**17.06.2024 to 21.06.2024**

*Workshop on "Artificial Intelligence and its Applications in VLSI Design and Technology"*

**(UNDER THE ANCHOR INSTITUTE PROGRAM)**

Anchor Institute Programme Office
DHIRUBHAI AMBANI INSTITUTE OF INFORMATION AND
COMMUNICATION TECHNOLOGY, GANDHINAGAR,GUJARAT

❖ **Funded by:** The Centre for Entrepreneurship Development (CED)-A Government of Gujarat Organisation.

❖ **Organized by:** Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar, Gujarat, India (DA-IICT).

| Tentative Start Date | 17.06.2024 to 21.06.2024 |
|---|---|
| Venue | DA-IICT, Gandhinagar |
| Program Schedule | Click here |
| Course Duration | The duration of the course will be 40 hours, consisting of 20 hours of theory sessions and 20 hours of laboratory sessions. |
| Target Audience | **Faculties, Ph.D. Scholar, PG and Professionals** |
| Course Fee (Pay Online) | Participants are charged a fully refundable upfront course fee of 5,000 INR. |
| Accommodation | **Complimentary accommodation, breakfast, lunch, and snacks will be provided throughout the workshop. Kindly note that at present the accommodation is available only for male candidate.** |
| Refund Policy | Maintain a 75% minimum attendance to be eligible for the refund. |
| Certificate | A participation certificate will be conferred to individuals who maintain an attendance record of at least 75%. |

❖ **Pay online to the below bank account:**

| Name of Account Holder | M/S.DHIRUBHAI AMBANI INST OF INFOR & COMM TECHNOLOGY ANCHOR IN |
|---|---|
| Bank Name | ICICI Bank Ltd. |
| Account Number | 016501021384 |
| IFSC Code | ICIC0000165 |

❖ **Registration on the following link after the payment:**

To enroll, please complete the registration form by clicking here. Once you open the registration form, you will find further instructions and details. However, we have attached the poster and course outlines for your reference.

The last day of registration is **06th June. 2024**

❖ For more details, please visit https://www.daiict.ac.in/courses-through-aip-cep

1. **Course Objective**

The course aims to introduce the basic concepts of Artificial Intelligence and Machine Learning followed by its applications in the area of VLSI Design and Technology. The scope of AI/ML at various levels of abstraction will be covered in detail.

The focus of the present course is to start with the basic understanding of AI and ML. The modeling, experimentation and analysis of the AI/ML based algorithms will be executed. Thereafter, the state-of-the-art research and development in the VLSI domain will be covered. The design challenges, complexities in nanometer designs, various non-ideal effects in the device, interconnects, packaging, testing and electronic design automation (EDA) tools will be discussed. The incorporation of AI/ML based approaches for solving VLSI design challenges

will be studied and implemented. The AI/ML based solutions to the VLSI domain and their applications will be seen at various levels of abstractions such as device, gate, circuit and system.

Hands-on-training and exposure to different computer-aided design tools such as MATLAB, Python, Cadence, Xilinx- Verilog and FPGA will be provided. Application oriented VLSI system project development using AI/ML will be developed at the end.

## 2. Expected Outcome

Upon completion of the course, students are expected to possess a comprehensive understanding of fundamental AI and ML concepts, with practical proficiency in modeling, experimenting, and analyzing AI/ML algorithms. They will gain awareness of state-of-the-art research in VLSI design, along with insights into design challenges, non-ideal effects, and EDA tools. Students will learn to incorporate AI/ML approaches to address VLSI design challenges across various abstraction levels, from devices to systems, and acquire hands-on experience with CAD tools like MATLAB, Python, Cadence, Xilinx-Verilog, and FPGA. Furthermore, they will develop project development skills by working on application-oriented VLSI system projects, enabling them to apply their knowledge effectively in real-world scenarios.

## 3. Course Instructors:

- Dr. Yash Agrawal, DA-IICT Gandhinagar
- Dr. Manish Khare, DA-IICT Gandhinagar
- Dr. Bakul Hohel, DA-IICT Gandhinagar
- Dr. Vinay Palaparthy, DA-IICT Gandhinagar
- Prof. Jai Narayan Tripathi (IIT Jodhpur)
- Prof. Rohit Kumar (IIT Roper)
- Prof. Somesh Kumar(ABV-IIIM Gwalior)

## 4. Address for Correspondence:

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