



BHARATMALA
ROAD TO PROSPERITY



Indian Academy of Highway Engineers
Ministry of Road Transport and Highways, Govt. of India)

F.No. IAHE/Trg/SMHR&LM/Webinar/2020-21

17th June, 2020

OFFICE MEMORANDUM

Subject: Online training programme on "Slope Management in Hill Roads & Landslide Mitigation" from 01st - 08th July, 2020 - request for nominations regd.

Indian Academy of Highway Engineers (IAHE) is organizing "Online training programme on **Slope Management in Hill Roads & Landslide Mitigation**" from 01st - 08th July, 2020 on Cisco (website and app) which is being used widely for video conferencing purposes presently. Eminent guest faculty will deliver the lectures on the topics as per attached schedule and share the presentations screen. Discussions and deliberations will be held online with the faculty on Cisco. Therefore, you are required to download the Cisco app through Google Play Store or iOS Store or you can go to hyperlink <https://webex.co.in> wherein you can signup for free of cost account by filling up your details as asked therein. The website and app are user friendly and you can get yourself acquainted with the app before joining the training sessions.

One day before the lecture, a hyper link to attend the lectures with Meeting ID and Password will be shared by IAHE with the participants on email IDs. Participants need to click the hyperlink to join the lectures with Meeting ID and Password as indicated in the email. Please make sure that you are logged in the webpage or app of Cisco. These steps are to be followed every day to attend the scheduled lectures as per schedule.

3. It may be noted that each lecture is divided in two sessions of 90 minutes duration each and two lectures per day in forenoon and afternoon will be held. After first session of 90 minutes, the lecture will get disconnected and to attend the second session, you are required to re-join and start session after 5 minutes on the hyperlink sent on your email for that day. This way you will again be redirected on Cisco app in lecture directly.

4. All the participants are requested to attend the lectures on daily basis on time positively. For any clarification, you may contact Mr. D. Sarangi, Director, IAHE, Mob: 8130781101 or Mr. Sunil Kumar Gupta, Deputy Director, Mob. 9718053953 or Mr. Ashish Kumar, Stenographer (Rajbhasha), Mob. 7753862019 or Mr. Neeraj Dutt, Training Assistant Mob. 9315886672 for assistance required if any.

5. MORTH, NHAI, NHIDCL, BRO, State PWDs, Central and State PSUs, etc. are requested to nominate Officers who are dealing "Slope Management in Hill Roads & Landslide Mitigation" to attend the programme online. The nominations may please be sent as soon as possible on iahe.training@gmail.com.

Yours faithfully,

Sunil Kumar Gupta,
Deputy Director & Course coordinator,
For Director, Indian Academy of Highway Engineers
(IAHE), A-5, Institutional Area, Sector-62,
NOIDA - 201309
Mob. 9718053953



Indian Academy of Highway Engineers

(Ministry of Road Transport & Highways, Govt. of India)

A-5, Sector-62, Noida-201301

Online Training Programme on "Slope Management in Hill Roads & Landslide Mitigation"

from 01st – 08th July 2020 on Cisco Webex

01.07.2020 (Wednesday)		
10:00 – 10.30	Introduction	Shri D. Sarangi, Director, IAHE and Shri Sunil Kumar Gupta, Deputy Director and Course Coordinator, IAHE
(Morning Session) 10.30 -12.00	Hill Slope across Highways <ul style="list-style-type: none"> ➤ Definition of Highway Slopes ➤ Virgin Slopes ➤ Highway Cut Slopes ➤ Manmade Slopes ➤ Components of Hill Slope across Highways ➤ Geological, Geomorphological, Geohydrological, Geotechnical, Ecological/Environmental Interactions and Interrelationships between Slope Components 	Dr. Kishore Kumar, Retd Chief Scientist, CRRRI 9811211512 kishornhrm@gmail.com
(Afternoon Session) 15.00 -16.30	Highway Slope vs. Mass Wasting & Instability <ul style="list-style-type: none"> ➤ Classification of Slope Processes vis-à-vis Slope Types ➤ Conditions, Causes and Factors influencing Mass Movement and Instability on Slope and their Mechanism 	Dr Vikram Gupta, Scientist E, Wadia Institute of Himalyan Geology 9411528837 vgupta@wihg.res.in , vgupta_wihg@yahoo.com
02.07.2020 (Thursday)		
(Morning Session) 10.30 -12.00	Highway Slope vs. Mass Wasting & Instability Contd...	Dr Vikram Gupta, Scientist E, Wadia Institute of Himalyan Geology 9411528837 vgupta@wihg.res.in , vgupta_wihg@yahoo.com
(Afternoon Session) 15.00 -16.30	Investigations of Hill Slopes & Processes <ul style="list-style-type: none"> ➤ Geological Investigations- Identification of material, properties and classification ➤ Geomorphological Investigations- Micro and macro features of morphology ➤ Geohydrological Investigations- Surface and Sub-surface Drainage Investigations, Watershed Management ➤ Geotechnical Investigations 	Dr. Kishore Kumar, Retd Chief Scientist, CRRRI 9811211512 kishornhrm@gmail.com
03.07.2020 (Friday)		
(Morning Session) 10.30 -12.00	Investigations of Hill Slopes & Processes contd...	Dr. Kishore Kumar, Retd Chief Scientist, CRRRI



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<p>(Afternoon Session) 15.00 -16.30</p>	<p>Highway Hill Slope Data Base and Inventory</p> <ul style="list-style-type: none"> ➤ Purpose of database ➤ Inventory methods for preparation of a data base 	<p>Dr. R K Bhandari, Chairman, Forum for Disaster Mitigation, Indian National Academy of Engineering, and Member, National Advisory Committee to the NDMA.</p> <p>9810345123 rajmee@yahoo.com</p>
<p>06.07.2020 (Monday)</p>		
<p>(Morning Session) 10.30 -12.00</p>	<p>Highway Hill Slope Vulnerability and Risk Assessment</p> <ul style="list-style-type: none"> ➤ Highway hill slope rating system <ul style="list-style-type: none"> • Rating criteria for identification and classification of highway slopes • Suitability/vulnerability and potential for hill slope failure ➤ Zonation of slopes <ul style="list-style-type: none"> • Zonation of highway hill slopes based on their vulnerability classes (methods and applications) • Identification/estimation/calculation of risk due to vulnerable highway hill slopes 	<p>Dr. R K Bhandari, Chairman, Forum for Disaster Mitigation, Indian National Academy of Engineering, and Member, National Advisory Committee to the National Disaster Management Authority</p> <p>9810345123 rajmee@yahoo.com</p>
<p>(Afternoon Session) 15.00 -16.30</p>	<p>Highway Slope Monitoring and Forecasting System</p> <ul style="list-style-type: none"> ➤ Significance of monitoring and forecasting ➤ Methods and application of monitoring including instrumentation and forecasting ➤ Case Study 	<p>JICA Expert</p>
<p>07.07.2020 (Tuesday)</p>		
<p>(Morning Session) 10.30 -12.00 and (Afternoon Session) 15.00 – 16.30</p>	<p>Highway Hill Slope Protection Structures (Construction & Maintenance)</p> <ul style="list-style-type: none"> ➤ Stabilization of slopes- Excavation at Top of Slope, General Flattening of Slope, Benching of Slope, Complete Removal of Unstable Mass, Earth Fill at Toe Slope, Rock or Gravel Fill at Toe of Slope ➤ Selection of Structures for Protection-Debris Arrestors, Retaining Wall, Breast Wall, Toe Wall, Piles, benching, Filter beds, Easing of Slopes, Bitumen/ Asphalt mulching, Chutes and Sloping Aprons, Turfing ➤ Retaining Structures- Rock and Earth Fill Buttress at Toe of Slope, Crips or Gravity Retaining Wall, Pile Walls, Caisson Toe of Slope, Barriers at Toe anchored by Tie- Back 	<p>Ms. Minimol Korulla, Vice President, Maccaferri</p> <p>9717568886 m.korulla@maccaferri.com</p>



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	Cementation, Freezing, Electro-Osmosis, Compaction , Rock Bolting, Blasting at Toe ➤ Drainage System ➤ Application of Geosynthetics for hill slopes stabilisations ➤ Maintenance of slope protections structures	
08.07.2020 (Wednesday)		
(Morning Session) 10.30 -12.00	Highway Hill Slope Protection Structures (Construction & Maintenance) Contd.....	Ms. Minimol Korulla, Vice President, Maccaferri 9717568886 m.korulla@maccaferri.com
(Afternoon Session) 15.00 -16.30		
16.30 – 17.00	Feedback and Concluding	Shri D. Sarangi, Director, IAHE and Shri Sunil Kumar Gupta, Deputy Director and Course Coordinator, IAHE



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(Participant Registration Form)
**“Online Training Programme on
“Slope Management in Hill Roads & Landslide Mitigation”
(From 01.07.2020 – 08.07.2020)
Organized by IAHE, on Cisco Webex**

Please fill and submit at iahe.training@gmail.com



1. Name :
2. (i) Age:..... (ii) Date of birth
3. Education Qualification:
4. State/Region:.....
5. Language Proficiency:

	Write	Read	Speak
Hindi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
English	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Any Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Designation/Position.....
 - (i) Office.....
 - (ii) Residence.....
 - (iii) Mobile.....
 - (iv) Email-id:.....
7. Office Address
8. Correspondence Address :
9. Contact Detail of Organizations:
 - (i) Name of Organization:
 - (ii) Name of H.O.DDesignation/Position:
 - (iii) Contact (Ph. No. / Email):.....
10. Years of Experience in Road/Highway Sector:
.....