

MoE/SICI Sponsored
(Online)
WORKSHOP
ON
Nanoelectronics & VLSI
(February 11- 12, 2021)



ORGANIZED BY
Sant Longowal Institute of Engineering & Technology
(Deemed to be University under MHRD, Govt. of India)
Longowal, Distt. Sangrur-148106 Punjab (India).

Course Coordinator
Pankaj Kumar Das
Electronics & Communication Engg. Department,
Sant Longowal Institute of Engg. & Tech., Longowal.
Deemed to be University (Established by Govt. of India)
District: Sangrur (Punjab) 148106, India.

INSTITUTE

Sant Longowal Institute of Engineering & Technology (SLIET), Deemed to be University, has been established and funded by MHRD, Government of India in 1991, to provide technical education in emerging areas of Engineering and Technology. The institute caters to the technical manpower requirements at various levels by adopting a concept of a modular system in imparting professional education with an emphasis on practical training in the industry. The study programmes include various courses at Integrated Certificate and Diploma, Degree, M.Tech & Ph.D levels in 11 departments of Engineering, Science and Technology. The Institute has come up beautifully in a sprawling green area of 451 acres, with many topographically featured picturesque landscape and presents spectacle of harmony and natural beauty, embedded with all the amenities required for a complete township.

LOCATION AND WEATHER

The Institute is located at Longowal village and is connected by road with Sangrur (18 km), Sunam (18 km), Barnala (30 km), Patiala (80 km), Ludhiana (110 km) and Chandigarh (150 km). The nearest railway stations are Sangrur (18 km), Sunam (18 km), Barnala (30 km) and Dhuri (35 km). The nearest airport is at Chandigarh. The month of February is winter season and temperature ranges from 20°C to 22°C.

SHASTRI INDO-CANADIAN INSTITUTE

The Shastri Indo-Canadian Institute is a binational organization that promotes understanding between India and Canada through academic activities and exchanges. The institute support the creation of binational links between academia, government, the business community and civil society organizations by funding research and hosting seminars. The Shastri Institute is funded by and partners closely with government bodies in both India and Canada. The Institute aims to achieve gender equality and reduce poverty by focusing programming on sustainable development and other United Nations Millennium Development Goals.

ABOUT THE WORKSHOP

Semiconductor devices are the basic building blocks of integrated chips (ICs). Due to the rapid development of semiconductor technology, the dimensions of the electronic devices are shrinking and the density of transistors have increased in the ICs which enables multiple features and functionalities in the electronic gadgets where energy, power, speed and area are the important design metrics. The proportionate change in the device dimensions in the nanometer regime also faces several challenges, worldwide. The nanoscale devices need quantum mechanics in order to model and understand the device behavior. Hence, this workshop will focus on various aspects of Nano-electronic devices and the possibility of circuits and system design.

EXPECTED OUTCOMES

In the current era of Nanoelectronics & VLSI semiconductor devices have been developed along with manufacturing technologies to improve the yield of semiconductor devices. The proposed workshop is planned for UG & PG students of the institute. After attending this workshop students have the broad exposure about the various aspect of Nano-electronics & VLSI Design from device level to low-power circuits & systems. Further, students can aware about the latest trends and dimensions in nano-electronics such as spintronics, GaN and SiC devices. Enabled the participants in the field of Electronics and Communication Engineering to introspect and learn techniques that help them for active and successful participants in a knowledge society. Enhanced the PG students' effectiveness in research and learning in the field of nano-electronics & VLSI design, modeling and simulation of device and circuits.

RESOURCE PERSONS

- 1) **Dr. Pankaj Kumar Pal**, Assistant Professor
Department of ECE, NIT Utrakhnad
- 2) **Dr. Praveen Prajapati**, Associate Professor,
Department of ECE, A. D. Patel Institute of
Technology, Gujarat
- 3) **Er. Pankaj Kumar Das**, Assistant Professor
Department of ECE, SLIET Longowal
- 4) **Er. Swapnil Gaul**, Founder and Director
Numergion Technology (OPC) PVT LTD,
PUNE Maharashtra-411014Praveen

REGISTRATION

The registration will be done online using the following link. The link is also available at <http://sliet.ac.in/>

Link for Registration:

<https://forms.gle/qff7QAvcM9BZ7Aof6>

No registration fees for the students from Indo-Canadian Institutes.

Course Contents

- Basics About Nanoelectronics
- Carbon Nanotubes Interconnect Design
- Nano antenna Design
- Challenges in Electronic System Design
- Recent Issues in VLSI Design
- Importance of Interconnects in System Design
- Importance and effective communication of e-Resources.

ELIGIBILITY:

The workshop is open to Degree and PG Students of the institute/ Indo-Canadian Institute.

The number of participants for the course is limited to sixty (60) on a first-come, first-serve basis.

MODE OF CONDUCTION

The workshop will be conducted on a suitable online platform. All the participants who will attend all the workshop will be issued e-certificates post successful verification of the attendance.

REGISTRATION

The registration will be done online using the following link. The link is also available at <http://sliet.ac.in/>

Link for Registration:

<https://forms.gle/qff7QAvcM9BZ7Aof6>

No registration fees for the students from Indo-Canadian Institutes.

IMPORTANT DATES

Last date for registration: February 10, 2021

Notification of selection: February 10, 2021

ADVISORY COMMITTEE

**Chief Patron: Prof. Shailendra Jain, Director
SLIET Longowal**

**Patron: Prof. Prachi Kaul, Director, SICI
Prof. A. S Arora, Dean (Academics)**

**Chairman: Prof. Surinder Singh,
HOD(ECE), SLIET Longowal**

**SICI Member Representative: Prof. Surita
Maini, SLIET Longowal**

**Coordinator: Er. Pankaj Kumar Das, SLIET
Longowal**

Address for correspondence

Coordinator:

Er. Pankaj Kumar Das, A.P. (ECE)

**Sant Longowal Institute of Engineering and
Technology, Longowal, Sangrur, Punjab-
148106**

Ph. No. 9478214936, 9463122255

E-mail.: pankajkdas@sliet.ac.in



*The Department of Electronics & Communication Engineering
Sant Longowal Institute of Engineering & Technology, Longowal*

*Solicit your benign presence on the occasion of
Inaugural Ceremony of the
MoE/SICI Sponsored Two Days Online Workshop
on*

Nanoelectronics & VLSI

*Prof. Shailendra Jain, Director, SLIET Longowal
has kindly consented to be the Chief Guest of the function*

R.S.V.P

Organizing Committee of the Programme

Inaugural Ceremony, February 11, 2021

<i>10:00-10:05 AM</i>	<i>Initiation of the inaugural ceremony of the online workshop, by Er. Pankaj Kumar Das, Programme Coordinator, SLIET, Longowal</i>
<i>10:05-10:10 AM</i>	<i>Welcome address by Prof. Surinder Singh, Chairman (Workshop), SLIET, Longowal</i>
<i>10:10-10:20 AM</i>	<i>Address by SICI Member representative</i>
<i>10:20-10:30 AM</i>	<i>Address by Dean (Academics) SLIET Longowal</i>
<i>10:30-10:40 AM</i>	<i>Address by Sponsor, Director, SICI</i>
<i>10:40-10:50 AM</i>	<i>Inaugural Address by the Chief Guest</i>
<i>10:50-10:55 AM</i>	<i>Vote of thanks by Er Pankaj Kumar Das, Coordinator (Workshop), SLIET, Longowal</i>

The event will be compered by Er Pankaj Kumar Das, AP (ECE).



MoE/SICI Sponsored

Two Days Online Workshop

on

Nanoelectronics & VLSI

February 11th -12th, 2021

Organized by

***Department of Electronics & Communication Engineering,
SLIET Longowal***

Programme Schedule

<i>February 11th, 2021</i>	
<i>10:00 AM to 10:55 AM</i>	<i>Inauguration</i>
<i>11:00 AM to 01:00 PM</i>	<i>Speaker: Dr. Praveen Prajapati</i> <i>Associate Professor, Department of ECE, A. D. Patel Institute of Technology, Gujarat</i> <i>Topic: Basics of Design of Nano Antennas</i>
<i>02:00 PM to 04:00 PM</i>	<i>Speaker: Dr. Pankaj Kumar Pal, Assistant Professor Department of ECE, NIT Uttrakhand</i> <i>Topic: Basics of Nanoelectronics and VLSI Design</i>
<i>February 12th, 2021</i>	
<i>10:00AM to 11:00AM</i>	<i>Speaker: Er. Pankaj Kumar Das</i> <i>Assistant Professor, Department of Electronics & Communication Engineering, SLIET Longowal</i> <i>Topic: Carbon Nanotube as Global VLSI Interconnects</i>
<i>11:00AM to 01:00 PM</i>	<i>Speaker: Er. Swapnil Gaul,</i> <i>Founder and Director Numergion Technology (OPC) PVT LTD, PUNE Maharashtra-411014</i> <i>Topic: Advanced simulation based virtual lab: MyTaraNG Cloud</i>
<i>01:00 PM to 01:30 PM</i>	<i>Feedback and Valedictory</i>