



Sri Venkateswara
College of
Engineering



An Autonomous Institution - Affiliated to Anna University
Pennalur, Sriperumbudur Tk - 602117, Tamil Nadu

Department of Electronics and Communication Engineering

Presents Faculty Development Programme on

"Digital VLSI Design"

Resource persons:

Dr.M.Arun Janarthanan

Senior Staff, Qualcomm, Chennai

Dr.P.Deepa

Asst.Prof/ECE, GCT, Coimbatore

Mr. Sathish

Entuple Technologies

Dr.G.A.Sathish Kumar

Prof./ECE, SVCE

Dr.S.R.Malathi

Asso.Prof/ECE, SVCE

Dr.R.Gayathri

Asso.Prof/ECE, SVCE

Topics:

- Introduction to VLSI Design
- Circuit Characterization
- Sequential Circuit Design
- ASIC and full-custom design flow
- Xilinx FPGA design flow
- Low Power VLSI Design
- Recent Research Challenges & Applications in VLSI design
- VLSI Design using simulation tool
- CAD for VLSI

Convenor:

Dr.S.Muthukumar, HOD-ECE

Coordinators:

Ms.D.Menaka, Asst. Professor/ECE Ms.S.Kalyani, Asst. Professor/ECE

Ms.K.Srividhya, Asst. Professor/ECE Ms.L.Anju, Asst. Professor/ECE

Mr.M.K.Varadarajan, Asst. Professor/ECE

Date: 31/01/2022 - 05/02/2022 Time: 10:00 am - 12:00 noon

Online via Google Meet

Register @ <https://forms.gle/zhH8uEnhDDYwkuMs8>


Contact: Mr.M.K.Varadarajan 9942842979



Sri Venkateswara College of Engineering
Department of Electronics and Communication Engineering
Faculty Development Programme
on
DIGITAL VLSI DESIGN
Schedule

S.no	Date	Topic	Name of Speaker	Designation and contact details
1	31/01/2022	Introduction to VLSI design flow, Circuit Characterization, Combinational Circuit Design	Dr.S.R.Malathi	Professor Dept of ECE,SVCE Ph:9962534922 Email ID:malathiraj@svce.ac.in
2	01/02/2022	Sequential Circuit Design, ASIC and full-custom design flow using simulation tool	Dr.M.Arun Janarthanan	Senior Staff, Qualcomm, Chennai Ph:9611354477 Email ID: arun.janarth@gmail.com
3	02/02/2022	Xilinx FPGA design flow Low Power VLSI Design	Dr.G.A.Sathish Kumar	Professor Dept of ECE,SVCE Ph:8681019661 Email ID:sathish@svce.ac.in@svce.ac.in
		CAD for VLSI Design	Dr.R.Gayathri	Professor Dept of ECE,SVCE Ph:9884811501 Email ID:rgayathri@svce.ac.in@svce.ac.in
4	03/02/2022	Recent Research Challenges and Applications in digital VLSI design	Dr.P.Deepa	Assistant Professor, Dept of ECE, Government College of Technology, Coimbatore Ph:9942912778 Email ID: deepap05@gmail.com
5	04/02/2022	VLSI Design using simulation tool	Mr.Sathish	Email ID: sathish.gnanaraj@entuple.com
6	05/02/2022	VLSI Design using simulation tool	Mr.Sathish	


Signature of Co-ordinator


Signature of HOD/ECE

2022/02/04 12:38:25 PM GMT+5:30	S.P. SIMAGNANA SUBRAMANIA N	spsivagnanam@svce.ac.in	9444123626 SRI VENKATES\ Tamil Nadu	Assistant Professor	YES	YES	YES
2022/02/04 12:38:28 PM GMT+5:30	RANJANA R	ranjanashanker2629@gmail.com	8838780559 PANIMALAR INS TAMIL NADU	Assistant Professor	YES	YES	YES
2022/02/04 12:38:28 PM GMT+5:30	JALAJA S	jalajasampath@gmail.com	9841666699 VelTech High Tec Tamil Nadu	Assistant Professor	YES	YES	YES
2022/02/04 12:38:31 PM GMT+5:30	R.INDIRA	indirasaravanan2021@gmail.com	9791096472 Panimalar Insritu Tamilnadu	Assistant Professor	YES	YES	YES
2022/02/04 12:38:31 PM GMT+5:30	SIVASARAVAN ABABU.S	sivasaravanabu@velhightech.com	9944700708 VELTECH HIGH TAMIL NADU	Assistant Professor	YES	YES	YES
2022/02/04 12:38:37 PM GMT+5:30	V.JEYA RAMYA	jeyaramyavv@gmail.com	9952994081 Panimalar Insritu Tamil Nadu	Associate Professor	YES	YES	YES
2022/02/04 12:38:41 PM GMT+5:30	B. Sarala	sarala@svce.ac.in	9841617115 SVCE Tamilnadu	Assistant Professor	YES	YES	YES
2022/02/04 12:38:41 PM GMT+5:30	Dr.I. Poonguzhali	kuzhalirec@gmail.com	8903468992 Panimalar Insritu Tamilnadu	Associate Professor	YES	YES	YES
2022/02/04 12:38:45 PM GMT+5:30	Yogaraj A	yogaraj@velhightech.com	9488039645 Vel High tech Tamilnadu	Assistant Professor	YES	YES	YES
2022/02/04 12:38:45 PM GMT+5:30	Dr.Anitha G	anithag.sse@saveetha.com	9952286913 Saveetha School Tamilnadu	Assistant Professor	YES	YES	YES
2022/02/04 12:38:46 PM GMT+5:30	R.REVATHI	REVATHIESEC@GMAIL.COM	8610508982 SURYA GROUP TAMIL NADU	Assistant Professor	YES	YES	YES
2022/02/04 12:38:48 PM GMT+5:30	Ms. R. Breesha	breesha@velhightech.com	8248307711 Vel Tech High Te Tamilnadu	Assistant Professor	YES	YES	YES
2022/02/04 12:38:48 PM GMT+5:30	V.Gomathi	gomathi@saveetha.ac.in	9941004561 Saveetha Engine Tamil Nadu	Assistant Professor	YES	YES	YES

Timestamp	Name of the Participant	Email address	Mobile number	Name of the Insti Tamil Nadu	Mention the state (Eg.)	Designation	Was Audio and Video Quality Good	Were all your questions clearly answered by the resource person?	Do You look forward to another session by the experts?
2022/02/04 12:37:24 PM GMT+5:30	Joyanto Roychoudhary	joyanto.roychoudhary296@msit.edu.in	8334923046	Meghnad Saha Ii West Bengal		Assistant Professor	YES	YES	YES
2022/02/04 12:37:30 PM GMT+5:30	P. ARUL	arulp@svce.ac.in	9884372131	SRIVENKATESH TAMIL NADU		Assistant Professor	YES	YES	YES
2022/02/04 12:37:46 PM GMT+5:30	S.Radhika	sradhika@svce.ac.in	8489828970	SVCE	Tamil Nadu (Sou	Assistant Professor	NO	YES	YES
2022/02/04 12:37:56 PM GMT+5:30	J NAVARAJAN	navarajan381@gmail.com	9884698433	PANIMALAR INS TAMIL NADU		Associate Professor	YES	YES	YES
2022/02/04 12:38:00 PM GMT+5:30	Shruti	shruti1526@gmail.com	8123800794	FETW Shambas	Karnataka	Assistant Professor	YES	YES	YES
2022/02/04 12:38:03 PM GMT+5:30	Chandaboina Pavan Kumar	chandaboina vankumar@ail.com	9494994492	Jyothishmathi ins	Telangana	Assistant Professor	YES	YES	YES
2022/02/04 12:38:04 PM GMT+5:30	ARUNKUMAR K	arunkumar@saveetha.ac.in	9600981800	SAVEETHA ENG TAMILNADU		Assistant Professor	YES	YES	YES
2022/02/04 12:38:08 PM GMT+5:30	M. Vidya	mvidya@svce.ac.in	9840150933	Sri Venkateswar	Tamil Nadu (Sou	Assistant Professor	YES	YES	YES
2022/02/04 12:38:14 PM GMT+5:30	GURUPANDI D	gurupandi85@gmail.com	9944068163	PANIMALAR INS TAMILNADU		Assistant Professor	YES	YES	YES
2022/02/04 12:38:15 PM GMT+5:30	S. M. Mehzabeen	mehzabeen@svce.ac.in	7502357937	SVCE	Tamil Nadu	Assistant Professor	YES	YES	YES
2022/02/04 12:38:16 PM GMT+5:30	MANOCHANDA R T	manochanda.be@gmail.com	7373227652	Surya Group of it	Tamilnadu	Assistant Professor	YES	YES	YES

2022/02/04 12: 47:27 PM GMT+5:30	VEERARAGAV AN P	veeraragavan. ci@gmail.com	9159683010	KINGS ENGINEER Tamil Nadu	Assistant Professor	YES	YES	YES
2022/02/04 12: 47:47 PM GMT+5:30	Shofia priyadharshini.D	shofiapriya@vel hightech.com	9566085960	Veltech hightech TamilNadu	Assistant Professor	YES	YES	YES
2022/02/04 12: 48:00 PM GMT+5:30	Dr.S.Lekashri	lekashri@kings edu.ac.in	8807936775	Kings Engineerin Tamil Nadu	Assistant Professor	YES	YES	YES
2022/02/04 12: 50:17 PM GMT+5:30	A.Mary joy kinol	alphonse. kinol@gmail. com	8825880412	Saveetha School Tamil nadu	Associate Professor	YES	YES	YES
2022/02/04 12: 50:44 PM GMT+5:30	Sarala A	sarala@kingsed u.ac.in	9894506673	Kings engineerin Tamilnadu	Assistant Professor	YES	YES	YES
2022/02/04 12: 51:47 PM GMT+5:30	TAMILSELVI T	tthamizhselvi2 @gmail.com	8015739129	Nadar Saraswath Tamil Nadu	Assistant Professor	YES	YES	YES
2022/02/04 12: 54:33 PM GMT+5:30	Dr.A. SELVARANI	selvaraninacc20 21@gmail.com	9884609297	PANIMALAR INS TAMIL NADU	Professor	YES	YES	YES
2022/02/04 12: 58:49 PM GMT+5:30	M.Rathi	Rathi@kingsed u.ac.in	9444349438	King Engineering Tamilnadu	Assistant Professor	YES	YES	YES
2022/02/04 1: 29:17 PM GMT+5:30	S.Manoj Kumar	mano. engrr@gmail. com	7904493880	Mahendra Colleg Tamil Nadu	Assistant Professor	YES	YES	YES
2022/02/04 1: 48:44 PM GMT+5:30	THANGAM C	thangamc81@g mail.com	9786143717	St.Moithr Theres Tamil Nadu	Assistant Professor	YES	YES	YES
2022/02/04 2: 08:17 PM GMT+5:30	IPPALAPALLI VENU	venu. swayam@gmail .com	9059078035	SRI INDU INSTI TELANGANA	Assistant Professor	YES	YES	YES

D. Rathi



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SRI VENKATESWARA COLLEGE OF ENGINEERING

FEEDBACK FROM THE SPEAKER - GUEST LECTURE

DEPARTMENT : Electronics and Communication Engineering

Name of the Speaker	: Dr.Arun Janarthanan
Designation	: Senior Staff,
Institution/University/Organisation	: Qualcomm,Chennai
Mobile / E-mail	: arun.janarth@gmail.com
Title of the Lecture	: Sequential Circuit Design, ASIC and full-custom design flow using simulation tool
Date	: 01/02/2022
Time	: 10 am to 12 noon
Venue	: Online (Google meet ID: https://meet.google.com/zus-nort-prc)
Comments by the Speaker	: The session started right on time, with full participants, slowly as they began interacting, we developed a curriculum for teaching VLSI design together, showcasing 10+ simulation tools, hands-on, and building the slide deck along the way
Suggestions for improvement	: None – this is a great start, we can prep work on the content to the students early, so they will have more questions/interaction as well,next time
Signature of the Speaker	: Arun Janarthanan


Signature of Coordinator


Signature of HOD

Sri Venkateswara College of Engineering
Department of ECE

Report on 6 days online FDP on Digital VLSI Design

31st January – 05th February, 2022

Convenor: Dr.S.Muthukumar, HoD/ECE

Coordinators

Ms.D.Menaka , AP/ECE

Ms.K.Srividhya , AP/ECE

Ms.S.Kalyani , AP/ECE

Ms.L.Anju , AP/ECE

Mr.M.K.Varadarajan , AP/ECE

6 Days Online Faculty Development Programme

on

Digital VLSI Design

31st January – 05th February, 2022

Agenda details: Session timing: 10 am -12 noon

I. Dr. S.R.Malathi

Associate Professor/ECE,
Sri Venkateswara College of Engineering, Sriperumbudur
Introduction to VLSI design flow, Circuit Characterization, Combinational
Circuit Design
31/01/2022



II. Dr. Arun Janarthanan

Senior Staff, Qualcomm, Chennai.
Sequential Circuit Design, ASIC and full-custom design flow using
simulation tool”
01/02/2022



III. Dr. G.A.Sathish Kumar

Professor/ECE,
Sri Venkateswara College of Engineering, Sriperumbudur
Xilinx FPGA design flow, Low Power VLSI Design
02/02/2022



IV. Dr. R. Gayathri

Assistant Professor/ECE,
Sri Venkateswara College of Engineering, Sriperumbudur
CAD for VLSI Design
02/02/2022



V. Dr. P. Deepa

Assistant Professor/ECE,
Government College of Technology, Coimbatore
Recent Research Challenges and Applications in digital VLSI design
03-02-2022



VI. Ms.Saraswathi

Entuple Technologies

VLSI Design using simulation tool

04-02-2022


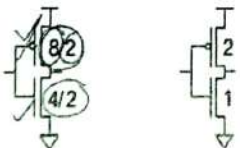
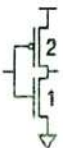



Session I : Introduction to VLSI design flow, Circuit Characterization, Combinational Circuit Design

Dr.S.R.Malathi gave an insight into the basics of Digital VLSI Design as understandable to a beginner. She went in depth on VLSI design flow and elaborated on circuit characterization and explained the behavioral functionalities. The session also dealt with the Combinational circuit design aspects.

Inverter Layout

- Transistor dimensions specified as Width / Length
 - Minimum size is $4\lambda / 2\lambda$, sometimes called 1 unit
 - In $f = 0.6 \mu\text{m}$ process, this is $1.2 \mu\text{m}$ wide, $0.6 \mu\text{m}$ long

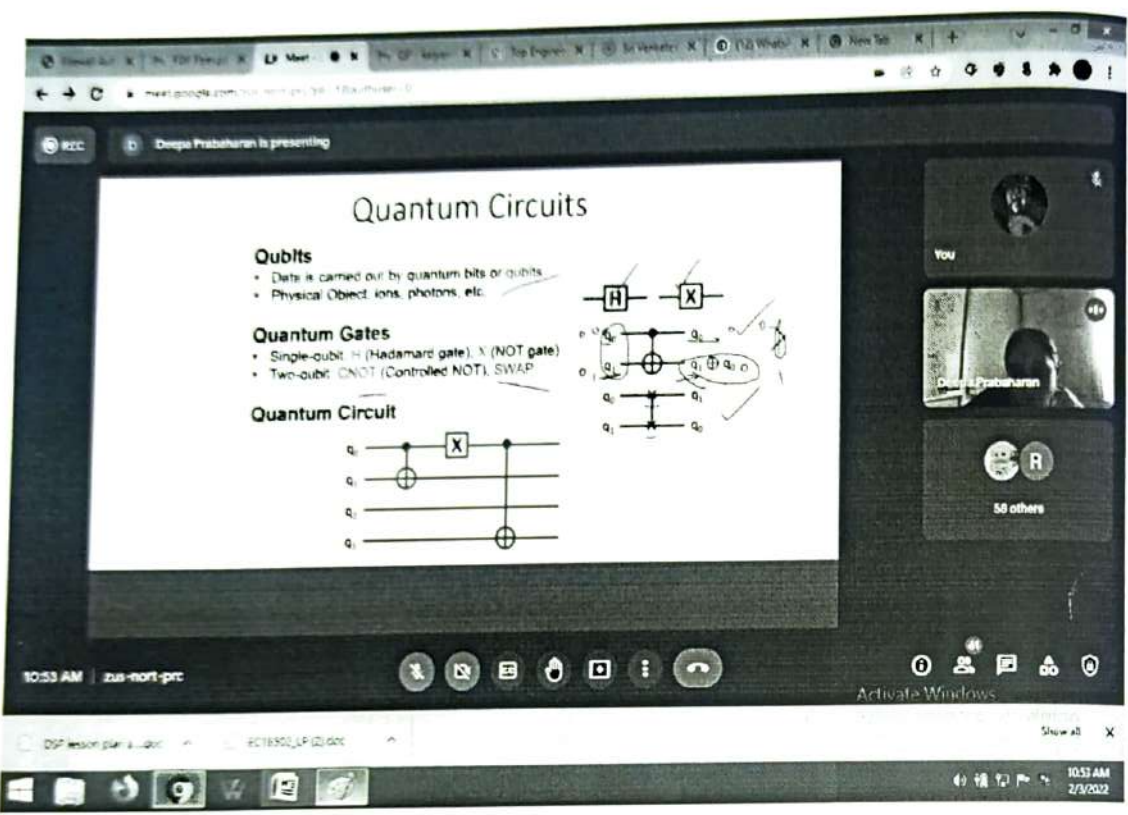


MALATHI S R.Cse

CMOS VLSI Design 4th Ed
by S. R. Malathi

Session II: Sequential Circuit Design, ASIC and full-custom design flow using simulation tool

Dr.Arun Janarthanan gave an insight on the Sequential Circuit design. He elaborated upon ASIC and full custom design. He opened up various simulation tools and discussed the significance of the tool and the design methodology using the tool. He showed simulation of the design and compared the outcomes.



Session V & VI – VLSI Design using simulation tool

The concluding sessions were handled by Industrial experts from Entuple Technologies. Ms.Sarawa, Design Engineer and Mr.Mamidi Nagaraju, Design Engineer gave a clear insight on the significance usage and methodology of working with simulators and simulation performance of complicated designs.





Certificate of Participation

This is to certify that _____ of _____ has participated in the six days FDP on “Digital VLSI Design” organized by the Department of Electronics and Communication Engineering in association with Entuple Technologies from 31st Jan 2022 to 5th Feb 2022.

M.K.Varadarajan
CO-ORDINATOR



DR.S.MUTHUKUMAR
HOD-ECE



Certificate of Appreciation

This is to certify that _____ of _____ from department of Electronics and Communication Engineering has organized the six days FDP on “Digital VLSI Design” in association with Entuple Technologies from 31st Jan 2022 to 5th Feb 2022.

M.K.Varadarajan
CO-ORDINATOR



DR.S.MUTHUKUMAR
HOD-ECE