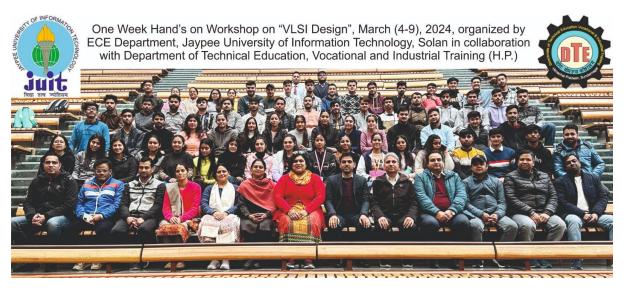
(Established by H.P. State Legislature vide Act No. 14 of 2002)

One Week Hands-on Workshop on

"VLSI Design"

March 04-09, 2024

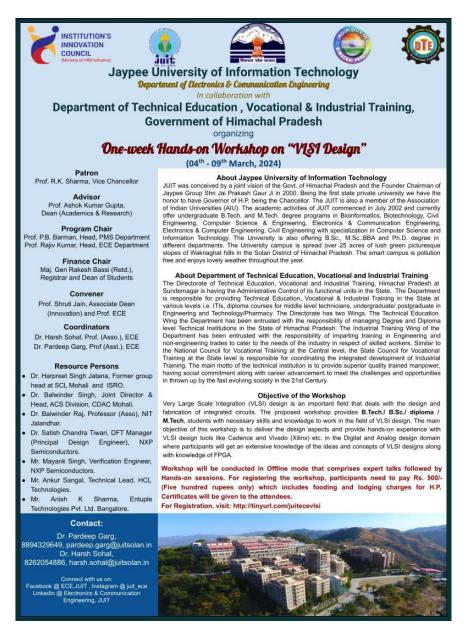




In a significant stride towards advancing knowledge in the field of VLSI Design, Jaypee University of Information Technology (JUIT), Waknaghat, organized a one week hands-on workshop on "VLSI Design". This workshop, a collaborative effort between JUIT's Department of Electronics and Communication Engineering and the Department of Technical Education, Vocational, and Industrial Training, Government of Himachal Pradesh and

(Established by H.P. State Legislature vide Act No. 14 of 2002)

Institution's Innovation Council (IIC), commenced on March 04, 2024, and continued until March 09, 2024. The event witnessed active participation from over 75 enthusiasts hailing from various districts of Himachal Pradesh.



The resource persons invited for the workshop are experts in their domains and from the renowned Govt. Organizations/ Industry in the field of VLSI/Semiconductor are listed below:

- 1. Dr. H. S. Jattana, Former group head at SCL Mohali and ISRO
- 2. Dr. Satish Chandra Tiwari, DFT Manager (Principal Design Engineer), NXP Semiconductors
- 3. Dr. Balwinder Singh, Joint Director & Head, ACS Division, CDAC Mohali
- 4. Dr. Balwinder Raj, Associate Professor, NIT Jalandhar
- 5. Mr. Mayank Singh, Verification Engineer, NXP Semiconductor
- 6. Mr. Ankur Sangal, Technical Lead, HCL Technologies
- 7. Mr. Anish.K.Sharma, Sr. FAE, Entuple Technologies Pvt. Ltd.

(Established by H.P. State Legislature vide Act No. 14 of 2002)



The workshop was inaugurated by Dr. Satish Chandra Tiwari, DFT Manager (Principal Design Engineer) at NXP Semiconductors, INDIA. The inaugural ceremony, graced by esteemed guests Mr. Mayank Singh, Verification Engineer at NXP Semiconductor, and Mr. Ankur Sangal, Technical Lead at HCL Technologies, marked the beginning of an insightful event. The inaugural session witnessed the presence of key figures, including Prof. Rajendra Kumar Sharma, Vice-Chancellor of JUIT, Prof. Ashok Kumar Gupta, Dean (Academics & Research), Maj Rakesh Bassi, Dean of Student Welfare, Prof. P.B. Barman, Head of the Department (PMS), Prof. Rajiv Kumar, Head of the Department (ECE), and Prof. Dr. Shruti Jain, Associate Dean (Innovation). Dr. Harsh Sohal and Dr. Pardeep Garg steered the coordination of the workshop, ensuring its success and providing a platform for participants to delve into the intricacies of VLSI Design.

(Established by H.P. State Legislature vide Act No. 14 of 2002)

Itinerary

Registration Time: 9:00 AM (Academic Block, Vivekanand Bhawan)

Date	Time	Events (ALL IN CL1, 2nd floor, Vivekanand Bhawan)		
	10:00AM	Inaugural function		
04-03-2024	10: 30 AM	Expert Lecture by Dr. Satish Chandra Tiwari, DFT Manager (Principal Design engineer), NXP Semiconductors, INDIA. VLSI Current opportunities and Job Trends		
	2:30 PM	Hand's on session by Mr. Mayank Singh, Verification Engineer, NXP Semiconductor (Consultant) RTL VERIFICATION		
05-03-2024	10:00AM	Expert Lecture by Xilinx Vivado Tool Flow with FPGA based coding techniques by Mr. Ankur Sangal, Technical Lead, HCL Technologies Hand's on session by Mr. Mayank Singh, Verification Engineer, NXP Semiconductor.		
	2:30 PM	Hand's on session IP Integrator using Xilinx Vivado Tool by Mr. Ankur Sangal, Technical Lead, HCL Technologies		
06-03-2024	10:00AM	Expert Lecture by Dr. Balwinder Singh, Joint Director & Head, ACS Division, CDAC Mohali SoC Testing and hardware security concerns		
	2:30 PM	Hand's on session by Dr. Balwinder Singh		
07-03-2024	10:00AM	Expert Lecture by Mr. Anish.K.Sharma, Sr. FAE, Entuple Technologies Pvt. Ltd		
0. 00 2021	2:30 PM	Hand's on session by, Mr. Anish.K.Sharma on Cadence		
08-03-2024	10:00AM	Expert Lecture by Dr. Balwinder Raj, Associate Professor, NIT Jalandhar Multi-Gate Semiconductor Devices for VLSI Design		
	2:30 PM	Hand's on session by, Mr. Anish.K.Sharma on Cadence		
09-03-2024	9:30 AM Expert Lecture by Dr. Harpreet Single at SCL Mohali and ISRO. Challenges in CMOS design in low g			
	11:30 AM	Valedictory		

(Established by H.P. State Legislature vide Act No. 14 of 2002)

After the inauguration at around 11:00 AM, Dr. Satish Chandra Tiwari delivered his talk on the topic 'VLSI Current opportunities and Job Trends'.



(Established by H.P. State Legislature vide Act No. 14 of 2002)



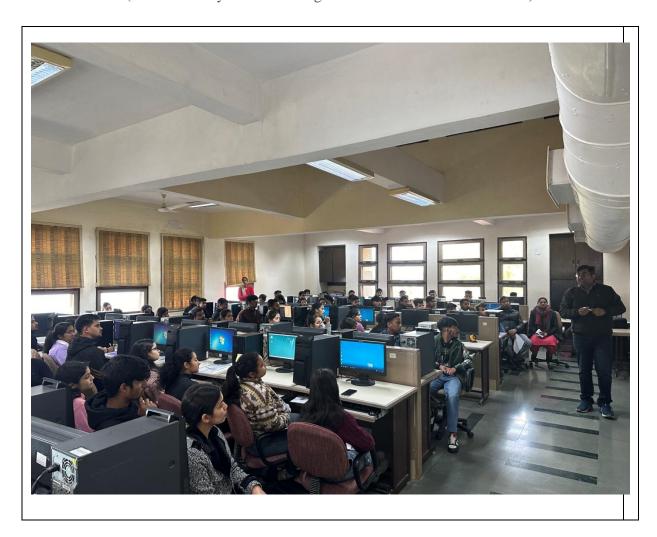
In the afternoon on 04-03-2024, Mr. Mayank Singh started his talk with Verilog HDL based implementation of Digital Logic Blocks and specifically covered the topic 'RTL VERIFICATION'.

(Established by H.P. State Legislature vide Act No. 14 of 2002)



In the morning session on 05-03-2024, Mr. Ankur Sangal delivered his expert lecture on the topic, 'Xilinx Vivado Tool Flow with FPGA based coding techniques'. The participants were successfully able to perform the hands on experiments and hence learnt to use the Xilinx Vivado Tool flow to design basic digital logic and also to burn the same on to ZedBoard (Zynq-7000 ARM/FPGA SoC Development Board).

(Established by H.P. State Legislature vide Act No. 14 of 2002)



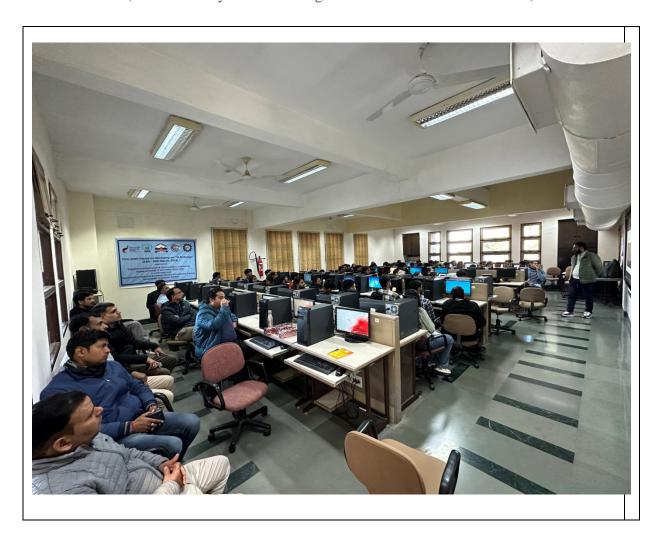
In the afternoon on 05-03-2024, Mr. Mayank Singh completed his talk on the topic 'RTL VERIFICATION'. He discussed with the participants the basic concepts which are very important for the new entrants to grasp and practice. He also shared some questions which he generally asks the aspirants while he interviews them for his verification team.

(Established by H.P. State Legislature vide Act No. 14 of 2002)



In the morning session on 06-03-2024, Dr. Balwinder Singh introduced the participants to system of chip while focussing on, 'SoC Testing and hardware security concerns'. He also stressed the hardware security concerns as one of the driving forces behind the Government of India Semiconductor initiative.

(Established by H.P. State Legislature vide Act No. 14 of 2002)



In the afternoon session on 06-03-2024, Dr. Balwinder Singh took the hands on session and covered the concept of VLSI design using Cadence Virtuoso tool.

(Established by H.P. State Legislature vide Act No. 14 of 2002)



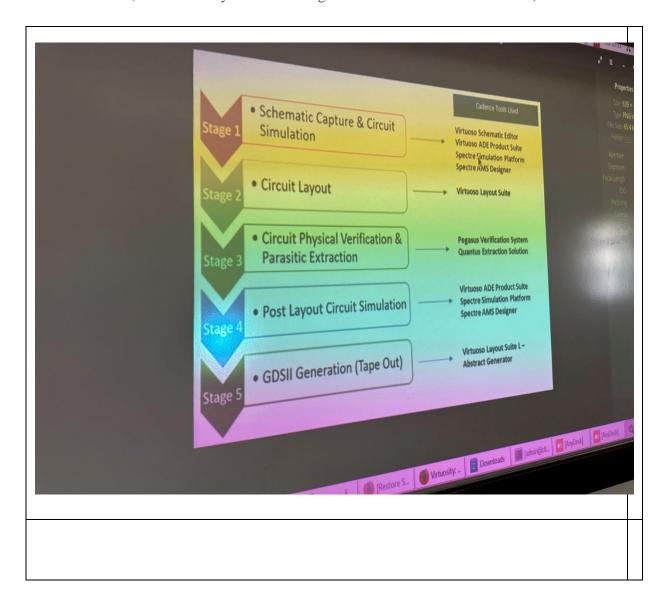
In the morning session on 07-03-2024, Mr. Anish Kumar Sharma delivered his expert lecture on the topic, 'EDA Tools'.

(Established by H.P. State Legislature vide Act No. 14 of 2002)



In the afternoon session on 07-03-2024, Mr. Anish Kumar Sharma took the hands on session and covered the concept of VLSI design using Cadence Virtuoso tool. The focus of the session was to familiarise the participants in the Digital Design flow of the Cadence Virtouso EDA tool.

(Established by H.P. State Legislature vide Act No. 14 of 2002)



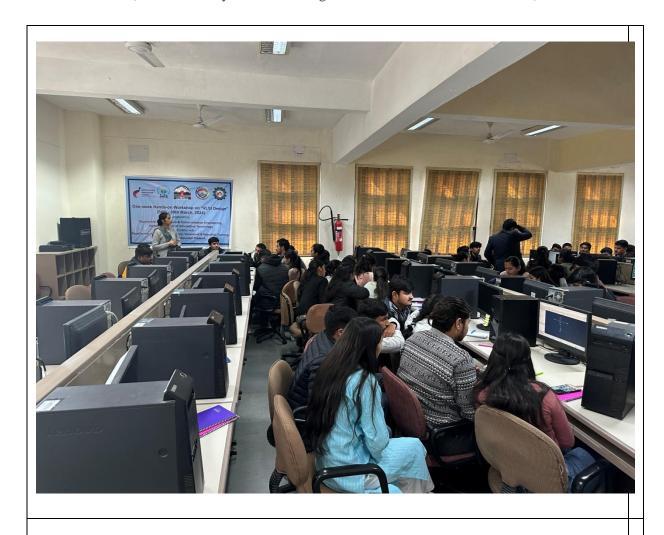
In the morning session on 08-03-2024, Dr. Balwinder Raj delivered his expert lecture on the topic, 'Multi-Gate Semiconductor Devices for VLSI Design'. Dr. Balwinder Raj presented to the audience his research work in the area of Semiconductor Devices. He introduced the participants to the future of semiconductor industry beyond traditional 'Si' as a material approach.

(Established by H.P. State Legislature vide Act No. 14 of 2002)



In the afternoon session on 08-03-2024, Mr. Anish Kumar Sharma took the hands on session and covered the concept of VLSI design using Cadence Virtuoso tool.

(Established by H.P. State Legislature vide Act No. 14 of 2002)



The last session of the workshop commenced on the morning of 09-03-2024 with the expert lecture of Dr. Harpreet Singh Jattana titled, "Challenges in CMOS design in low geometry technology node". After the talk was over he interacted with the students while discussing the GoI policy initiatives, various companies working for the semiconductor industry. Also, he showed the Silicon Wafer to the participants.





At 11:30 AM on 09-03-2024, the valedictory session was conducted; the certificates were distributed to all the participants and the Workshop organizers.





(Established by H.P. State Legislature vide Act No. 14 of 2002)



This collaborative endeavour between academia and industry experts promises to equip the participants with invaluable insights and hands-on experiences in the dynamic domain of VLSI Design. As JUIT continues to foster academic excellence, such workshops contribute significantly to shaping the future of aspiring engineers and innovators. The participants are set to gain practical knowledge, opening doors to new possibilities and reinforcing JUIT's commitment to nurturing talent in cutting-edge technological domains. The workshop was structured to be highly interactive, incorporating hands-on exercises utilizing industrystandard EDA tools. Participants engaged in designing, simulating, and verifying digital circuits under the guidance of experienced professionals. The comprehensive curriculum covered fundamental VLSI design principles, ensuring participants acquired practical skills essential for further studies or careers in the field. The week-long event facilitated a unique opportunity for attendees to directly interact with industry experts, fostering insightful discussions and enabling valuable networking among participants. As the workshop concluded, participants left with a solid foundation in VLSI design and the confidence to pursue advanced studies or embark on careers within the dynamic, lucrative realm of VLSI/Semiconductors.

The success of the "VLSI Design" workshop underscored JUIT Solan's commitment to providing students with hands-on learning experiences and industry-relevant knowledge, thereby contributing to the advancement of technology in the region. Participants gained a solid understanding of VLSI design principles and methodologies. They will surely aspire to enhance their problem-solving and critical thinking skills in the field of VLSI design.

(Established by H.P. State Legislature vide Act No. 14 of 2002)

Participants:

S. No.	Name	Currently enrolled in:	University/ College/ School Name	City/State	Gender
1	Avantika Sharma	B.Tech.	Rajiv Gandhi Government Engineering College	Himachal Pradesh	Female
2	Sonika devi	B.Tech.	Rajiv Gandhi government engineering college, massal	Nagrota bagwan	Female
3	Sumit Attar	B.Tech.	Rajiv Gandhi government engineering college at nagrota bagwan	Kangra/Himachal Pradesh	Male
4	ANUJ SHARMA	Diploma	Govt. Millennium Polytechnic Chamba	CHAMBA (H.P.)	Male
5	Rishu Sharma	Diploma	Govt. Millennium Polytechnic Chamba	Himachal Pradesh	Male
6	Karan singh	Diploma	Govt. Millennium polytechnic Chamba	Chamba	Male
7	Abhishek Kumar	Diploma	Govt. Millennium polytechnic Chamba	Himachal Pradesh	Male
8	Ajay Kumar	Diploma	Govt. Millennium polytechnic Chamba	Himachal Pradesh	Male
9	Abhishek Kumar	Diploma	Government Millennium Polytechnic Chamba	Chamba (Himachal Pradesh)	Male
10	Aman Bharwal	Diploma	Dr. B. R. Ambedkar Govt. Polytechnic Ambota	Gagret / Himachal Pradesh	Male
11	Sahil Naryal	Diploma	Dr Br Ambedkar govt polytechnic Ambota	Gagret/ Himachal pardesh	Male
12	Sunil kumar	Diploma	Dr. Br. Ambedkar govt. Polytechnic Ambota	Una/H.p.	Male
13	Rihal Rai	Diploma	Dr. B. R. Ambedkar Govt. Polytechnic Ambota	Gagret/ Himachal Pradesh	Male
14	Kritika	Diploma	Dr. B.R Ambedkar Govt. Polytechnic Ambota	Gagret/Himachal Pradesh	Female
15	Sunidhi Rana	Diploma	Dr. B.R Ambedkar Govt. Polytechnic Ambota	Gagret/ Himachal Pradesh	Female
16	Lovely vijay banta	Diploma	Government Polytechnic Rohru	Shimla	Male
17	Amish kumar	Diploma	Government Polytechnic Rohru	Shimla	Male

18	Rajat	Diploma	Government Polytechnic Rohru	Shimla	Male
19	ANSHUL KESTA	M.Tech.	Govt. Polytechnic Rohru	Shimla	Male
20	Rishu	Diploma	Government Polytechnic Rohru	Shimla	Male
21	Sparsh verma	Diploma	Government polytechnic Rohru	Shimla	Male
22	Aayush	Diploma	Government Polytechnic Rohru	Shimla	Male
23	Dhananjay Sharma	Diploma	Government Polytechnic Rohru	Rohru	Male
24	Ankit Kumar	Diploma	Government Polytechnic Rohru	Shimla	Male
25	Parikshit Sharma	Diploma	Govt. Polytechnic Hamirpur	Hamirpur	Male
26	Anish Malhotra	Diploma	Govt. Polytechnic hamirpur	Hamirpur	Male
27	Nikhil Moudgil	Diploma	Govt Polytechnic Hamirpur	Hamirpur	Male
28	Mayank Chauhan	Diploma	Govt. Polytechnic Paonta Sahib	Himachal Pradesh	Male
29	Harpreet Singh	Diploma	Govt. Polytechnic Paonta Sahib	Himachal Pradesh	Male
30	Tarun Kashyap	Diploma	Govt. Polytechnic Paonta Sahib	Himachal Pradesh	Male
31	Anamika	Diploma	Govt.polytechnic Sundernagar	Sundernagar	Female
32	Deepa Devi	Diploma	Government Polytechnic Sundernagar	Sundernagar	Female
33	Dhruv Sharma	Diploma	Govt polytech Sundernagar	Sundernagar	Male
34	Manish Kumar	B.Tech.	Jawaharlal Nehru Govt. Engineering Collage Sundernagar	Himachal Pradesh	Male
35	Tanishq Sood	B.Tech.	Jawaharlal Nehru Govt. Engineering Collage Sundernagar	Himachal Pradesh	Male
36	Sarthak Patial	B.Tech.	Jawaharlal Nehru Government Engineering College	Sundernagar	Male

37	Aryan Sharma	B.Tech.	Jawaharlal Nehru Government Engineering College	Sundernagar	Male
38	Diya Sharma	B.Tech.	Jawaharlal Nehru Government Engineering College	SunderNagar	Female
39	Shruti Sharma	B.Tech.	Jawaharlal Nehru government engineering College, Sundernagar	Sundernagar	Female
40	SURYA SHARMA	Diploma	Government Polytechnic Kangra	Kangra / Himachal Pradesh	Male
41	AVDESH KUMAR	Diploma	Government Polytechnic Kangra	Kangra, Himachal Pradesh	Male
42	SUSHEN DHIMAN	Diploma	Government Polytechnic Kangra	Kangra, Himachal Pradesh	Male
43	Kamal Kumar	Diploma	Government Polytechnic College Kangra	Kangra	Male
44	Nikhil	Diploma	Government polytechnic Kangra	Kangra	Male
45	Rishav	Diploma	Government Polytechnic Kangra	Kangra	Male
46	Neha Sharma	Diploma	G.P.W Kandaghat	solan	Female
47	Anshita	Diploma	Government polytechnic for women kandaghat	Kandaghat / solan	Female
48	Sonia	Diploma	G.P.W Kandaghat	Solan	Female
49	Sakshi	Diploma	GPW Kandaghat	Kandaghat	Female
50	Niharika	Diploma	GPW kandaghat	Solan	Female
51	Pooja Devi	Diploma	Govt. Polytechnic for Women Rehan	Himachal Pradesh	Female
52	Komal	Diploma	Govt. Polytechnic for Women Rehan	Himachal Pradesh	Female
53	Nidhi Sharma	Diploma	Govt. Polytechnic for Women Rehan	Himachal Pradesh	Female
54	Neha	Diploma	Government polytechnic for women Kandaghat	Kandaghat	Female
55	Ipshita Puri	B.Tech.	Government Hydro Engineering College Bandladhar , Bilaspur	НР	Female

56	Bhanupriya	B.Tech.	Government Hydro Engineering College Bandla Bilaspur	H.P	Female
57	Sakshi Sharma	B.Tech.	Govt.Hydro Engineering College Bandla , Bilaspur (H.P)	Н.Р	Female
58	Ankita Saini	B.Tech.	ABVGIET Pragtinagar	Himachal Pradesh	Female
59	Nitish kunar	B.Tech.	ABVGIET Pragtinagar	Himachal pradesh	Male
60	Chhering Dolma	B.Tech.	ABVGIET Pragtinagar	Himachal Pradesh	Female
61	Ashish Kumar	Diploma	ABVGIET Pragtinagar	Shimla	Male
62	Pankaj Kumar	Diploma	ABVGIET Pragtinagar	Shimla	Male
63	Alisha	B.Tech.	AVBGIET pragati nagar	Himachal Pradesh	Female
64	Ankita Thakur	Diploma	ABVGIET Pragtinagar	Shimla	Female
65	Sarika Sharma	B.Tech.	ABVGIET Pragtinagar	Himachal Pradesh (Hamirpur)	Female
66	Shivani Gaura	B.Tech.	ABVGIET Pragtinagar	Himachal Pradesh	Female
67	Tanishk Thakur	M.Tech.	Jaypee University of Information Technology, Solan	Himachal Pradesh	Male
68	Rishika Goel	M.Tech.	Jaypee University of Information Technology, Solan	Himachal Pradesh	Female
69	Naresh Rana	M.Tech.	Jaypee University of Information Technology, Solan	Himachal Pradesh	Male
70	Aaryan Sharma	B.Tech.	Jaypee University of Information Technology, Solan	Himachal Pradesh	Male
71	Prakhar Kulshrestha	B.Tech.	Jaypee University of Information Technology, Solan	Himachal Pradesh	Male
72	Sandeep Thakur	Faculty	ABVGIET Pragtinagar	Himachal Pradesh	Male
73	Navya	B.Tech.	Jaypee University of Information Technology, Solan	Himachal Pradesh	Female
74	Manas Jain	B.Tech.	Jaypee University of Information Technology, Solan	Himachal Pradesh	Male

(Established by H.P. State Legislature vide Act No. 14 of 2002)

Newspaper clippings:



Guests from various universities attending a workshop organised at JUIT on Monday.

Workshop on "VLSI Design" inaugurated at JUIT

Excelsior Correspondent

Design" was inaugurated at of Himachal Pradesh. University Waknaghat, Solan here today.

Engineer), Semiconductors, INDIA, who also was the Chief Guest.

Engineer, NXP Semiconductor and Ankur Sangal, Technical Lead, HCL Technologies were the Guest of Honor.

The workshop was organized tors of the event.

at JUIT in collaboration with the Department of Technical Vocational and JAMMU, Mar 4: A week Education, Vocational and long Workshop on "VLSI Industrial Training, Government

There were more than 80 Information Technology, (JUIT) participants from various districts of Himachal Pradesh.

The workshop was inaugurated by Dr. Satish Chandra Sharma, VC, Prof. Ashok Tiwari, DFT Manager (Principal Kumar Gupta, Dean (A&R), Maj Rakesh Bassi, Dean Student Welfare, Prof. P.B.Barman, HoD PMS, Prof Rajiv Kumar, HoD Mayank Singh, Verification ECE and Prof. Dr. Shruti Jain, Associate Dean (I) graced the inaugural of the workshop.

Dr. Harsh Sohal and Dr. Pardeep Garg are the coordina-

जेपी यूनिवर्सिटी में वीएलएसआई डिजाइन पर व्यावहारिक कार्यशाला का आयोजन

हिमाचल दस्तक ब्यूरो 🛮 सोलन

वीएलएसआई डिजाइन पर एक सप्ताह की व्यावहारिक कार्यशाला का उदघाटन मुख्यअतिथि के रूप में डॉ. सतीश चंद्र तिवारी, डीएफटी मैनेजर (प्रिंसिपल डिजाइन इंजीनियर),

🛮 कार्यक्रम में प्रदेश के विभिन्न जिलों से 80 किया। मयंक से अधिक प्रतिभागी शामिल

सिंह, सत्यापन अभियंता. एनएक सपी सेमीक डक्टर

एनएकसपी

सेमीकंडक्टर्स,

इंडिया

और अंकुर संगल, तकनीकी प्रमुख, एचसीएल टेक्नोलॉजी सम्मानित अतिथि थे। प्रो. राजेंद्र कुमार शर्मा वीसी, प्रो. अशोक कुमार गुप्ता डीन (एएंडआर), मेजर राकेश बस्सी, डीन छात्र



कल्याण, प्रो. पीबी बर्मन, एचओडी पीएमएस, प्रोफेसर राजीव कुमार, ईसीई विभागाध्यक्ष और प्रो. डॉ. श्रुति जैन, एसोसिएट डीन (आई) ने कार्यशाला के उद्घाटन की शोभा बढ़ाई। डॉ. हर्ष सोहल और डॉ. प्रदीप गर्ग कार्यक्रम के समन्वयक रहे। कार्यशाला का आयोजन इलेक्टॉनिक्स और संचार इंजीनियरिंग विभाग, जेपी सूचना

प्रौद्योगिकी विश्वविद्यालय (जेयूआईटी) वाकनाघाट, सोलन द्वारा तकनीकी शिक्षा, व्यावसायिक और औद्योगिक प्रशिक्षण विभाग, हिमाचल प्रदेश सरकार के सहयोग से किया गया। कार्यक्रम ४ से ९ मार्च तक जेयुआई वाकनाघाट परिसर में निर्धारित है। इसमें हिमाचल प्रदेश के विभिन्न जिलों से 80 से अधिक प्रतिभागी शामिल हैं।

(Established by H.P. State Legislature vide Act No. 14 of 2002)



Online prints:

- 1. https://himachaltonite.com/himachal/juit-solan-hosts-successful-vlsi-design-workshop/
- 2. https://crazynewsindia.com/breaking-news-flash-news/vlsi-design-workshop-held-at-juit/
- 3. https://shikharnewsindia.com/archives/3319
- 4. https://himachaltonite.com/education/one-week-hands-on-workshop-on-vlsi-design-inaugurated-at-juit-waknaghat-campus/
- https://crazynewsindia.com/breaking-news-flash-news/report-on-one-week-hands-onworkshop-on-vlsi-design-held/