



RISE KRISHNA SAI PRAKASAM GROUP OF INSTITUTIONS

NH-5, Valluru, -523272, Ongole, Prakasam District

REPORT OF THE GUEST LECTURE
ON
INTRODUCTION TO EDA TOOLS AND OPPORTUNITIES IN VLSI
ON
29th DDECEMBER 2018

Organized by the department of ECE

Target Audience: II, III & IV ECE

The departments of ECE organized a guest lecture on “**INTRODUCTION TO EDA TOOLS AND OPPORTUNITIES IN VLSI**” on 29thDecember, 2018.



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The lecture was started at 11.30 AM in RISE INDIA Auditorium by **Dr. Ch. Venugopal Reddy**, Professor, and HOD, Department of ECE addressing the participants about the importance of the event. The participants for the expert lecture were 360 Undergraduate students of ECE in RISE Krishna Sai Prakasam Group of Institutions. The Resource person **Mr. Ramesh pyru**, Team Manager, Altran Technologies, Bangalore.

The resource person took over the session at 11:35 AM discussing overview, Introduction to **Introduction to EDA Tools and Opportunities in VLSI**.



EDA has been an immensely successful field, helping to manage the exponential increase in our capability to implement ICs that incorporate billions of transistors. At the same time, EDA has fostered and applied theories of computation and modeling, successfully combining them with practice. EDA has completely transformed the way that electronics engineers design and manufacture ICs. It was one of the earliest fields in computer science to engage in interdisciplinary collaboration, in which computer scientists and engineers successfully worked with electrical engineers, physicists, chemists, applied mathematicians and optimization experts, and application domain specialists. EDA consists of a collection of methodologies, algorithms, and tools that assist and automate the design, verification, and testing of electronic systems. EDA embodies a general methodology that seeks to successively refine a high-level description to a low-level detailed physical implementation for designs ranging from ICs (including SoCs), to PCBs and electronic systems. EDA involves modeling, synthesis, and verification at every level of abstraction. The design of VLSI has been simplified to combine blocks together, check the layout then optimize manually or based on automatic optimization techniques. Also, some software packages have the ability to check the logic, schematics and layout, and find potential problems in the design.

Salient features of this guest lecture:

- A review of Very Large Scaled Integrated Circuits (VLSI) which is far beyond human ability, computers are increasingly used to aid in the design and optimization processes and also Design on Development Life Cycle.
- Covered Application Specific Integrated Circuit and Field Programmable Gate Arrays can be reprogrammed to desired application or functionality requirements after manufacturing. This feature distinguishes FPGAs from Application Specific Integrated Circuits (ASICs), which are custom manufactured for specific design tasks.
- Discussion on Design Architectures and Test bench Architectures with an example 4:1 Mux.
- Discussion on VLSI Front End Languages such as Verilog HDL, HVL, Verification methodologies and various scripting languages.



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- Provides a perspective on EDA Tools such as Xilinx ISE, ModelSim, Cadence, etc.

Finally, he focused on Career Opportunities on VLSI regarding the private and service companies, VLSI Foundries including various training institutes all over the world. He also provided a perspective on the role of Design Engineers & Verification Engineers in VLSI field.