

## Scope of the Short-Term Training Program

VLSI (Very Large-Scale Integration) design is an important field that deals with the design and fabrication of integrated circuits. The proposed STTP provides students, scholars, academicians, and industry professionals to enrich their skills and knowledge in the field of VLSI design.

The scope of this STTP is to deliver the design aspects and provide hands-on experience with VLSI design tools such as Vivado (Xilinx) and Cadence in the following topics:

- **Digital Design:** Digital design concepts including combinational and sequential logic, finite state machines, and basic digital circuits.
- **Analog Design:** Analog design concepts including basic amplifier design, filters, and analog-to-digital conversion.
- **Advanced Topics in VLSI Design:** Recent advancements in VLSI design such as low-power design, high-speed design, and mixed-signal design.

### Chief Guest - Inauguration

**Prof. R. K. Nagaria**  
Professor, MNNIT Allahabad

### Chief Guest - Valedictory

**Prof. Laxmidhar Behera**  
Director, IIT Mandi

### Resource Persons

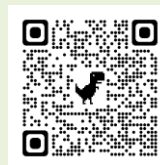
- Dr. Balwinder Singh, Joint Director & Head, ACSD, Chandigarh
- Dr. Hitesh Srimali, Associate Professor, IIT Mandi
- Dr. Ambika Prasad Shah, Assistant Professor, IIT Jammu
- Dr. Mayank Srivastava, Assistant Professor, NIT Jamshedpur
- Dr. Jyotirmoy Dutta, Special Scientist, IISc Bangalore
- Dr. Trailokya Nath Sasamal, Assistant Professor, NIT Kurukshetra
- Dr. Tarun Chaudhary, Assistant Professor, NIT Jalandhar
- Dr. Shuvam Pawar, Assistant Professor, NIT Warangal
- Dr. Vaithyanathan, Assistant Professor, NIT Delhi
- Dr. Deepak Kumar Sharma, PEC, Chandigarh
- Dr. Kunwar Singh, Assistant Professor, NSUT Delhi
- Dr. Tanmay Dubey, Assistant Professor, IIIT Surat

## Participants

- Faculty members/Engineering professionals of the AICTE approved institutions/ Universities and Industries.
- Research scholars, M. Tech., and B. Tech. Students with an ambition to study in this exciting area.
- The number of participants is limited to 50 and the selection is based on first come - first serve basis.

### Registration Link

<https://forms.gle/JQfjr9o4FWEuGDaaA>



### Registration Fee:

| Participants type   | Registration Charges |
|---|----------------------|
| Corporate Professionals                                   | ₹1500                |
| Academician   | ₹1000                |
| Research Scholars/ UG-PG Students from other institutions | ₹500                 |
| Research Scholars/ UG Students from IIIT Una              | NIL                  |

### The process of fee payment is as follows:

- Go to [www.onlinesbi.com](http://www.onlinesbi.com) and select option SBI Collect.
- Select State of Category/Educational Institute: Filter by state: Himachal Pradesh.
- Select Educational Institute Name: IIITU and click on submit button.
- Select payment category: 'WORKSHOP/STC/FDP/CONFERENCE' and fill the details to proceed further.
- After filling the Form, pay the amount and save a copy or take a print of the 'Proof of Payment' for submission during application form through google form.

### Important dates

- Last date for online registration: **20.06.2023.**
- Selected participants will be notified via email by **22.06.2023.**

### Certification

- **Certificate** will be provided to the participant upon successful completion of the STTP with **100% attendance** and securing a **minimum of 60% marks** in quiz.



Indian Institute of Information  
Technology Una (HP)  
(An Institute of National Importance  
under MoE)

## One Week Short-Term Training Program (STTP)

On

## Recent Advancements in VLSI Design and its Applications

(RAVDA-2023)

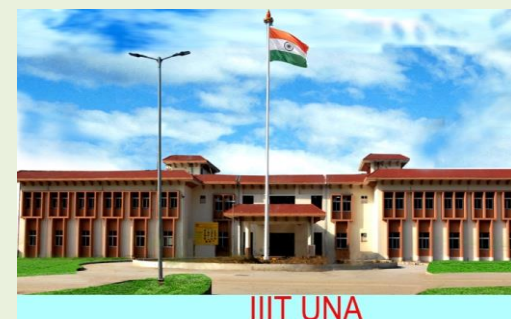
04- 08 July, 2023

Technically supported by:



Organized by:  
School of Electronics,

Indian Institute of Information  
Technology Una [HP]  
An Institute of National Importance  
under MoE  
Saloh, Una (HP) – 177 209  
<http://www.iiitu.ac.in/>



IIIT UNA

## About IIIT Una

IIIT Una is one of the 20 IIITs being setup, funded and managed by the Ministry of Education, Govt. of India under the Public Private Partnership (PPP) model. Admissions to the undergraduate programmes in the Institute are made through the Joint Entrance Examination (JEE).

At present, IIIT Una operates from its permanent campus at Saloh, Una. The campus is fully furnished and working full-fledged from its permanent campus.

## School of Electronics (SoE)

Since its inception in the year 2014, the School of Electronics (SoE) has taken a great leap in providing quality technical education. At present, the school is offering Bachelor of Technology (B. Tech.) and Ph. D. programs in Electronics and Communication Engineering (ECE). SoE has expertise in the fields of VLSI, Communication, RF and Microwave, and Signal processing.

SoE has Cadence Virtuoso and Xilinx Vivado softwares for VLSI, MATLAB for communication and signal processing, and CST Studio for Antenna design. These softwares offer good opportunity for the students and scholars working in their respective research domains.

## Vision of the School

To impart up to date technical knowledge of Electronics and equip the students to handle the global challenges.

## Mission of the School

- To educate the students with strong theoretical and practical knowledge by imparting quality education.
- To increase the research activity through constant interaction with research organizations and industry.
- To encourage students to entrepreneurship, teamwork, and professional ethics.

## About Entuple Technologies

**Entuple Technologies** was Founded on 1st January 2010 by professionals with a combined experience of over 80 years in the Electronics Industry. Combined from the words "Enable" and "n-tuple", Entuple is suggestive of enabling multi-dimensional possibilities and growth for all their stakeholders.

Entuple Technologies is a Design Service, Product and Engineering Solution Provider for Electronic System Design, VLSI/Semiconductor, Electrical Drives & Renewable Energy Systems, RF & Antenna, Additive Manufacturing, Mechanical, Finite Element Analysis (FEA), Computational Fluid Dynamics, PCB Design & Prototyping Solutions, IoT & Data Sciences and more.

**Objective:** To provide precise quality solutions to their customers and win loyalty by leveraging their technical capability. Satisfaction of the customer is valued and is of paramount importance right from the beginning of the engagement with the customer.

## Tentative Programme Contents

- Emerging Low Power VLSI Techniques
- Introduction to Verilog HDL and its Applications
- Design of Data Path Unit: Hybrid Adders
- FPGA Architecture and Programming using HDL
- Recent Development in Analog and mixed signal VLSI design [ADCs]
- Modern Active Building Blocks and Their Applications in Non-conventional Analog Designs
- Integrated Circuit Reliability, Security and Quality: Challenges, Opportunities, and Roadmap
- MEMS Inertial Sensors for Space Applications
- Piezoelectric material-based MEMS Acoustic Sensors
- Low power VLSI Design and Testing
- Hands-on Analog Design practical session on Cadence
- Hands-on Digital Design practical session on Xilinx

## CHIEF PATRON

**Prof. S Selvakumar, Director, IIIT Una**

## PATRON

**Prof. Amar Nath Gill, Registrar, IIIT Una**

## ADVISOR(s)

**Dr. Vikram Kumar, SoC**  
**Dr. Nishtha Hooda, SoC**

## CONVENOR(s)

**Dr. Ankur Kumar, SoE**  
**Dr. Naman Garg, SoE**

## COORDINATOR(s)

**Dr. Naveen Cheggoju, SoE**  
**Dr. Vejjandla Kishore, SoE**

## REGISTRATION COMMITTEE

**Dr. Gurpreet Kaur, SoE**  
**Dr. Tanu, SoE**

## ORGANIZING COMMITTEE

**Dr. Mrityunjay Singh, SoC**  
**Dr. Sanjit Ningthoujam, SoC**  
**Dr. Shatrughan Modi, SoC**  
**Dr. Shivdutt Sharma, SoC**  
**Dr. Ambigavathi M, SoC**  
**Dr. Neha Sharma, SoC**  
**Dr. Jaspal Kaur Saini, SoC**  
**Dr. Payal Sharma, SoBs**  
**Mr. Satish Kumar, SoE**  
**Mr. Divyansh Thakur, SoC**  
**Ms. Pranshu Sharma, SoE**  
**Ms. Minakshi Shastri, SoC**  
**Ms. Richa Thakur, SoC**

## ADDRESS FOR CORRESPONDENCE

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