

## Activities Conducted By IGS Aurangabad Chapter from January to March 2022.

IGS Aurangabad has conducted 3 webinars, 2 STTP and Formation of IGS Students Chapter during January to March 2022. The brief report is as follows:

### Webinar 1 : 11<sup>th</sup> January 2022

A Webinar on the topic “**Constitutive Model of Soil by using Triaxial Test**” was arranged by Civil Engineering Department of Marathwada Institute of Technology, Aurangabad in association with IGS Aurangabad Chapter, on 11<sup>th</sup> January 2022 at 11.30am. Dr. Shrikant Shinde, Faculty of Civil Engineering Department, Vishwakarma Institute of Information Technology (VIIT), Pune, was the resource person. More than 170 participants (including students and faculty ) registered for the webinar.

Dr. Shrikant Shinde explained the theoretical background of Shear strength and its related parameters. Later he explained graphical method of plotting mohr’s circle and experimental set-up of Triaxial Test. The webinar concluded with information about ‘Constitutive Model of Soil and its significance’.

Participants appreciated the work done by Dr. Shrikant Shinde. Prof. Mrs. Archana Pathak, carried the proceedings. Dr. Manish S. Dixit, (HCED, MIT and Hon. Secretary, IGS Aurangabad Chapter) and entire organizing team took efforts in successful completion of the webinar.

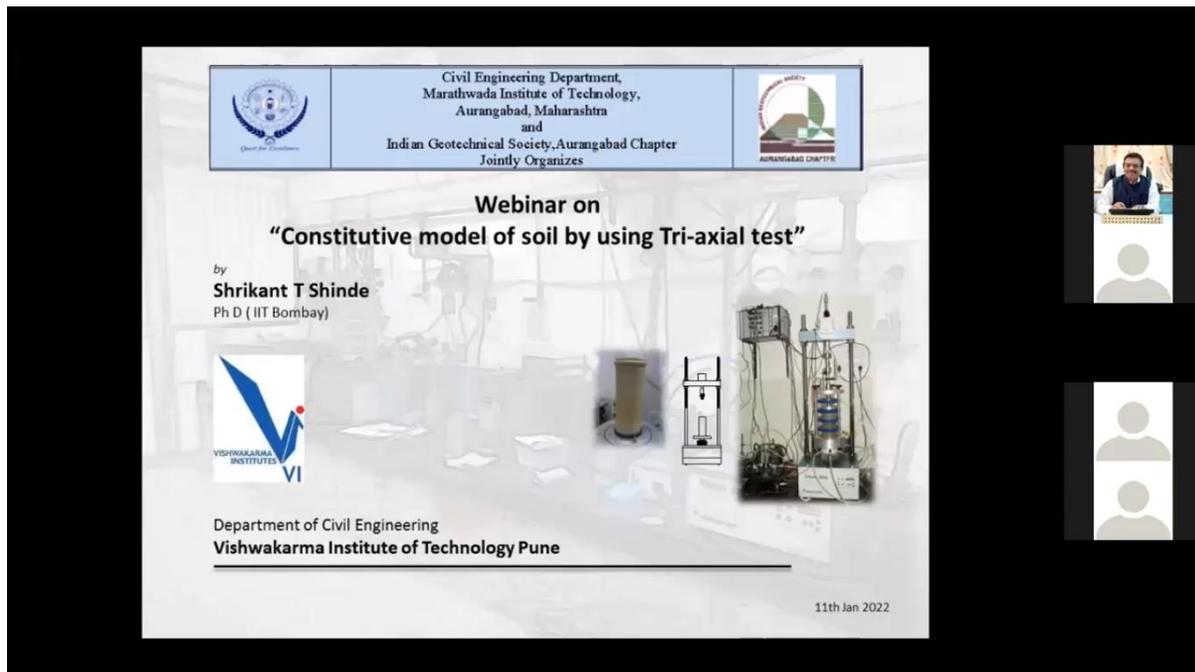


Photo 1 : Slide of resource person

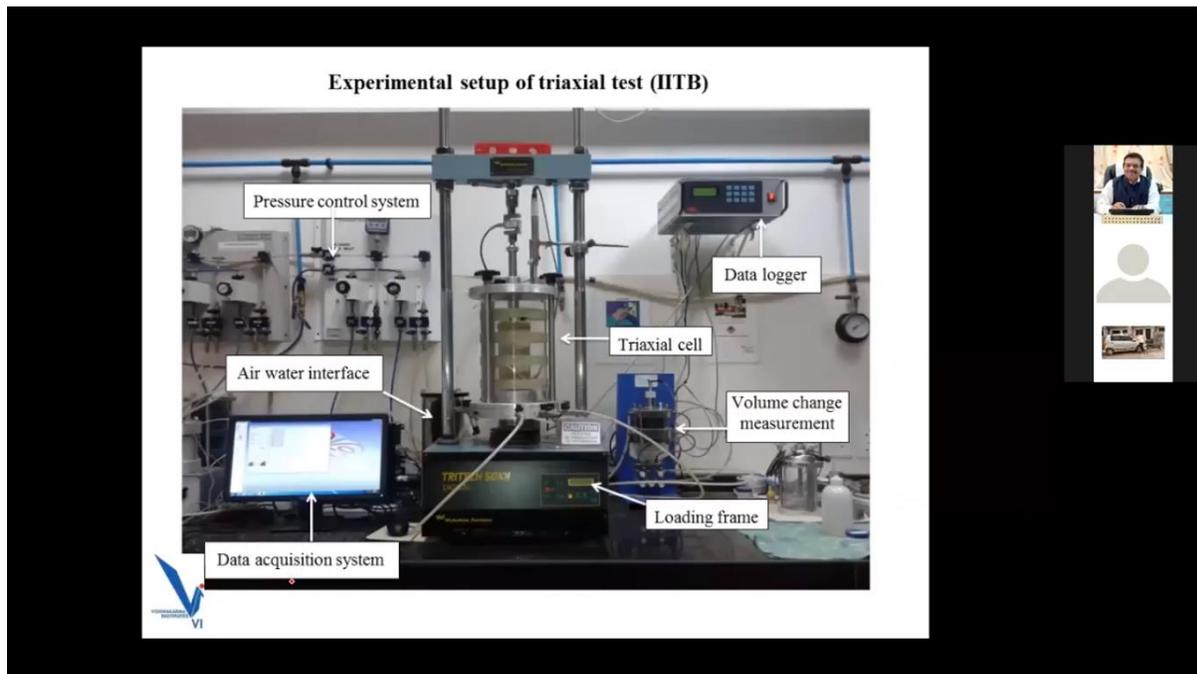
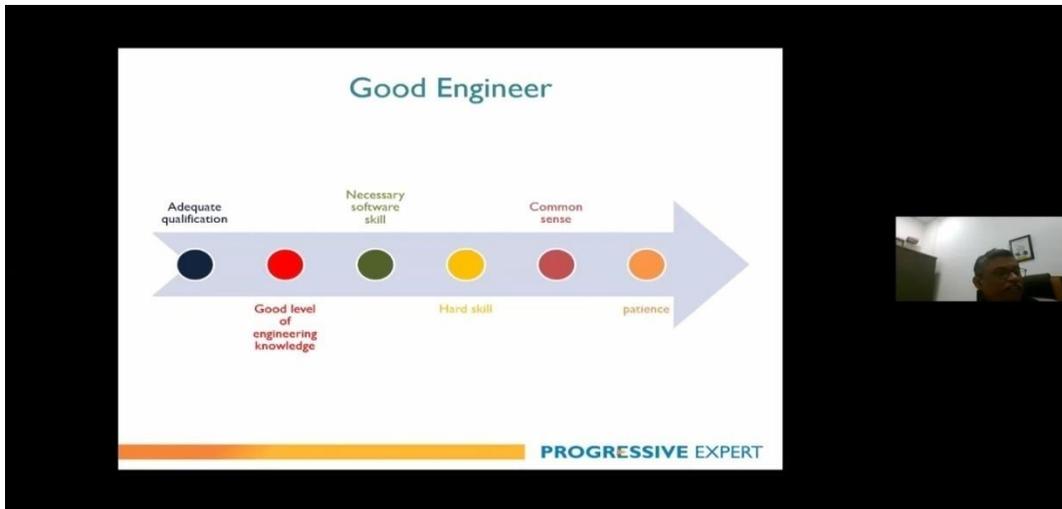


Photo 2 : Experimental setup of Tri-axial test at IITB

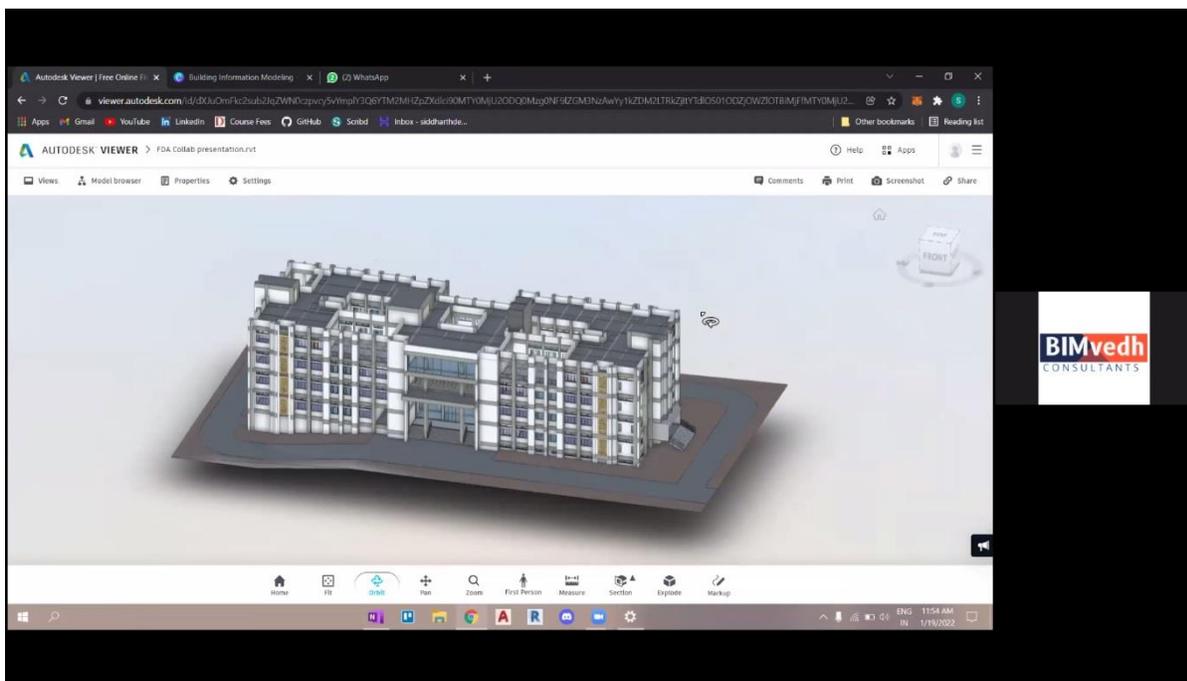
#### Webinar 2: 19<sup>th</sup> January 2022

The webinar has started with a welcome speech and brief introduction of expert Er. Parimal Abay Marathe, Director Progressive Expert Consulting Pvt. Ltd. at 11:00 am on 19<sup>th</sup> January 2022 through the online platform of ZOOM app. The session was addressed on the Topic “Opportunities in Building Information Modelling”. During the talk speaker has guided students regarding career growth in civil engineering, hard skills and software skills necessary for becoming good engineer and industry opportunities for civil engineers. He discussed regarding case study project of Hedgewar Hospital with advanced scaffolding polymer plates used in construction



**Figure 1: Er.Parimal Marathe**

At 11:45AM session was continued by Er. Siddharth Prabhakar Deore(Founder of BIMvedh, Pune).Speaker introduced students about Building Information Modelling software. He guided students regarding importance of BIM software, use of BIM in construction and various advantages and opportunities available there in industry by using this software. At the end speaker has given short demo of Building Information Modelling software which has created more curiosity among students in learning this software. One of the snapshot of the session is shown in the Figure 2.



**Figure 2: Er. Siddharth Deore**

### Webinar 3 : 22<sup>nd</sup> January 2022, IGS Student Chapter inauguration function

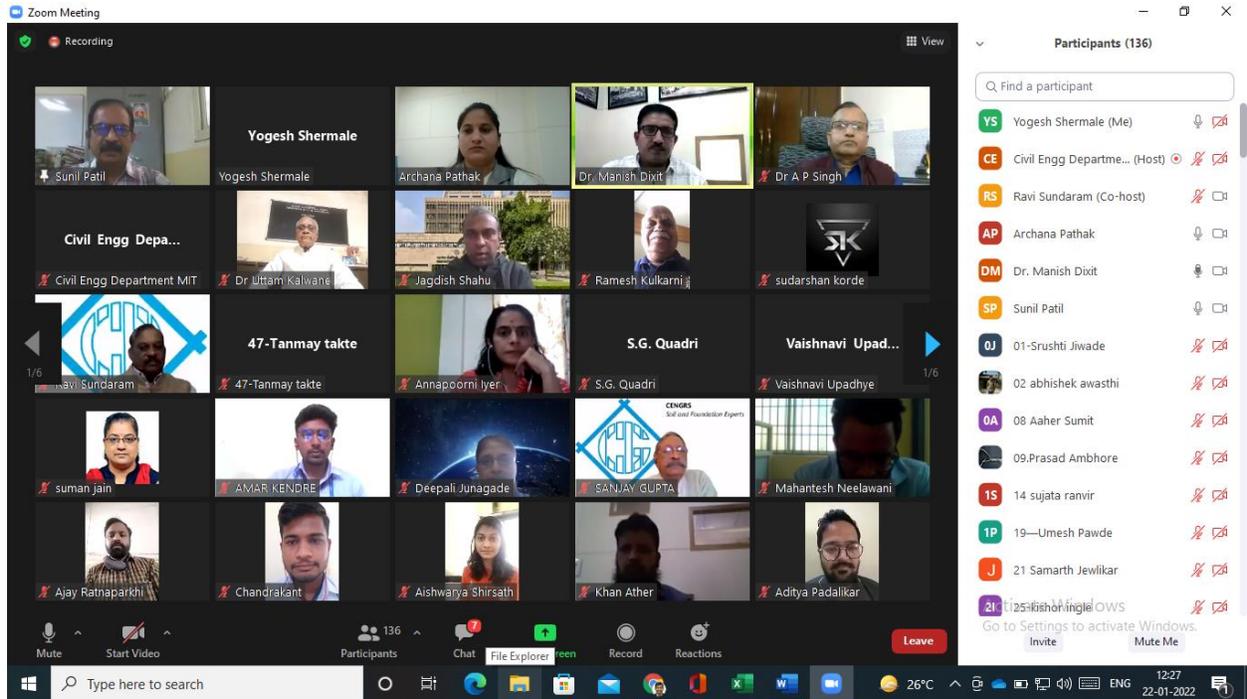
IGS Aurangabad Chapter under the guidance of IGS, New Delhi formed its 1<sup>st</sup> Student Chapter in Civil Engineering Dept., Marathwada Institute of Technology, Aurangabad. The details of the program are mentioned as under:

The program started at 11:30am by lighting the traditional lamp. Dr. U.B. Kalwane, Chairman, IGS Aurangabad chapter gave the preamble. Dr. M.S. Dixit, Hon. Secretary, IGS Aurangabad chapter gave information regarding various activities carried out by the chapter. Dr. J.T. Shahu, Hon. Secretary, IGS New Delhi, gave the Presidential address. He informed the students about the benefits of joining IGS body.

Er. Ramesh Kulkarni, Chairman and Managing Director, Soiltech India, Pvt. Ltd. Pune, informed about 'Importance and need of formation of Students' chapter'. Er. Ravi Sundaram, Director, Cengrs Geotechnica, Pvt. Ltd. Noida, gave motivational words to students for becoming member of professional bodies. Er. Vikas Patil, Chairman, IGS Pune Chapter & Managing Director, Savi Infrastructures & Properties Pvt. Ltd., Pune, spoke on bridging gap between academia and practical applications.

Er. S. G. Quadri, Joint Secretary, IGS Aurangabad Chapter, carried the proceedings of Students' Chapter body formation, master Amar Kendre, President, Student Chapter (newly formed) proposed activities for students (Technical), Miss Vaishnavi Upadhye, Secretary, Student Chapter (newly formed) proposed activities for students (Non-Technical).

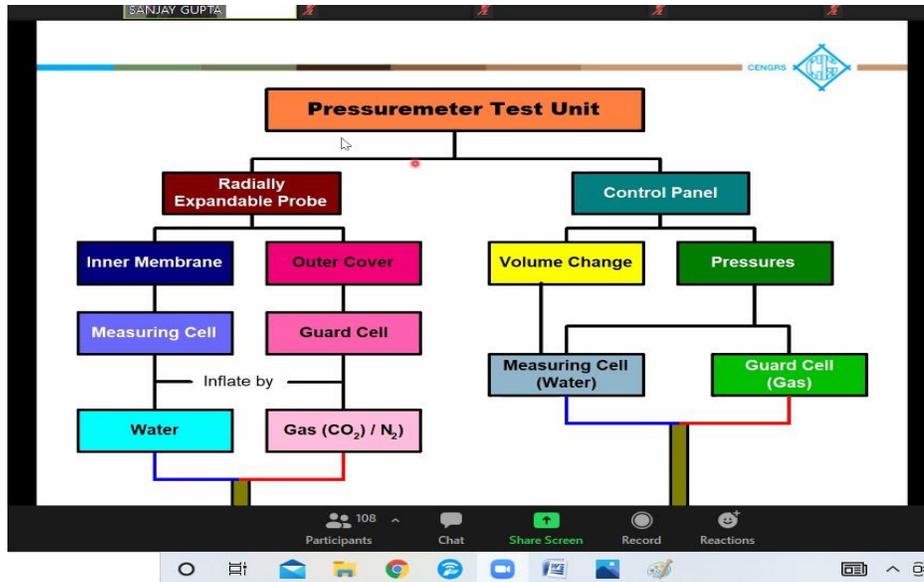
Lastly the program concluded by vote of thanks by Er. S. T. Patil, Treasurer, IGS Aurangabad Chapter.



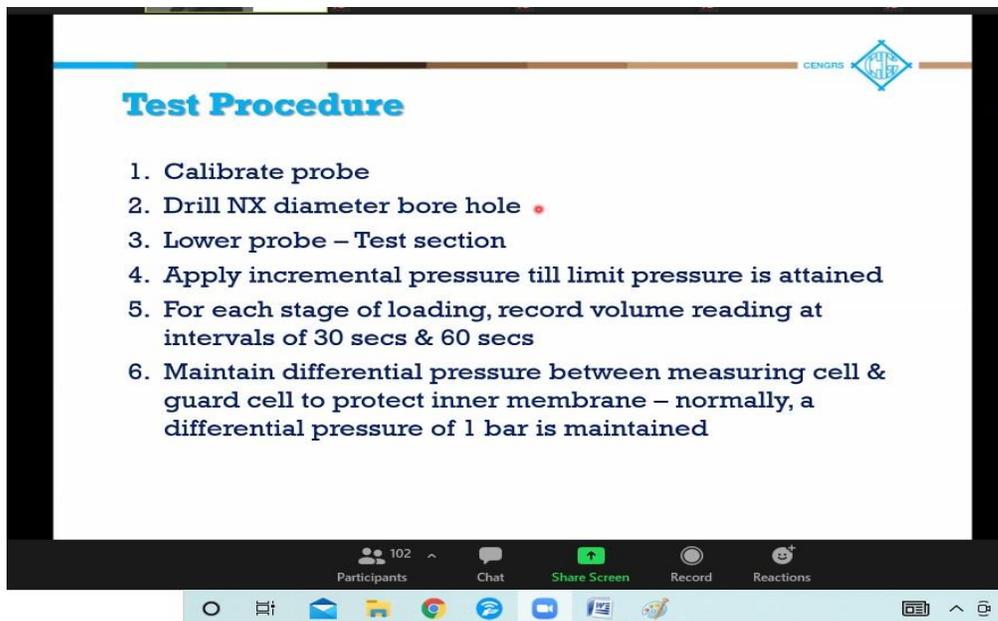
Webinar 4: 2 Feb.2022

### Pressuremeter Tests in Geotechnical Design

The webinar has started with a welcome speech and brief introduction of expert Er. Sanjay Gupta, Founder & Managing Director of Cengrs Geotechnica Pvt Ltd., Noida at 11:00 AM on 02 February 2022 through the online platform of ZOOM app. The session was addressed on the Topic “Pressuremeter Tests in Geotechnical Design”. During the initial talk speaker has guided students and faculties regarding levels of geotechnical investigation, design and analysis, advancements in geotechnical investigation, various career opportunities in field of geotechnical engineering. Session then continued with brief introduction of pressuremeter tests. Speaker has thoroughly explained pressuremeter tests including various types of pressuremeters, equipments used along with their specifications, test methodology & steps, typical test results and other test related parameters including various advantages and limitations of pressuremeter tests. At the end of talk speaker has discussed about three case studies related to pressuremeter tests.



**Figure 1: Pressure meter Test Unit**



**Brief Report of One Week STTP on “Importance of Soil Investigations and Non-Destructive Techniques” Organised by IGS – Aurangabad Chapter (8<sup>th</sup> –12<sup>th</sup> March 2022)**

One Week STTP on “**Importance of Soil Investigations and Non-Destructive Techniques**” was jointly Organised by IGS – Aurangabad Chapter in association with Civil Engineering Department, Marathwada Institute of Technology, Beed by pass road, Aurangabad & Dr. Babasaheb Ambedkar Technological University, Lonere, Raigad on 8<sup>th</sup> –12<sup>th</sup> March 2022.

The workshop started with a formal inauguration session at 11:15 am on 8<sup>th</sup> March 2022 through the online platform of ZOOM app. This included a welcome speech of the Convener; Dr. M.S. Dixit (HCED, MIT Aurangabad & IGS Aurangabad chapter) followed by introductory speech by co-convener Dr. S.M. Pore (Professor, DBATU, Lonere). After this, Dr. N.G. Patil (Director, MIT, Aurangabad) and President IGS, Dr. N.K. Samadhiya (IIT Roorkee) addressed the participants.

The aim of the workshop is to make the participants understand the basic properties of soil which affect the design and safety of structure i.e., compressibility, strength and hydrological conditions, to determine the extent and properties of the material to be used for construction, to determine the condition of groundwater. Many NDT techniques are capable of locating defects and determining the features of the defects such as size, shape, and orientation. The purpose of NDT is to inspect a component in a safe, reliable, and cost effective manner without causing damage to the equipment or shutting down plant operations

50 participants registered for this STTP out of which 62% were faculty members, 10% Industry person/ Consultants, 8% Research Scholars and 20 % PG Students. Participants consisted of Faculty members of renowned institutions, Research scholars and PG Students from almost all parts of India.

During valedictory session, some of participants shared their overall feedback about STTP. Vote of Thanks was done by Er. S. G. Quadri, Joint Secretary IGS Aurangabad Chapter.



**One Week STTP on**  
**“Importance of Soil Investigations and Non-Destructive Techniques”**  
Jointly Organised by  
**IGS – Aurangabad Chapter**  
In association with  
**Civil Engineering Department,**  
Marathwada Institute of Technology, Beed by pass road, Aurangabad  
& Dr. Babasaheb Ambedkar Technological University, Lonere, Raigad  
On  
**8<sup>th</sup> – 12<sup>th</sup> March 2022**

DAY/TIME	8 <sup>th</sup> March (Day1)	9 <sup>th</sup> March (Day2)	10 <sup>th</sup> March (Day3)	11 <sup>th</sup> March (Day 4)	12 <sup>th</sup> March (Day 5)
I 10:30 am - 11:30am	---	“Importance and pitfalls during Field tests for Geotechnical Investigations” Dr. S.S. Basarkar AFCONS Infra Ltd, Mumbai	“Investigation of Contaminated Soil” Dr. G.L. Sivakumar Babu IISc Bangalore	“Recent Experience with Driven Piles in India – Design & Performance” Dr. Jaykumar Shukla Geo Dynamics, Vadodara	“Precautionary Measure during soil Investigation” Dr. Shrikant Shinde, VIIT Pune
II 11:30 am – 12:30 pm	Inauguration & Keynote lecture “Geotechnical Investigations for Tunnels” President IGS Dr. N.K. Samadhiya IIT Roorkee	“Quantification of Bridge Approach Settlements using GPR” Dr. Sireesh Sarida, IIT Hyderabad	“Implementing Better Practices in Geotechnical Investigations” Er. Ravi Sundaram Director, Cengrs Geotechnica Pvt Ltd, Noida	“Recent Developments in Deep Foundation Testing” Er. Ravi Kiran Vaidya Geo Dynamics, Vadodara	“Significance of NDT Methods for Geotechnical Investigations” Dr. Vinil Kumar Gade National Institute of Technology Andhra Pradesh
III 12:30 pm – 1:30 pm	“NDT for Landslide Hazard” Dr. Neelima Satyam IIT Indore	“Geotechnical Aspect of Infra projects” Dr. A.P.Singh Director, Explore Engg.Consultants,Noida	---	“Cone Penetration Test and its Applications” Dr. C. R. Parthasarthy, MD,Sarthy Geotech.and Engg.Services , Bangalore	Feedback & Valedictory session

### **Brief Report of One Week online STTP on “ABAQUS for Beginners (Introduction with Hands-on)” (28 March- 01April 2022)**

One week online STTP on “ABAQUS for Beginners (Introduction with Hands-on)” was jointly organised by IGS – Aurangabad Chapter in association with Department of Civil Engineering & Department of Mechanical Engineering, Marathwada Institute of Technology, Aurangabad and Dr. Babasaheb Ambedkar Technological University, Lonere, Raigad during 28 March – 01April 2022.

The STTP started with a formal inauguration session at 10:00 am on 28 March 2022 through the online platform of ZOOM app. This included a welcome speech of the Convener; Dr. M.S. Dixit (HCED, MIT Aurangabad & Secretary IGS Aurangabad chapter) followed by introductory speech by Dr. N.K. Samadhiya (Professor, IIT Roorkee & President IGS). Later, Dr. N.G. Patil (Director, MIT, Aurangabad) addressed the participants and highlighted the importance of computational mechanics in the field of research and innovation.

This STTP was organised with the objective of comprehensive and unified introduction to the basics of aspects of computational modeling, Finite Element Analysis along with the hand-on practice on SIMULIA Abaqus software. Many aspects of the Abaqus software was explored such as how to solve linear and nonlinear problems, contact properties, submit-monitor analysis jobs and view simulation results using the interactive interface of the software.

Total 50 participants were allowed to registered, because of the limitation of the licences available.. Participants consisted of faculty members of the premium institutions, research scholars and PG students (of both civil and mechanical background) from all across the country. The resource persons for the workshop were also from both academia and industry as well.

During valedictory session, some of participants shared their overall feedback about STTP. Vote of Thanks was done by Dr. Hashmi Suhel (Assistant Professor, CED & Organizing Secretary).

**One Week STTP on**  
**“ABAQUS for Beginners**  
**(Introduction with Hands-on)”**  
 Jointly Organised by  
**IGS – Aurangabad Chapter**  
 In association with  
**Department of Civil Engineering,**  
**Department of Mechanical Engineering,**  
 Marathwada Institute of Technology, Beed by pass road, Aurangabad  
 & Dr. Babasaheb Ambedkar Technological University, Lonere, Raigad  
 On  
**28<sup>th</sup> March – 1<sup>st</sup> April 2022**

### SCHEDULE OF SESSIONS

DAY/TIME	I 10:30 am - 11:45 pm	II 11:45 pm – 1:00 pm
<b>28<sup>th</sup>March</b>  <b>(Day1)</b>	<b>“Aspects of Structural Analysis &amp; Modelling”</b>  <b>Dr. S.M. Pore,</b> Professor, Dr. BATU, Lonere	<b>“Introduction to Finite Element Analysis for solids and Structures”</b>  <b>Dr. Subhrajit Datta</b> Asst. Professor, NIT Silchar

<p><b>29<sup>th</sup>March</b> <b>(Day2)</b></p>	<p><b>“Introduction to SIMULIA Abaqus”</b></p> <p><b>Mr. Onkar Madhekar</b> EDS Technologies, Pune</p>	<p><b>“Geometrical Modelling in Abaqus”</b></p> <p><b>Mr. Onkar Madhekar</b> EDS Technologies, Pune</p>
<p><b>30<sup>th</sup>March</b> <b>(Day3)</b></p>	<p><b>“Analysis of a Cantilever Member”</b></p> <p><b>Dr. Hashmi Suhel</b> Asst. Professor, MIT Aurangabad</p>	
<p><b>31<sup>st</sup>March</b> <b>(Day 4)</b> <b>(Prallel)</b></p>	<p><b>“Flexural Analysis &amp; result interpretation of RCC Beam”</b></p> <p><b>Mr. Abhay Gujar,</b> Gujar Associates, Satara</p>	<p><b>“Heat Generation due to friction”</b></p> <p><b>Mr. M. Ghadmode</b> Asst. Professor, MIT Aurangabad</p>
<p><b>01<sup>st</sup>April</b> <b>(Day 5)</b></p>	<p><b>“Vibration Analysis of component &amp; A Case Study”</b></p> <p><b>Mr. Kamran Khan</b> Senior Engineer, JohnDeere, Pune</p> <p style="text-align: center;">&amp;</p> <p>Feedback &amp; Valedictory session</p>	

Dr. Manish S. Dixit,  
HCED, MIT &  
Hon. Secretary,  
IGS Aurangabad Chapter