    | 2. Presentation on "Qazikund Banihal Tunnel" by Mr. Manoj Kumar (Member, NHAI)   |
|                    | 3. Presentation on "57 km Railway Tunnel between Lyon and Turin under the Alps" by Lucy Rew (Egis, ITA-Member, UK)   |
| 12.00-13.30        | Session-6B: Case Studies on Road Tunnel Projects - Part I  |
|                    | <ol> <li>Presentation on "Kashedi Tunnel: A Green Field Tunnel with Viaducts" by Mr. Deepak<br/>Goel &amp; Mr. Prashant Navalakha (ILF India)</li> </ol>   |
|                    | 2. Presentation on "Case Study about A Project with FFFS" by Max Lakkonen (IFAB, ITA Cosuf, Germany)   |
|                    | 3. Presentation on "Sao Paulo Fire Fighting Strategies" by Mr. Ricardo Miranda (PIARC TC4.4 Member, Brazil)  |

| 13.30-14.30        | Lunch Break   |  |  |
|--------------------|---|--|--|
| 14.30-15.30        | Session-7A: Case Studies on Road/Rail Tunnel Projects Part 2  |  |  |
|                    | 1. Presentation on "Design concept of Road Tunnel against Earthquake in Japan" by Mr. Nobuharu Isago (PIARC TC4.4 Member, Japan)  |  |  |
|                    | 2. Presentation on "Long Subsea Tunnels" by Mr. Arild Sovik (PIARC TC4.4, ITA-Cosuf Member, Norway)   |  |  |
|                    | 3. Presentation on (Zojila tunnel) Mr. Atul Kumar/Mr. G.B Nagendra (USBRL)  |  |  |
| 14.30-15.30        | Session-7B: Case Studies on Road Tunnel Projects - Part II  |  |  |
|                    | 1. Presentation on "Annie-Cordy Tunnel Refurbishment & Modernization of the Brussels Road Tunnel Control Center" by Mr. Arthur Kabuya (PIARC TC4.4 WG1 Leader, Belgium) |  |  |
|                    | 2. Presentation on "Smart Tunnel in Malaysia/Penang Undersea Tunnel" by Mr. IR. Chan Sai Chok, (MD Perunding Eagles Engineers Sdn Bhd. Malaysia)                        |  |  |
|                    | 3. Presentation on "Road Tunnels Controlling in the Centre of Prague" by Mr. Lukáš Rákosník (PIARC TC4.4 Member, Czech Republic)  |  |  |
| 16.00-16.30        | Tea/Coffee Break  |  |  |
| 16.30-18.00        | Valedictory Session   |  |  |
| Friday, the 21st A | Friday, the 21st April, 2023  |  |  |
| 09.00              | Technical Site Visit  |  |  |

# **SPONSORSHIP RATE**

Sponsors and Co-sponsor are invited form Government organizations, Concessionaries, Contractors, Consultants and Manufacturers etc. The structure fee is as follows, which, may be sent by Demand Draft/crossed cheques drawn in favour of the Secretary General, IRC or through NEFT/RTGS.

#### RATES FOR SPONSORSHIP, CO-SPONSORSHIP

| 1. | Platinum Sponsor (with Ten free delegates) | Rs. 20,00,000/- inclusive of GST    |
|----|--|-------------------------------------|
| 2. | Gold Sponsor (with five free delegates)    | Rs. 15,00,000/- inclusive of GST    |
| 3. | Sliver Sponsor (with three free delegates) | Rs. $10,00,000$ /- inclusive of GST |
| 4. | Bronze Sponsor (with two free delegate)    | Rs. 5,00,000/- inclusive of GST     |

#### RATES FOR EXHIBITION STALL SIZE 3X3 (MTRS.)

| 1                       | Stall Size 3x3 Mtrs. | Rs.3,00,000/- inclusive of GST (Two persons will be allowed to         |
|-------------------------|----------------------|--|
| 1. Stall Size 3x3 Witts |                      | participate free of cost during the Event) (Depending on the response) |

## **REGISTRATION FEE**

The Central/State Government Departments, Consultants, Concessionaries, Contractors and other stake holders may nominate the delegates for this International Seminar.

#### The Rates of Registration for the Seminar are as under:

| Car | tegory of Delegates  | Registration fee including GST |                          |  |
|-----|--|--------------------------------|--------------------------|--|
| A.  | Delegates from India   | Self                           | Spouse                   |  |
| 1.  | Official Government Delegates a) Senior (EE & above) b) Junior (below EE)                            | Rs.9000.00<br>Rs.7000.00       | Rs.5000.00<br>Rs.5000.00 |  |
| 2.  | Officials of Public and Private Sector Undertakings/Companies, etc.                                  | Rs.9000.00                     | Rs.5000.00               |  |
| 3.  | Individuals (Not nominated by the Government/Public and Private Sector Undertakings/Companies, etc.) | Rs.7000.00                     | Rs.5000.00               |  |
| 4.  | Student Member   | Rs.2000.00                     |                          |  |
| 5.  | International Participants (for the Members of PIARC & ITA)  | 700 US \$                      | 300 US \$                |  |
| 6.  | International Participants (non-members/private sector)  | 850 US \$                      | 300 US \$                |  |

# **ACCOMMODATION**

Delegates are requested to make their own arrangements for travel and accommodation. The details of Hotel with Tariff is at **Annexure-I** 

#### For more information please contact:

Indian Roads Congress Secretariat

Kama Koti Marg, Sector-6,

R.K. Puram

New Delhi-110 022

| INDIAN ROADS CONGRESS                                   |         |                          |  |  |
|---|---------|--------------------------|--|--|
| S.K. Nirmal   | Phone   | 011- 26185303            |  |  |
| Secretary General                                       | E-mail: | secygen.irc@gov.in       |  |  |
| Rahul Patil   | Phone   | 011-26185273             |  |  |
| Deputy Director (T)                                     | E-mail: | tc.irc@gov.in            |  |  |
| Mukesh Dubey  | Phone   | 011-26185315             |  |  |
| Under Secretary (Finance)                               | E-mail: | ircfinance2017@gmail.com |  |  |
| Anil Sharma   | Phone   | 011-23387140             |  |  |
| Under Secretary (Membership, Journal & Indian Highways) | E-mail: | paper.irc-morth@gov.in   |  |  |
| Ajay Kumar Bhalla                                       | Phone   | 011-26171548             |  |  |
| Under Secretary (Admn.)                                 | E-mail: | admn.irc-morth@gov.in    |  |  |
| Rajneesh Katoch   | Phone   | 011-26171548             |  |  |
| Section Officer (Admn.)                                 | E-mail: | ircseminar1934@gmail.com |  |  |

# Places of Interest in Uttarakhand



1. Rishikesh – The Adventure and Yoga capital



2. Haridwar – Blessed by Ganga



3. Dehradun – The Capital City of the Uttarakhand



4. Nainital – Gets its Identity from Mesmerizing Naini Lake



5. Mussoorie



4. Jim Corbett National Park – The Natural Habitat of Royal Bengal Tigers

Indian Roads Congress 11

# LIST OF HOTELS

| S.<br>No   | Hotel Name            | Contact No. and Email                             | Room Type<br>Single/<br>Double<br>Room | Rates/<br>Per<br>Day | GST            | Room<br>Rates<br>including<br>GST Per<br>Day |
|------------|-----------------------|---|--|----------------------|----------------|--|
|            |                       |   | Standard<br>(Twin & King)<br>on single | 7700                 |                | 9,086  |
|            | Fairfield By Marriott | Shri Aditya P Singh<br>8077732308<br>0135 6620222 | Standard<br>(Twin & King)<br>on double | 8200                 | 100/           | 9,676  |
| 1          | Dehradun              | Aditya.singh3@fairfieldinn.com                    | Deluxe (Twin<br>& King) on<br>single   | 9000                 | 18%            | 10,620                                       |
|            |                       |   | Deluxe (Twin<br>& King) on<br>double   | 9500                 |                | 11,210                                       |
| o          | 9 Hyatt Regency       | Shri Vivek Singh<br>7217015125                    | Single :<br>Regency<br>(King/Twin)     | 15000                | 100/           | 17,700                                       |
| 2          | Dehradun              | Vivek.singh1@hyatt.com                            | Double :<br>Regency<br>(King/Twin)     | 15500                | 18%            | 18,290                                       |
|            | Four points by        | Shri Dharamraj Singh<br>8171 999 263              | Single                                 | 9000                 | 100/           | 10,620                                       |
| 3 Sheraton |                       | Dharamraj.Singh@<br>marriott.com                  | Double                                 | 10000                | 18%            | 11,800                                       |
| 4          | 4 Lemon Tree Hotel    | Shri Sahil Snower<br>8979939162                   | Single                                 | 7000                 | 18%            | 8,260  |
| 4          |                       | Ados.dn@lemontreehotels.                          | Double                                 | 8500                 | 18%            | 10,030                                       |
| 5          | Hotel Madhuban        | Shri M Khanduri<br>9837388699                     | Single                                 | 4500                 | 12%            | 5,040  |
|            | 110001111441140411    | sm@hotelmadhuban.com                              | Double                                 | 5500                 | 12,0           | 6,160  |
| 6          | a Sarovar Portico     | Shri Mayank Rawat<br>0135-6616900                 | Single                                 | 4200                 | 12%            | 4,704  |
| O          | Dehradun              | fom@<br>sarovarporticodehradun.<br>com            | Double                                 | 4800                 | 12/0           | 5,376  |
| 7          | Red Fox Hotel         | Shri Shashank Chand                               | Single                                 | 4500                 | 12%            | 5,040  |
|            |                       | 6397501003  | Double                                 | 5000                 | _ <b>_</b> , 0 | 5,600  |
| Q          | Kova Prima Alata      | Shri Pranesh Singh Rana<br>9319096123             | Single                                 | 5000                 | 12%            | 5,600  |
| 8          | Keys Prima Aketa      | Sales1dn.keys@<br>lemontreehotels.com             | Double                                 | 5500                 | 1 <i>2</i> %   | 6,160  |







# INTERNATIONAL SEMINAR

on

#### ADVANCES IN DESIGN, CONSTRUCTION AND OPERATION OF TUNNELS

on 19th - 20th April, 2023, DIT, University, Mussoorie-Diversion Road, Village Makkawala, Dehradun, Uttarakhand

#### REGISTRATION FORM

| Indian Roads Congress, Kama Koti Marg, Sector-6, R.K. Puram NEW DELHI - 110 022 |                           | Email<br>Website | : ircseminar1934@gmail.com<br>: admn.irc-morth@gov.in<br>: www.irc.nic.in |
|---|---------------------------|------------------|---|
| IRC Membership  | No. :                     |                  |   |
| Name  | :                         |                  |   |
| Designation   | : <u></u>                 |                  |   |
| Organization  | :                         |                  |   |
| Address   | :                         |                  |   |
|   |                           |                  |   |
|   | Pin                       | Code :           |   |
| Telephone Nos. w  | vith (STD) Code           |                  |   |
| Office :  |                           | Residence        | :   |
|   |                           | Mobile           | :   |
| Email :   |                           |                  |   |
| Na  | ame of Spouse (If accompa | nying)           | Age   |
| 1.  |                           |                  |   |
| 2.  |                           |                  |   |
|   | Arrival                   |                  | Departure   |
| Date:   |                           |                  | Date:   |
| Time:   |                           |                  | Time:   |
| Mode: Mode:   |                           | Mode:            |   |
| If Official, Name   | of Sponsor &              |                  |   |
| Sanction Letter N   | No. (copy enclosed) :     |                  |   |

# **Registration Fee:**

| Catagory of Dalogatas  | Registration fee including GST |                          |  |  |
|--|--------------------------------|--------------------------|--|--|
| Category of Delegates  | $\mathbf{Self}$                | Spouse                   |  |  |
| <ol> <li>Official Government Delegates</li> <li>Senior (EE &amp; above)</li> <li>Junior (below EE)</li> </ol>  | Rs.9000.00<br>Rs.7000.00       | Rs.5000.00<br>Rs.5000.00 |  |  |
| 2. Officials of Public and Private Sector Undertakings/Companies, etc.   | Rs. 9000.00                    | Rs. 5000.00              |  |  |
| 3. Individuals (Not nominated by the Government/<br>Public and Private Sector Undertakings/Companies,<br>etc.) | Rs.7000.00                     | Rs.5000.00               |  |  |
| 4. Student Member  | Rs. 2000.00                    | _                        |  |  |
| 5. International Participants (for the Members of PIARC & ITA)   | 700 US \$                      | 300 US\$                 |  |  |
| 6. International Participants (non-members/private sector)   | 850 US \$                      | 300 US\$                 |  |  |

# Payment Mode:

| drawn in favou<br>amounting Rs as Regi | Dated issued by a rof Secretary General, IRC payable at New Delhi stration fee is enclosed. The payment can also be a are available on IRC Website www.irc.nic.in |  |
|--|---|--|
| Date                                   | Signatures  |  |
| For Office Use Only                    |   |  |
| Receipt No :                           | Dated :   |  |
| Amount (Rs.) :                         | _   |  |







# INTERNATIONAL SEMINAR

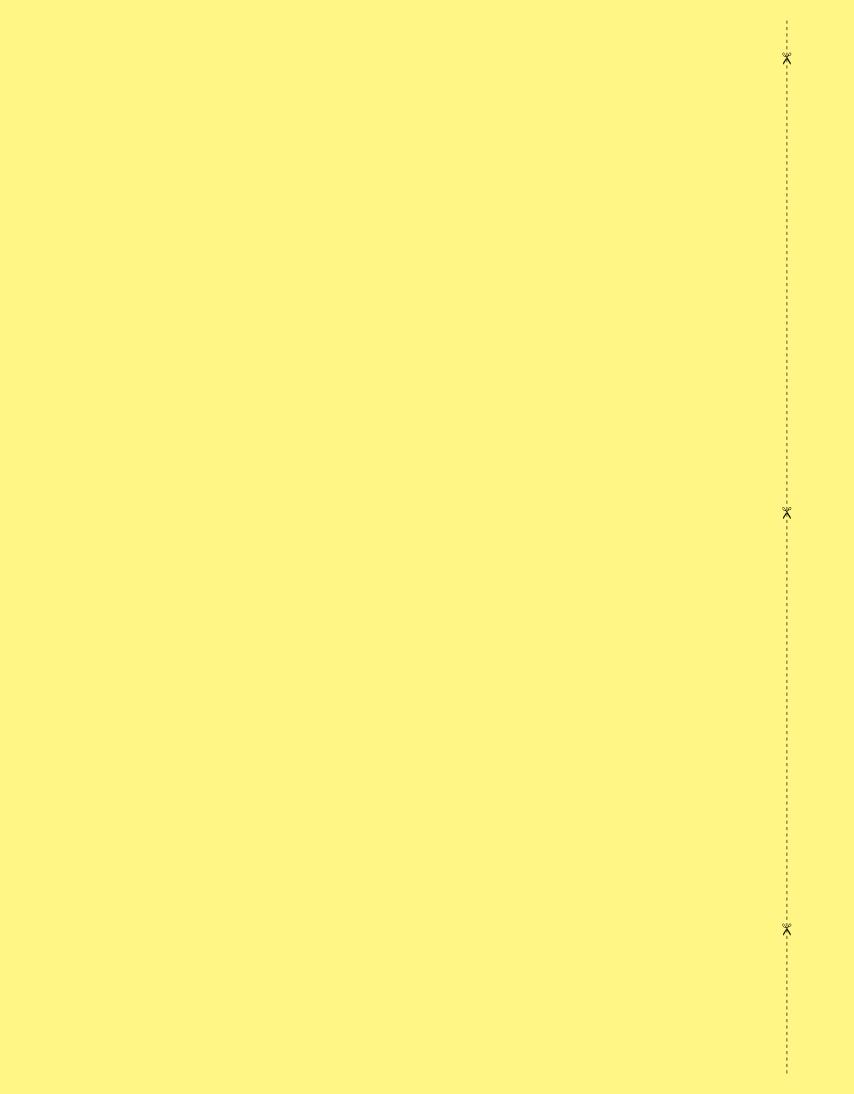
on

## ADVANCES IN DESIGN, CONSTRUCTION AND OPERATION OF TUNNELS

on 19<sup>th</sup> – 20<sup>th</sup> April, 2023, DIT, University, Mussoorie-Diversion Road, Village Makkawala, Dehradun, Uttarakhand

#### ACCOMMODATION FORM

| Indian Roads                     | arg, Sector-6, R        | ,     | Telephone No.: 011-26171548  Email: ircseminar1934@gmail.com: admn.irc-morth@gov.in  Website: www.irc.nic.in |                         |       |
|----------------------------------|-------------------------|-------|--|-------------------------|-------|
| IRC Member                       | -                       |       |  |                         |       |
| Name                             |                         |       |  |                         |       |
| Designation                      |                         |       |  |                         |       |
| Organization<br>Address          | · <u> </u>              |       |  |                         |       |
| Address                          | : _                     |       |  |                         |       |
|                                  |                         | Pi    | n Code :   |                         |       |
| Office : Fax :                   | os. with (STD)          |       | Residence         :           Mobile         :   |                         |       |
| Name of Spouse (If accompanying) |                         |       | Age  | Veg [V] / Non-veg [ N]  |       |
| 1.                               |                         |       |  |                         |       |
| 2.                               |                         |       |  |                         |       |
| Arrival Date                     |                         |       | Departure Date   |                         |       |
| Mode                             | Air / Train / Bus / Car |       | Mode   | Air / Train / Bus / Car |       |
| Flight No.                       | Time                    | Date  | Flight No.   | Time                    | Date  |
|                                  |                         |       |  |                         |       |
| Airport:                         |                         |       | Airport:   |                         |       |
| Train Name                       | Time                    | Date  | Train Name   | Time                    | Date  |
|                                  |                         |       |  |                         |       |
| Class                            | Class Station           |       | Class  | Station                 |       |
|                                  |                         |       |  |                         |       |
| Bus                              | Time:                   | Date: | Bus  | Time:                   | Date: |
| Car                              | Time:                   | Date: | Car  | Time:                   | Date: |
| Accommoda                        | tion: Name of H         | otel  |  |                         |       |





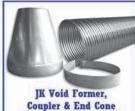


# **POST TENSION MATERIAL & EQUIPMENTS**















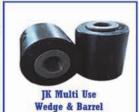


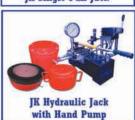
JK Anchor Cone &

**IK HDPE Sheathing** 











# **OUR VALUABLE CLIENTS:**



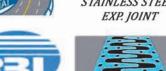






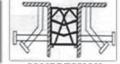






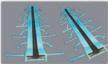


















**JOINTS** 





EXP. JOINT









