SREYAS

INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068

Department of Civil Engineering

Summary Report

on

One-week online Faculty Development Programme on "Sustainable Materials and Pavement Performance (SMPP): Design, Construction, and Maintenance"

26th April to 01st May 2021

Hosted by: Department of Civil Engineering, Sreyas Institute of Engineering and Technology, Hyderabad

Total Number of Participants: 180

Participants are the faculty members, research scholars and practicing engineers from India, USA, Nigeria, and Oman**.**

Meeting Platform: Google Meet

Day 1 Session 1

Keynote Speaker: Prof.K.Sudhakar Reddy, IIT Kharagpur

Topic: Sustainability of Materials in Pavements: Critical issues.

Time: 10:00 AM to 12:00 PM, April 26, 2021

Duration: 02 hours

Prof. Sudhakar Reddy, IIT Kharagpur highlighted the critical issues in the sustainability of the pavements. Prof.Reddy has also discussed innovative pavement technologies such as cell-filled concrete pavements, concrete block pavements, and short paneled concrete pavements. We need to adopt these technologies locally and have a feedback mechanism to implement at a large scale.

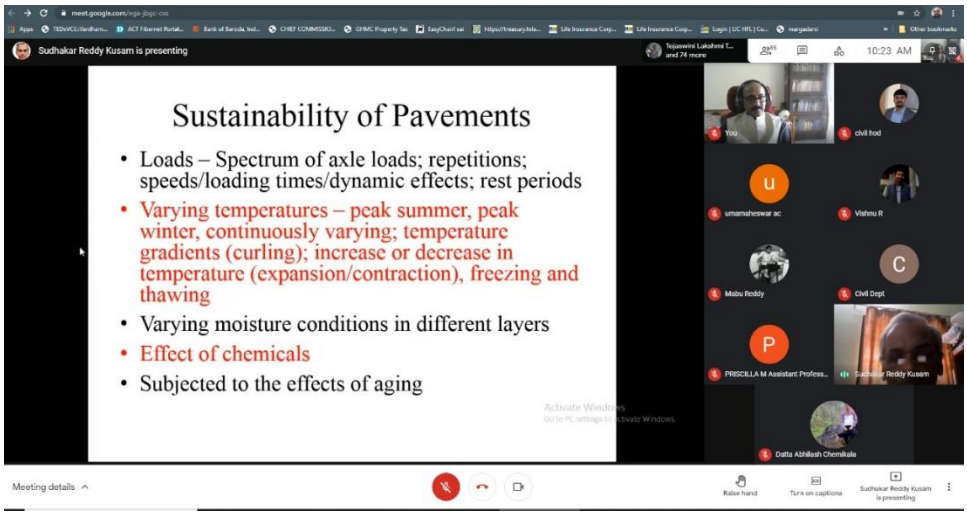
SREYAS

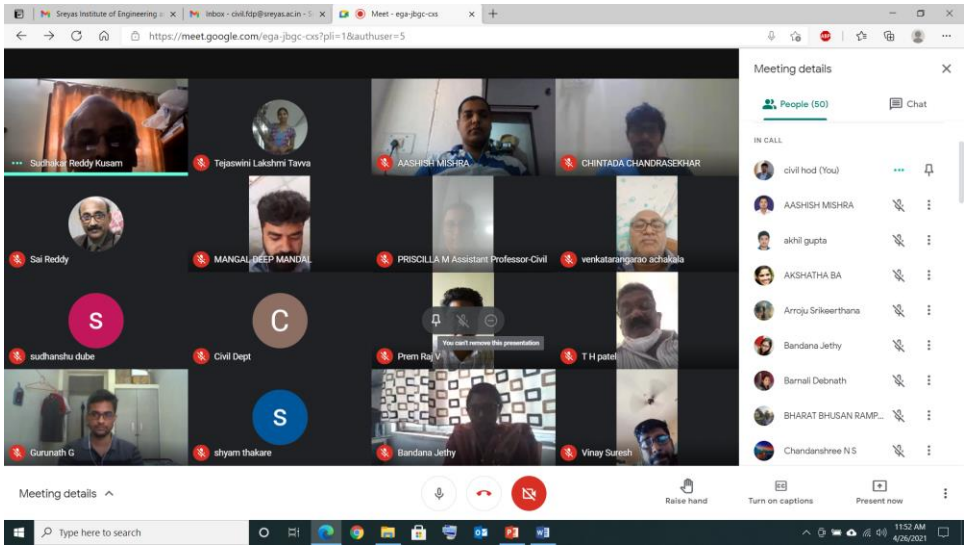
INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068

Few glimpses of the session 1 of Day 1 in the FDP.





SREYAS

INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068

Day 1 Session 2

Name: Prof. Ramya Sri Mullapudi, IIT Hyderabad

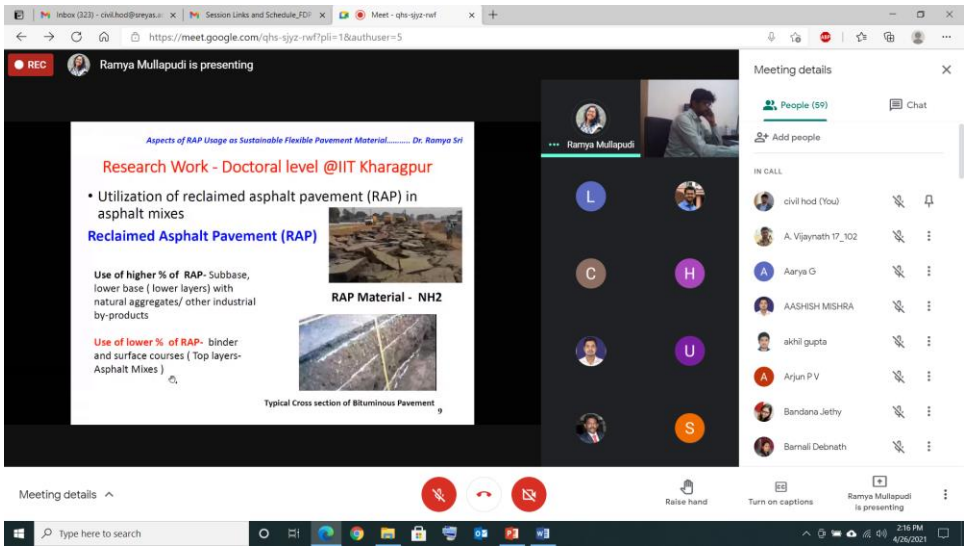
Topic: Aspects of Recycled Asphalt Pavement material usage as Sustainable Flexible Pavement Material.

Time: 02:00 PM to 03:45 PM, April 26, 2021

Duration: 01 hr 45 minutes

Prof.Ramya discussed about the sources of reclaimed asphalt pavement material (RAP) and their nature while producing at high volume quantity. The percentage of RAP that can go into the various base, subbase layers of flexible and rigid pavements were discussed. The presentation also includes the healing characteristics of asphalt mixture with various dosages of RAP.

Few glimpses of the session 2 of Day 1 in the FDP.

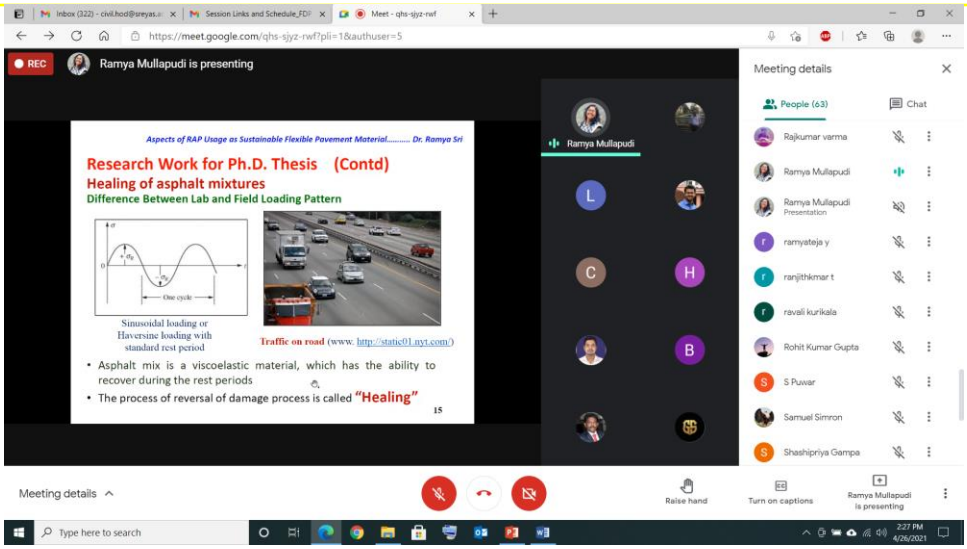


SREYAS

INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068



Day 2 Session 1

Name: Prof. Kranthi Kumar Kuna, IIT Kharagpur

Topic: Methods of recycling: Design implications.

Time: 10:00 AM to 11:30 AM, April 27, 2021

Duration: 01 hr 30 minutes

Prof.Kuna has discussed about the cold mix technologies across the world and few case studies of Indian highways. The presentation includes the mix design considerations and the issues which frequently occurs in the experimentation on such mixtures undertake.

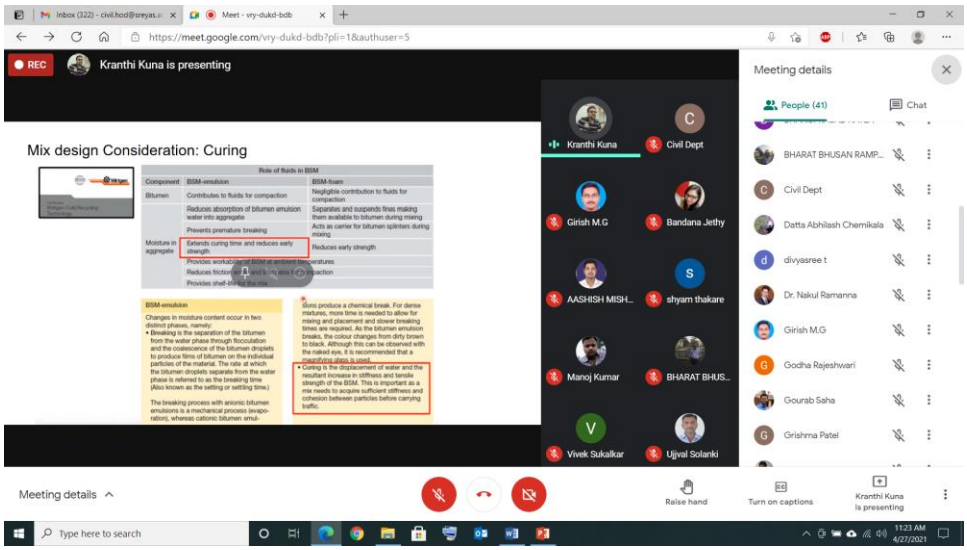
SREYAS

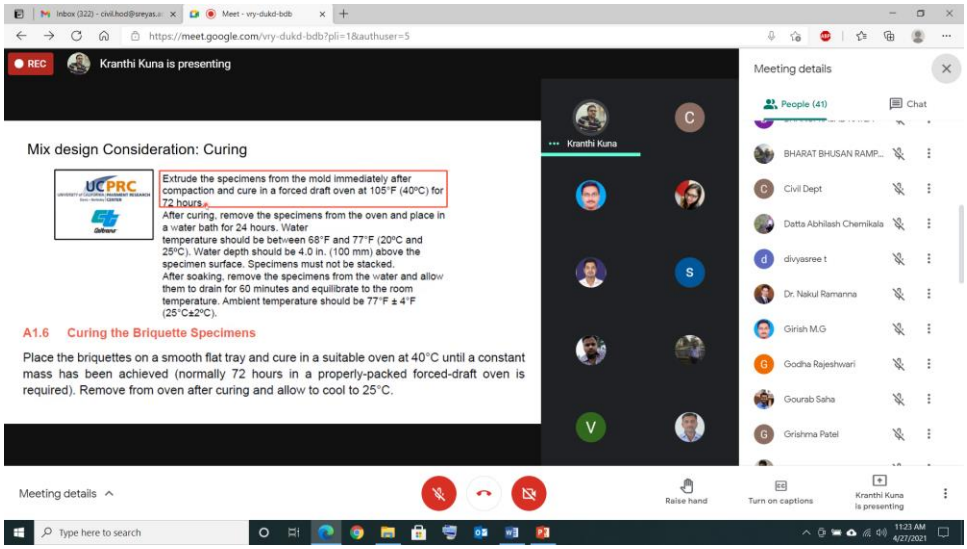
INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068

Few glimpses of the session 1 of Day 2 in the FDP.





SREYAS

INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068

Day 2 Session 2

Name: Prof. Gourab Saha, NIT Rourkela

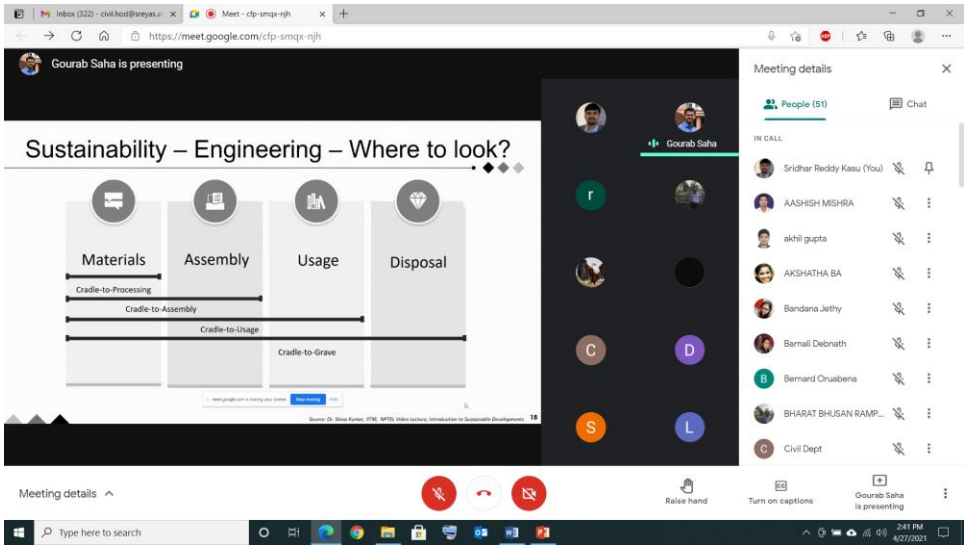
Topic: Overview of Sustainability – Connecting the Dots.

Time: 02:00 PM to 03:30 PM, April 27, 2021

Duration: 01 hr 30 minutes

Prof.Saha discussed about the various definitions of sustainability. How does this sustainability being linked to the various day to day activities. His presentation focused on to integrate the sustainability and engineering of pavement industry.

Few glimpses of the session 2 of Day 2 in the FDP.

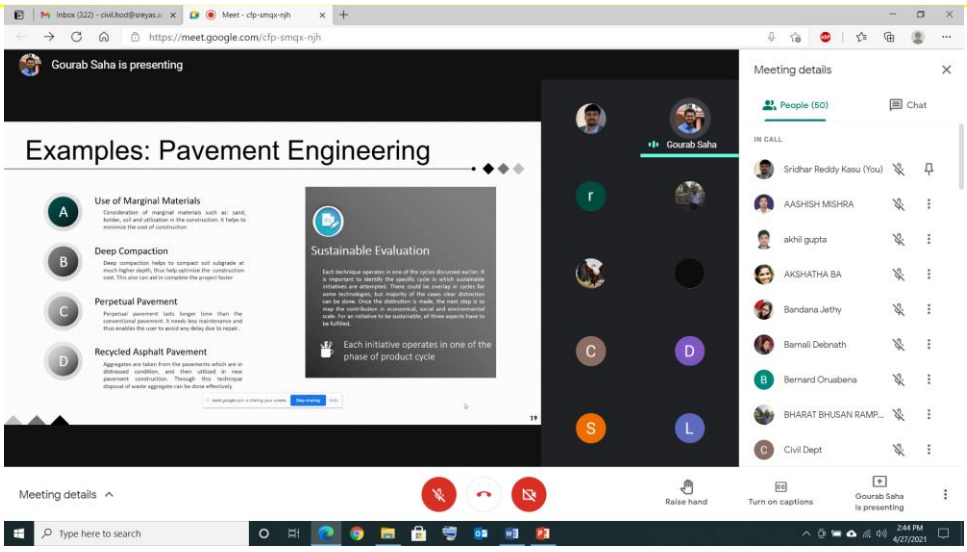


SREYAS

INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068



Day 3 Session 1

Name: Prof.Anush KC, IIT Bhubaneswar

Topic: Pervious Concrete Pavements: Solution towards Low Impact Development

Time: 10:00 AM to 11:30 AM, April 28, 2021

Duration: 01 hr 30 minutes

Prof.Anush has discussed about the pervious concrete pavements and their state of art review. He has highlighted the need of pervious concrete pavements to reduce the urban heat island effect (UHI). His presentation is also focused on the field performance of pervious concrete pavements which are constructed in various parts of the country.

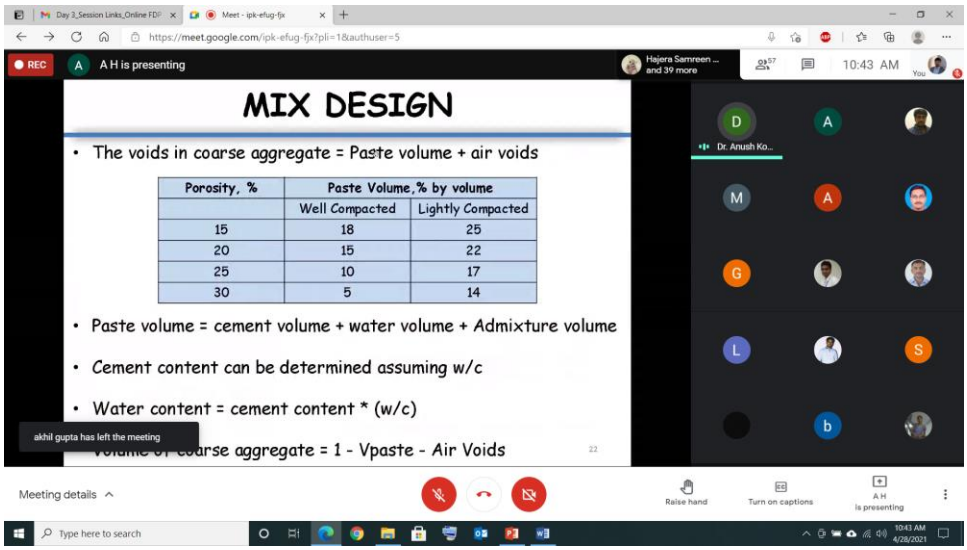
SREYAS

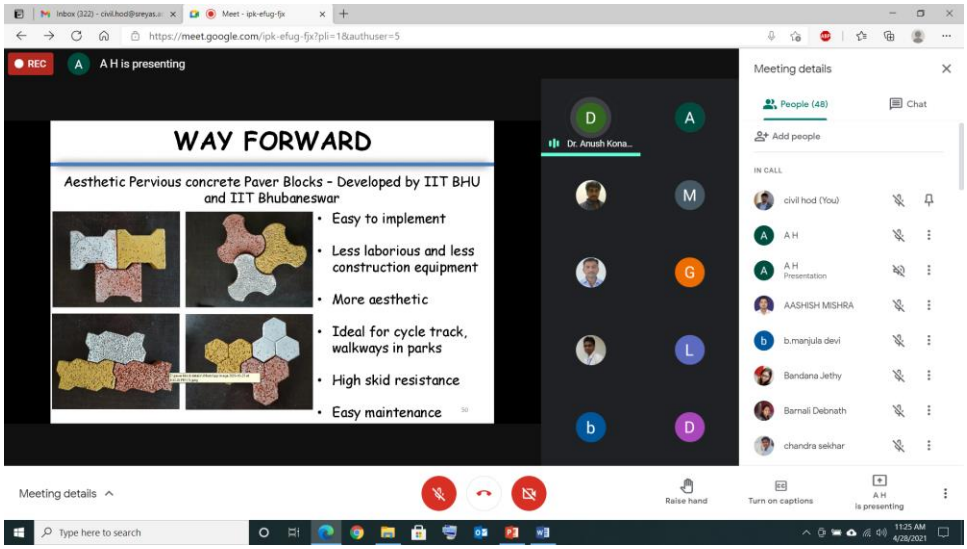
INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068

Few glimpses of the session 1 of Day 3 in the FDP.





SREYAS

INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068

Day 3 Session 2

Name: Prof.Umesh Chandra Sahoo, IIT Bhubaneswar

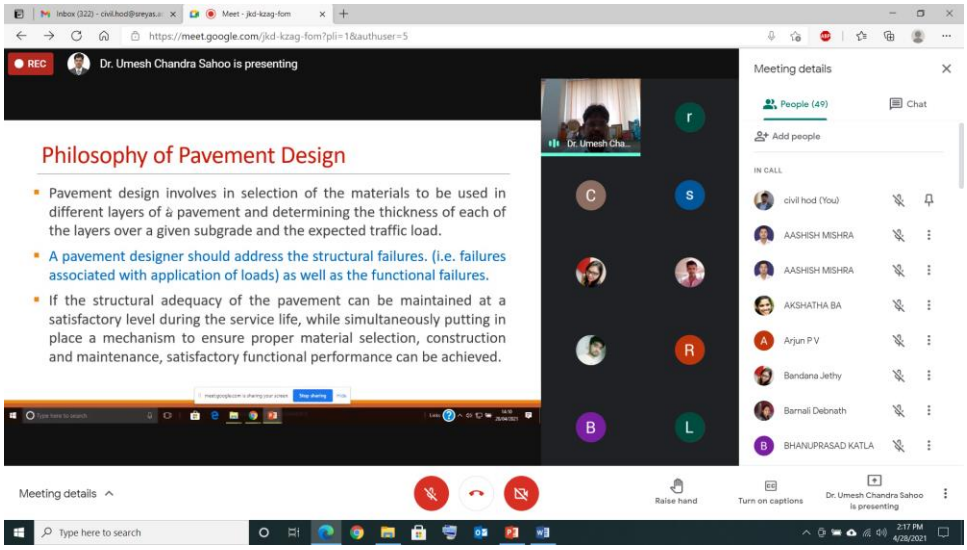
Topic: Design of Perpetual Pavements

Time: 02:00 PM to 03:30 PM, April 28, 2021

Duration: 01 hr 30 minutes

Prof.Sahoo was introduced by the convener of FDP. Prof.Sahoo has focused on the key design philosophies in the field of pavement engineering. More importantly, the philosophy focused on the perpetual pavement design, from the experiences of Austroads, India, and Belgium.

Few glimpses of the session 2 of Day 3 in the FDP.

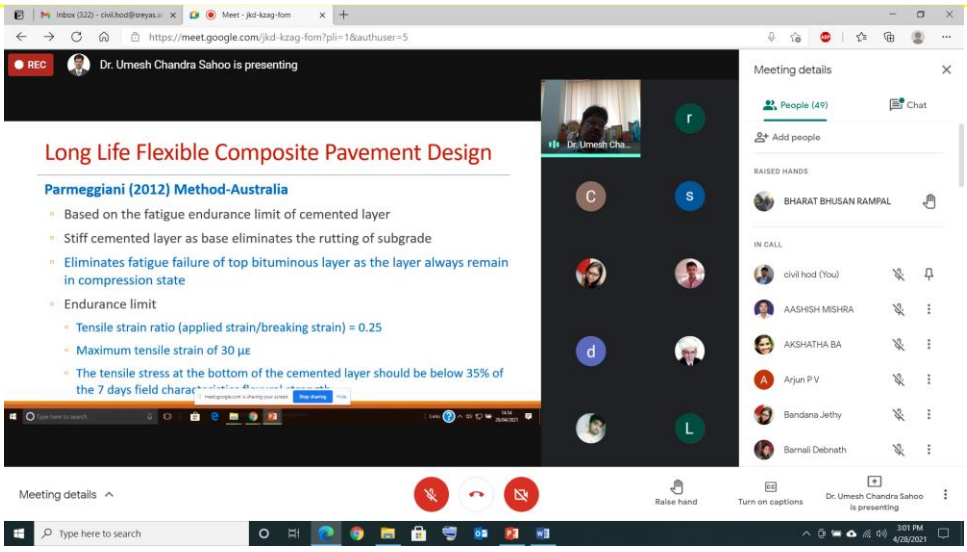


SREYAS

INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068



Day 4 Session 1

Name: Prof.Vishnu, NIT Warangal

Topic: Design of Emulsified Base Layers.

Time: 10:00 AM to 11:30 AM, April 29, 2021

Duration: 01 hr 30 minutes

Prof.Vishnu discussed about the design of emulsified base layers as per the asphalt institute manual series recommendations. The backdrop of such recommendations while calculating the optimal water content and optimal fluid content. The Indian roads congress design that accounting for emulsified base layers are also discussed.

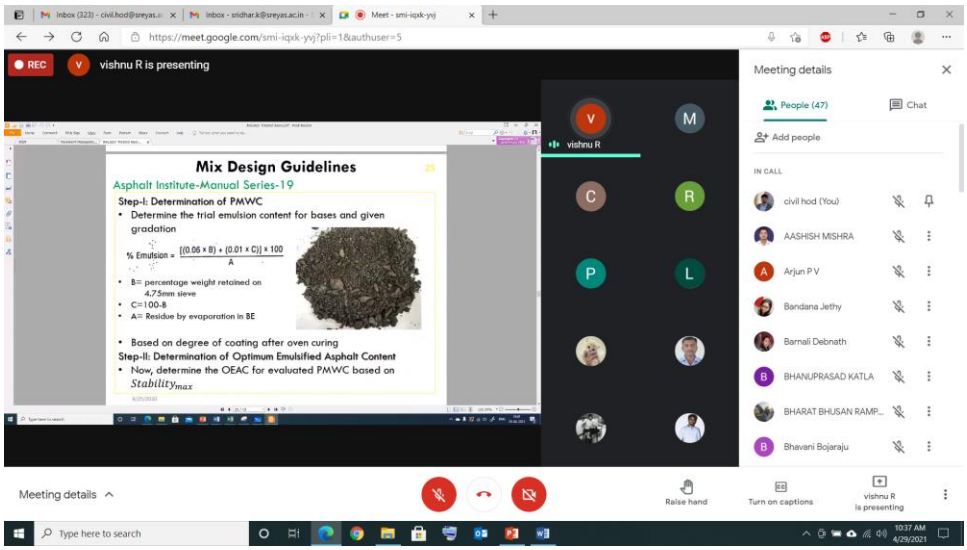
SREYAS

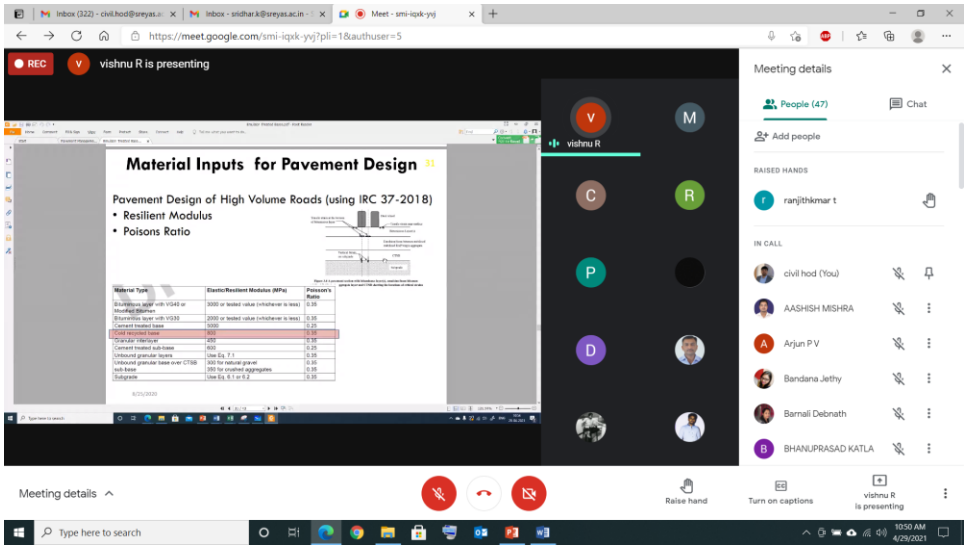
INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068

Few glimpses of the session 1 of Day 4 in the FDP.





SREYAS

INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068

Day 4 Session 2

Name: Dr.Uma Maheshwar Arepalli, SRM University, AP.

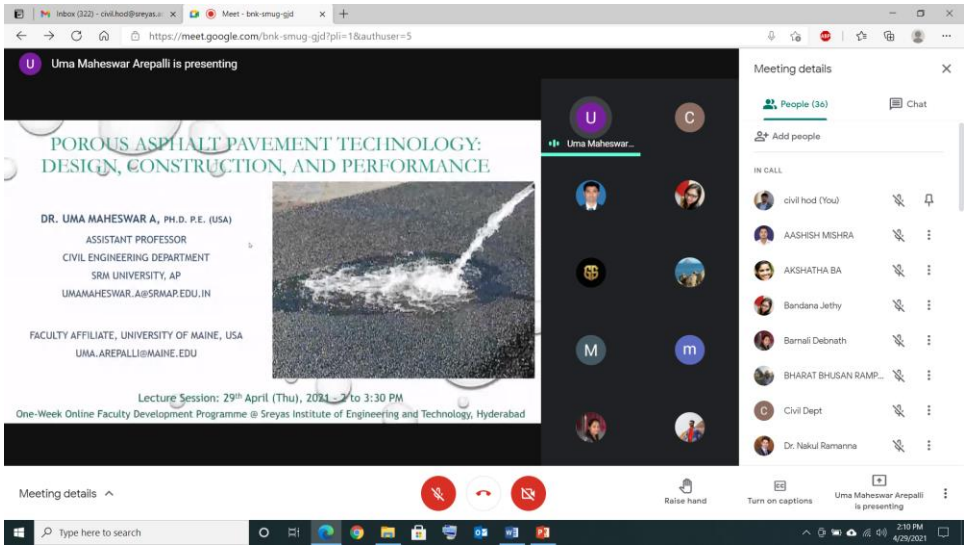
Topic: Porous Asphalt Pavement Technology: Design, Construction, and Performance.

Time: 02:00 PM to 03:30 PM, April 29, 2021

Duration: 01 hr 30 minutes

Prof. Uma Arepalli, SRM AP has shared the current practices of porous asphalt pavement technology in the USA. He has also discussed about the test sections and their performance over the last one decade. Which we can make some trials locally and have some idea on way forward.

Few glimpses of the session 2 of Day 4 in the FDP.

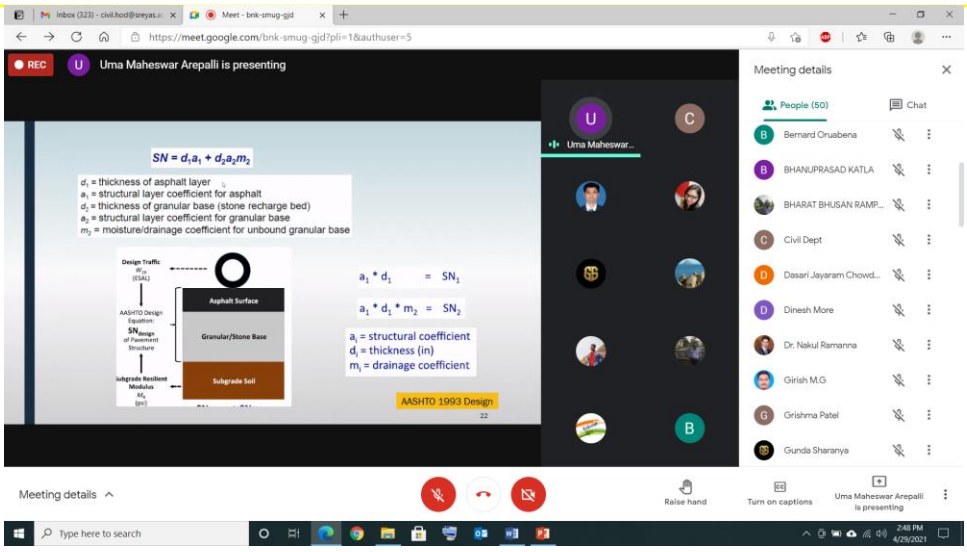


SREYAS

INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068



Day 5 Session 1

Name: Dr.Subhasis Pradhan, NTU Singapore

Topic: Present and Future Perspectives of Recycled Aggregate Concrete in Indian Infrastructure

Time: 10:00 AM to 11:30 AM, April 30, 2021

Duration: 01 hr 30 minutes

Dr.Subhasis discussed about the recycled aggregate concrete performance at multiscales such as meso-micro-macro levels. He has also discussed about the methods of mix designs incorporating the recycled aggregate concrete.

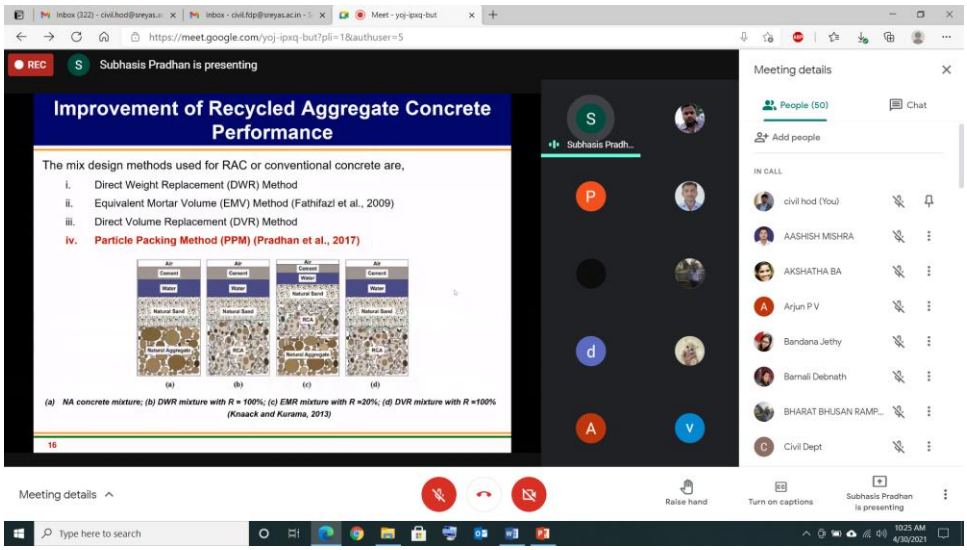
SREYAS

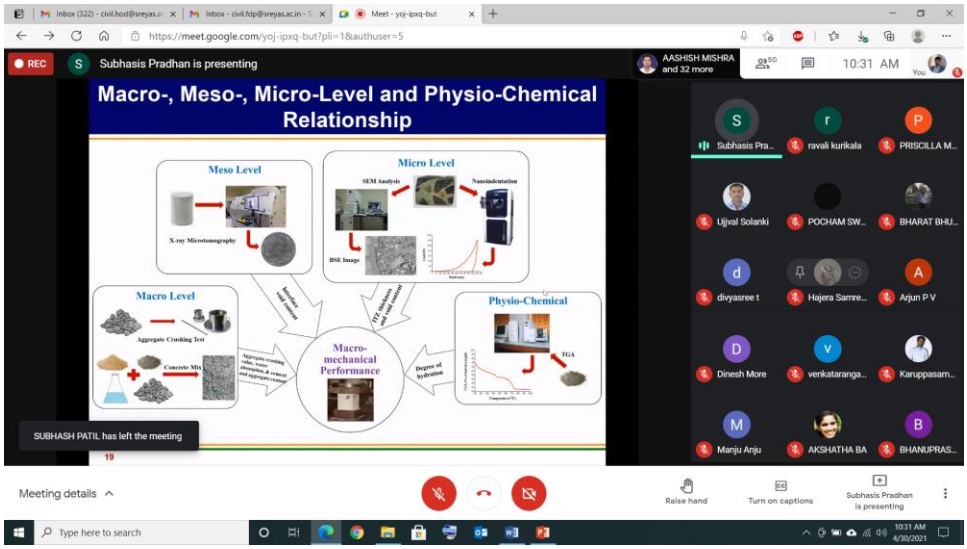
INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068

Few glimpses of the session 1 of Day 5 in the FDP.





SREYAS

INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068

Day 5 Session 2

Name: Dr.Anush KC, IIT Bhubaneswar

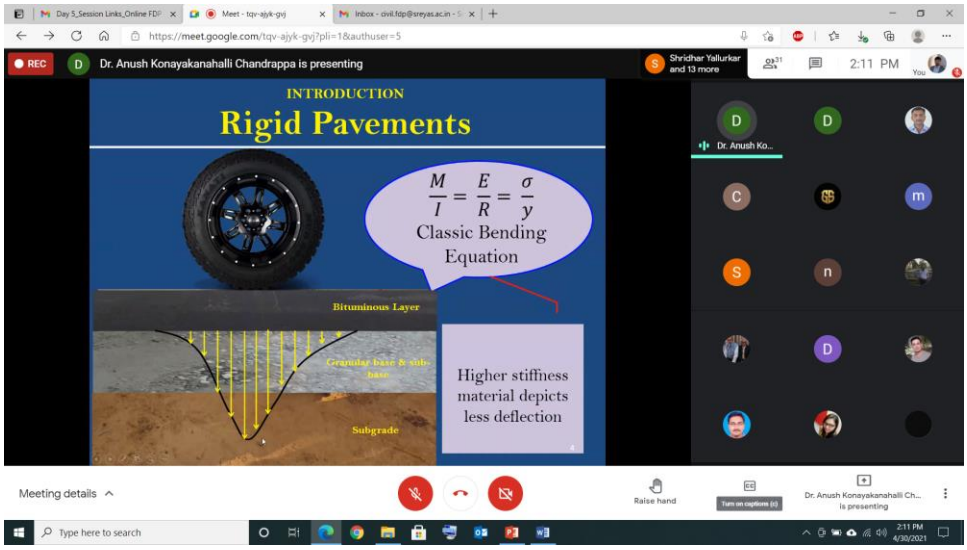
Topic: Construction of Concrete Pavements Using Slip Form Pavers

Time: 02:00 PM to 03:30 PM, April 30, 2021

Duration: 01 hr 30 minutes

Prof.Anush has mentioned various field-related issues which we can overcome with minimal care during execution of concrete pavement construction. His presentation includes the issues related to use of slip form paver construction and their repercussions in their design life.

Few glimpses of the session 2 of Day 5 in the FDP.

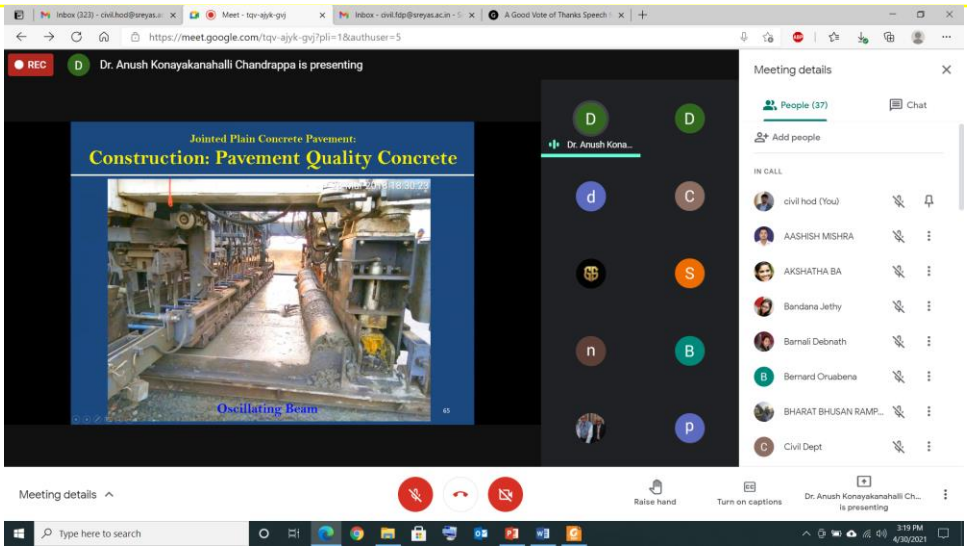


SREYAS

INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068



Day 6 Session 1

Name: Prof.Veena Venudharan, IIT Palakkad

Topic: AR-GAP modified mixtures: From Development to Practice

Time: 10:00 AM to 11:30 AM, May 1, 2021

Duration: 01 hr 30 minutes

Prof.Veena has detailed about the asphalt rubber development and their use in the field. The temperature and the time required for the digestion of rubber particles in the bitumen binder is also discussed. Some of the rheological parameters were discussed and the results are compared with the conventional binders.

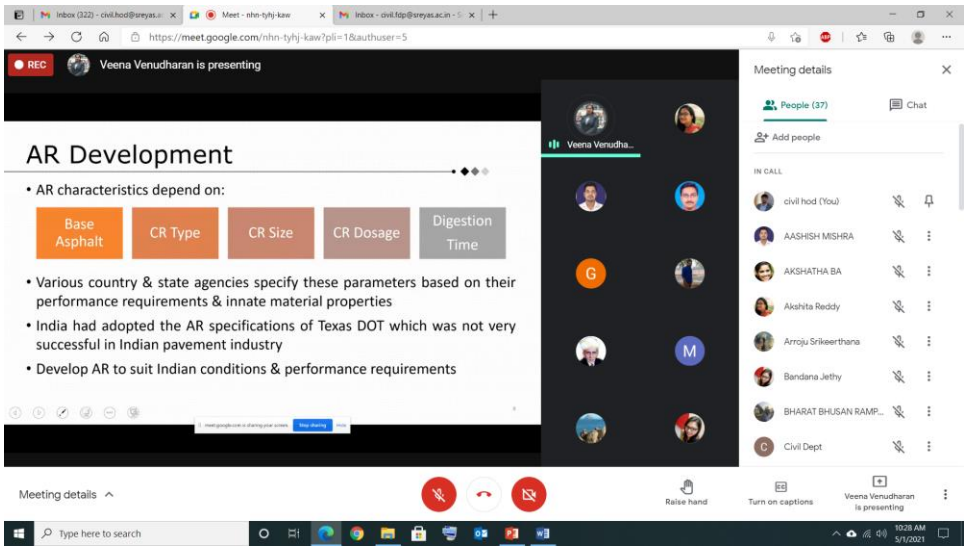
SREYAS

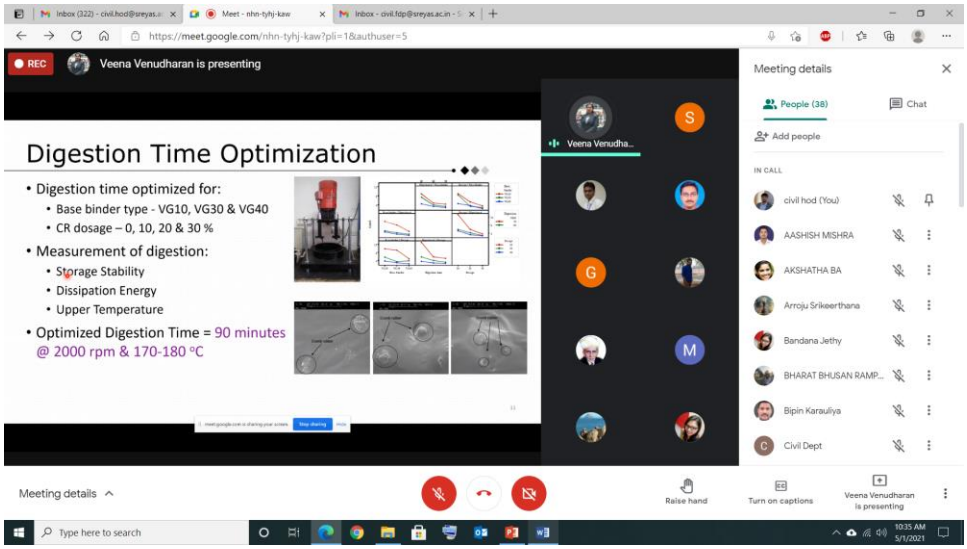
INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi | Affiliated to JNTUH, Hyderabad | Accredited by NAAC)

Hyderabad | PIN: 500068

Few glimpses of the session 1 of Day 6 in the FDP.





Day 6 Session 2

Name: Prof.K.Sridhar Reddy

Topic: Valedictory Session

Time: 02:00 PM to 03:30 PM, May 1, 2021

Duration: 01 hr 30 minutes

Programme Convener: Prof.K.Sridhar Reddy, Head of the Department, Civil Engineering,

He said that this kind of programmes will help the local faculty members to excel in the competitive world. We would like to continue conducting programmes such as workshops, and conferences to bridge the gap between industry and academia.

Principal: Prof.S.Sai Satyanarayana Reddy has said that this kind of programmes will help the faculty members to enhance their knowledge at the global level.

Vice-chairman: Ananthula Hriday Reddy, has said that we have been working to improve the current education system and "we are committed in pursuit of excellence".

K Sridhar Reddy, Associate Professor and Head of the Department, on behalf of the Department of Civil Engineering, Sreyas Institute of Engineering and Technology Hyderabad, and the entire fraternity, extended sincere thanks to one and all.