

# **Expert Talk Activity Report**

**On**

**“Turing Machine in Theory of  
Computation”**

**Date**

**(6<sup>th</sup> November 2020)**

**Organized by**

**Sandip Foundation's**

# **Sandip Institute of Technology and Research Center**

## **Department of Information Technology**

### **Activity Report of “Turing Machine in Theory of Computation”**

**Name of Program:** Expert Talk on “Turing Machine in Theory of Computation”

**Event Date:** 6/11/2020

**Event Resource Person:** Dr.Vivek Waghmare, Associate Professor, Computer Dept. ,SITRC

**Event Participants:** TEIT Class

**Event Time:** 11.10am to 12.10pm

**Mode of Conduction:** Online (Google Meet)

**Event Coordinator:** Mrs.Swati Khokale

- One Day Online Expert Talk on “**Turing Machine in Theory of Computation**” for TE IT students was successfully conducted on Friday, 6<sup>th</sup> November 2020.Dr.Vivek Waghmare, Associate Professor of Computer Department,SITRC Conducted Session.

Dr.Vivek Waghmare gave introduction to the concept of Turing machine that was invented in 1936 by Alan Turing. It is an accepting device which accepts Recursive Enumerable Language generated by type 0 grammar.There are various features of the Turing machine:

- 1. It has an external memory which remembers arbitrary long sequence of input.
- 2. It has unlimited memory capability.
- 3. The model has a facility by which the input at left or right on the tape can be read easily.
- 4. The machine can produce a certain output based on its input. Sometimes it may be required that the same input has to be used to generate the output. So in this machine, the

distinction between input and output has been removed. Thus a common set of alphabets can be used for the Turing machine.

- Also Dr.Vivek Waghmare told various Real time Examples of Turing Machine.
- The objective of the program is students will able to understand the concept of Turing Machine, Components of it and real time use of Turing machine.
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## Event Photos

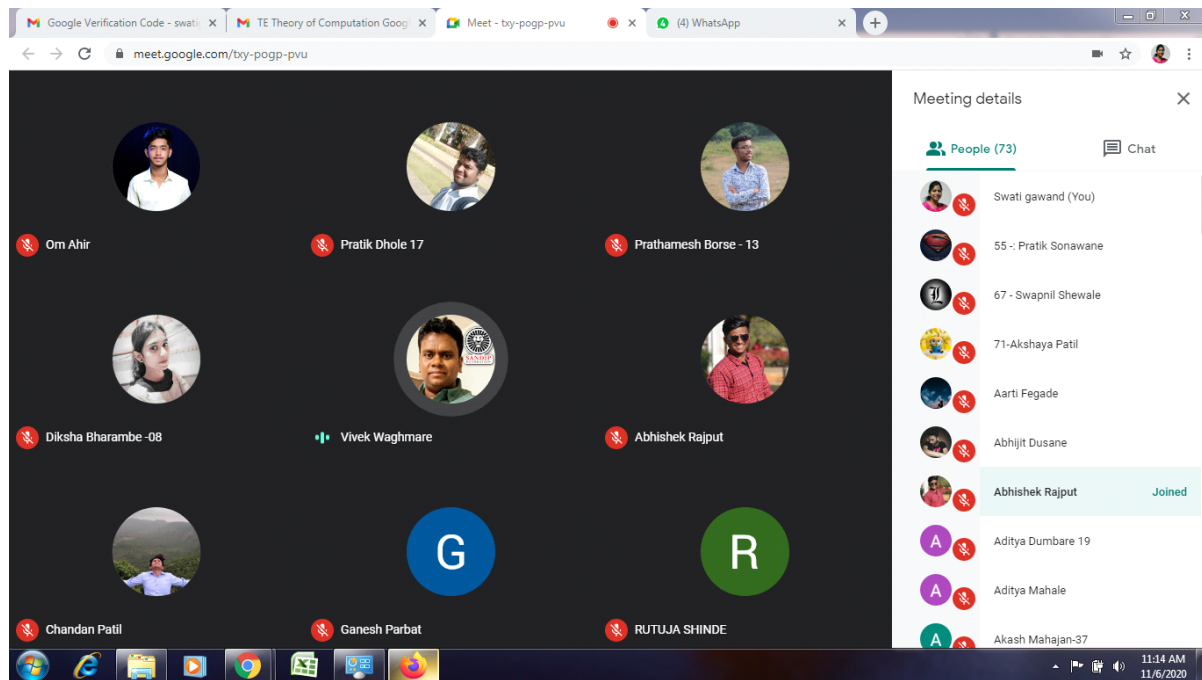
The screenshot shows a Google Meet window with a presentation titled "Introduction to Pushdown Automata" by Dr. Vivek Waghmare. The presentation slide lists the components of a Pushdown Automata (PDA):

- Input Tape:** The input tape is divided in many cells or symbols. The input head is read-only and may only move from left to right, one symbol at a time.
- Finite Control:** The finite control has some pointer which points the current symbol which is to be read.
- Stack:** The stack is a structure in which we can push and remove the items from one end only. It has an infinite size. In PDA, the stack is used to store the items temporarily.

A diagram labeled "Figure: Pushdown Automata" shows the interaction between the Input Tape, Finite Control, and Stack. The Input Tape has an arrow pointing to the Finite Control, which has arrows pointing to the Stack (labeled "Push or Pop") and back to the Input Tape (labeled "Accept or Reject").

The meeting interface includes a list of participants on the right: Swati gawand (You), 24 - Abhishek Jadhav, 55 - Pratik Sonawane, 67 - Swapnil Shewale, 71-Akshaya Patil, Aarti Fegade, Abhijit Dusane, Abhishek Rajput, Aditya Dumbare 19, and Aditya Mahale. The bottom of the screen shows the Windows taskbar with the time 11:20 AM on 11/6/2020.

Dr.Vivek Waghmare Giving Introduction to Turing Machine



Students Attending the Session

**Mrs.Swati R. Khokale**  
**Event Coordinator**

**Dr.Pawan Bhaladhare**  
**Head of Department**