

DATE: 04/12/2020

Event Coordinators:

Ms. Sushama Khanvilkar

Date & Place:

Online using Google Meet

4th December 2020

**Xavier Institute of
Engineering**

Department:

Computer Engineering

No of participant:

53

An online guest lecture was organized for T.E.(COMP) on the topic **“Automata, Logic and Games – A Research Perspective”** and it was delivered by Mr. Stanly John Samuel who is a PhD Scholar, CSA, IISc, Bangalore.

The guest lecture was conducted using Google meet on 4th December 2020 and was organized by Ms. Sushama Khanvilkar from Computer Department.

Total 53 students attended the guest lecture and the objective of the guest lecture was to provide an insight to the third year students about how automata concepts are applicable in the different domains in real time and help them to understand importance of automata theory as a research perspective.

The speaker shared his views on ‘program synthesis, logic and automata relation, how automata could be used to build gaming strategies and what is infinite automata’.

The students were quite astonished at the way available for different perspectives about research in automata theory. Overall, the session was interesting, interactive and motivating for students to study the Theory of Computer Science.

Student Feedback and Benefits: The students found the session very informative, helpful and excellent. It was a knowledge gaining session about automata concepts and its research perspectives.

Ms. Sushama Khanvilkar
Assistant Professor
COMP Dept.

Dr. Saurabh Patil
HOD, COMP Dept.

Dr. Y. D. Venkatesh
Principal, XIE

Images of the guest lecture

Program Synthesis:

- **Program Synthesis:** Synthesizing a correct-by-construction program from a given declarative specification.
- **Two broad categories:**
 - Functional Synthesis

Handwritten notes: I/O N/LZ, (x, y) , $Z = x + y$, Action 2, 3, TERMINATE

Specification (What you want)

Synthesizer

Correct-by-construction program

Microsoft Excel Flashfill: Noteworthy application of Functional Synthesis

Excel sees patterns and shows a preview

Cake Cutting Problem: A classic example of Game Theory:

Two Person Solution
"I cut, you choose"
Blue cuts, Red chooses first

Meeting details

You're presenting

Meeting details

You're presenting