



VISHWAKARMA GOVERNMENT ENGINEERING COLLEGE, CHANDKHEDA

Brief Report on “ Expert talk on Multigate (FinFET) Circuit Simulation””

Name of Department/Organizer	:	Electronics & Communication Department and IEI Student Chapter
Date & Time	:	29/03/2019
Venue	:	Ahmedabad
No of Participants	:	25

- **Objective of the Event**

To give an overview about various aspects of Multigate (FinFET) Circuit Simulation.

- **About Expert**

- ❖ Dr Mitesh J Limbachia was invited as an expert to deliver the lecture and Hands on session on “Multigate (FinFET) Circuit Simulation”. He is an assistant professor at Electronics and Communication engineering department, DDIT, Nadiad. He has more than 15 years of teaching experience and his research areas are MOSFET device physics and VLSI Design.

- **About Expert session**

- ❖ Expert session was arranged for PG Students of EC department.
- ❖ Dr Mitesh J Limbachia has explained basics of Multigate FinFETs and its advantages over planner MOSFETs. He described the physics behind the BSIM-CMG (Berkeley Short-channel IGFET Model – Common Multi-Gate) compact models for Multigate MOSFETs which serves as a link between process technology and circuit design and it is a concise mathematical description of the device physics in the transistor. He has given introduction of various FinFET models used for simulation in HSPICE tool.
- ❖ He mentioned all the parameter variations effects on OFF current and ON current. He also carried out many simulations for I_D-V_G and I_D-V_D characteristics of different physical variations in FinFET. He also carried out various simulations of various circuits like inverter, SRAM and sense amplifier.
- ❖ He also shared his experiences of doing research in Multigate FinFET. He also specified various advanced research problems of the domain and asked to the students to work on it.

- Photographs



