

A Report of
One Day Workshop
On
Virtual Laboratories
February 10, 2018



Venue

CAD LAB, Mechanical Engineering Dept.
Matsyodari Shikshan Sanstha's College of Engineering &
Technology, Jalna-431203

Under the Aegis of

Ministry of Human Resource and Development, Government of India
National Mission on Education through Information and
Communication Technology (NMEICT)
&
Indian Institute of Technology Bombay

Banner of Virtual Laboratories Workshop



The banner features a yellow background with a purple border. At the top left is the logo of Matsyodari Shikshan Sanstha, and at the top right is the Virtual Labs logo with the text 'An MHRD Govt of India Initiative'. The main text reads: 'Matsyodari Shikshan Sanstha's College of Engineering & Technology Jalna in Association with Indian Institute of Technology, Mumbai Organizes One Day Workshop on VIRTUAL LABS Date : 10th Feb. 2018'. The text 'VIRTUAL LABS' is highlighted in a purple box.



Welcome of Guest for Virtual Laboratories Workshop, Feb. 10, 2018. (Photo: From left to right: Dr.Abhilasha Mishra (chief guest), Dr.Smitaa Kasar by Dr.S.K.Biradar (Principal MSS CET), Prof.R.L.Karwande and Prof.G.N.Mandpe)

1. Background

Physical distances and the lack of resources make us unable to perform experiments, especially when they involve sophisticated instruments. Also, good teachers are always a scarce resource. Web-based and video-based courses address the issue of teaching to some extent. Conducting joint experiments by two participating institutions and also sharing costly resources has always been a challenge. With the present day internet and computer technologies the above limitations can no more hamper students and researchers in enhancing their skills and knowledge. Also, in a country such as ours, costly instruments and equipment need to be shared with fellow researchers to the extent possible. Web enabled experiments can be designed for remote operation and viewing so as to enthuse the curiosity and innovation into students. This would help in learning basic and advanced concepts through remote experimentation. Today most equipment has a computer interface for control and data storage. It is possible to design good experiments around some of this equipment which would enhance the learning of a student. Internet-based experimentation further permits use of resources – knowledge, software, and data available on the web, apart from encouraging skillful experiments being simultaneously performed at points separated in space (and possibly, time).

Objectives of the Virtual Labs

- To provide remote-access to Labs in various disciplines of Science and Engineering. These Virtual Labs would cater to undergraduate students, and post graduates and research scholars as well.
- To enthuse students to conduct experiments by the arousing their curiosity. This would help them in learning basic and advanced concepts through remote experimentation.
- To provide a Learning Management System around the Virtual Labs where the students can avail the various tools for learning, including additional web-resources, video-lectures, animated demonstrations and self evaluation.
- To share costly equipment and resources, which are otherwise available to limited number of users due to constraints on time and geographical distances.

2. Inauguration Ceremony

The one-day workshop on Virtual Laboratories was attended by 50 faculties from AICTE approved colleges in and around Jalna region. The aim of this workshop was to create awareness on the utilization of web-based experiments, virtualization and simulations towards enhanced learning. The target audience of faculties was chosen as the baton to pass on the knowledge of existence of web-based experiments to students. The purpose was to facilitate the understanding and concepts in the colleges where the state-of-the-art experimentations facilities and infrastructure is not present.

The program commenced with the lamp lighting ceremony followed by introduction and felicitation of Resource Persons by **Dr.S.K.Biradar, Principal, MSS's CET JALNA.**

Eminent Resource Persons were

- 1. Dr.Abhilasha Mishra, Regional Coordinator Virtual Lab, MIT Aurangabad**
- 2. Dr.Smitaa Kasar, Regional Technical Coordinator Virtual Lab, MIT Aurangabad**



Inauguration Ceremony for Virtual Laboratories, Feb. 10, 2018. (Photo: From left to right: Dr.S.K.Biradar, Dr.Abhilasha Mishra (chief guest), Dr.Smitaa Kasar and Prof.R.L.Karwande)



Lighting of the lamp during inauguration ceremony of Virtual Laboratories, Feb. 10, 2018.



Dr.S.K.Biradar (Principal, MSS CET JALNA) felicitating Dr.Abhilasha Mishra VLab Regional Coordinator, Feb. 10, 2018.



Prof.R.L.Karwande (Vice-Principal, MSS CET JALNA) felicitating Dr.Smitaa Kasar VLab Regional Technical Coordinator, Feb. 10, 2018.

The inauguration ceremony followed with the introductory lecture by **Dr.Abhilasha Mishra** on the “*Introduction to Virtual Laboratory Initiative*”. This lecture clarified the concept of Virtual Laboratories, and how real or virtual the experiments can be. The flavour of remote triggered experiments, and the animations/ visualization of virtual laboratories was also demonstrated.



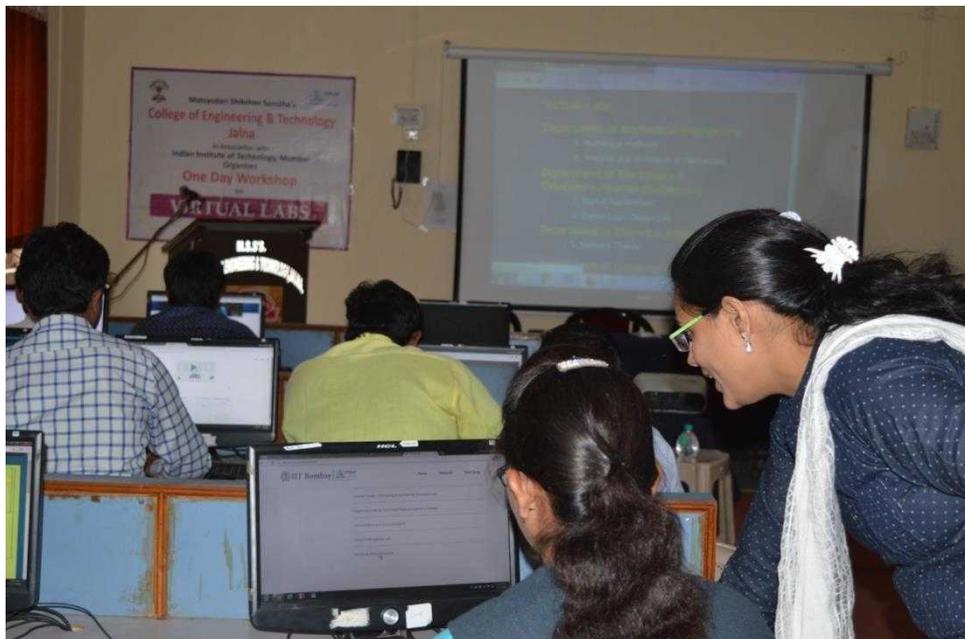
Dr.Abhilasha Mishra delivering a lecture on “Introduction to Virtual Laboratory Initiative” on Feb. 10, 2018.



Audience attending to Dr.Abhilasha Mishra on her introductory lecture



Dr.Smitaa Kasar demonstrating a 'remote triggered live experiment' to the audience during Virtual Laboratories workshop on Feb. 10, 2018, at MSS's CET JALNA.



Feedback was sought from the Faculty members for the improvement of the lab tools.

The workshop ended by the vote of thanks by the Virtual Lab Coordinator of the Institute **Prof.G.N.Mandpe**.

All in all, the conduct of workshop on Virtual Laboratories on February 10, 2018 at MSS's CET JALNA was a grand success.