



ISTE-GTU Sponsored One Week Faculty Development Program

**“Research Opportunities in VLSI and Signal
Processing”**

11th -16th February, 2019



Organized By

Electronics and Communication Department

Vishwakarma Government Engineering College

Near Visat three Roads, Visat Gandhinagar Highway, Chandkheda, Ahmedabad

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1. Objective of Faculty Development Program (FDP)

There are significant developments in the field of VLSI and Signal Processing. Tremendous growth in the field of VLSI is contributed by the continuous downscaling of MOSFET device. Channel length of MOSFET device is scaled down to below 20 nm. It has resulted into significant improvement in the performance of MOSFET based circuits in terms of speed, low power technology, portability and compactness, introduction of advanced features in electronic systems, etc. The down scaling of MOSFET technology is complemented by accurate and compact MOSFET model development, novel and efficient circuit design techniques, efficient CAD tools, fabrication technology, investigation and use of new materials, interconnect technology, etc.

Signal processing has remained a very interesting and wide domain of research since quite long. Researchers continuously come out with efficient techniques for various signal processing application such as Estimation, Filtering, Image processing, Speech processing, Video processing, etc.

This one week research oriented faculty development programme on “Research opportunities in VLSI and Signal Processing” is aimed to provide exposure to interested candidates willing to pursue their career in these domains.

This FDP is mainly designed for the interested faculties from EC and other related allied braches to provide exposure to recent development in the field of VLSI and Signal processing. This programme will provide a window to current research problems in the field of VLSI and Signal processing.

1.1 Inaugural Ceremony

In the auspicious presence of Dr. Navin Sheth (Vice-Chancellor – GTU), the inaugural ceremony of FDP was arranged in A Block auditorium of VGEC – Chandkheda. It was also attended by Shri. Damodara M S, Business Manager, Entuple Technologies, Prof. S. P. Sapre, I/C Principal, VGEC Chandkheda, Dr. R. A. Thakker, HoD - EC and Dr. N. M. Patel, Associate Professor, Chemical Department and Dr. A. R. Patel, Associate Professor – Mathematics ,other faculties of college and participants of FDP.

Dr. R. A. Thakkar, Coordinator of this FDP had given the opening remarks, briefed about the course contents, objective of the training program and shared his views on Research Opportunities in VLSI and Signal Processing. Dr. Navin Sheth (Vice-Chancellor – GTU) has appreciated the efforts of coordinator for organizing such kind of FDP.

One Week
ISTE-GTU Sponsored Faculty
Development Programme
on
“Research Opportunities in
VLSI and Signal Processing”
Date: 11/02/2019 to
16/02/2019



Organized by

EC Department, Vishwakarma
Government Engineering College,
Chandkheda, Ahmedabad

Objective: There are significant developments in the field of VLSI and Signal Processing.

Tremendous growth in the field of VLSI is contributed by the continuous down-scaling of MOSFET device. Channel length of MOSFET device is scaled down to below 20 nm. It has resulted into significant improvement in the performance of MOSFET based circuits in terms of speed, low power technology, portability and compactness, introduction of advanced features in electronic systems, etc. The down scaling of MOSFET technology is complemented by accurate and compact MOSFET model development, novel and efficient circuit design techniques, efficient CAD tools, fabrication technology, investigation and use of new materials, interconnect technology, etc.

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opportunities in VLSI and Signal Processing” is aimed to provide exposure to interested candidates willing to pursue their career in these domains.

This FDP is mainly designed for the interested faculties from EC and other related allied braches to provide exposure to recent development in the field of VLSI and Signal processing. This programme will provide a window to current research problems in the field of VLSI and Signal processing.

Eligibility: Faculty members of Electronics and communication, Computer and other allied disciplines of Degree/ Diploma Engineering Institutes are invited to attend this programme.

Course Fee: There is a fee of 500/- Rs. for the faculty of Degree/Diploma Engineering Institutes. Participant must become a member of ISTE at the time of registration, if not. Number of participants is limited to 40. Participants are requested to manage accommodation. Please send a Demand Draft in favor of “**Principal, VGEC Chandkheda.**”

Registration Link:

<https://docs.google.com/forms/d/e/1FAIpQLSf-UKoFB227a8MeMuPJpi9y7c3o33WI8ZTSfR20z3iE3Nw-iw/viewform>

About VGEC – Chandkheda:

Vishwakarma Government Engineering College – Chandkheda is established in the year 1994. It offers degree engineering courses in nine different disciplines. Departments of Electronics and Communication, and Chemical Engineering are offering two years PG Programme. The specialization offered by EC Department for PG course is Signal Processing and VLSI Technology. This Institute is considered among few best Engineering Institutes of the state. More than 125 Electronics Engineers are passing out every year from this Institute.

This Institute is located in Chandkheda which is highly developing area. The campus is presently shared with IIT Gandhinagar and GTU.

Speakers: Experts from academic and research Institutes such as various IITs and NITs, DAICT, Nirma, SAC, IPR, etc. will be sharing their valuable knowledge with the participants during this one week programme. Experts from Industries will

also be invited to share their knowledge and practical experience with the participants. The hands-on session will provide exposure to practical implementation.

Application Form

One Week FDP on “Research Opportunities in VLSI and Signal Processing”

Duration: 11/02/2019 to 16/02/2019

Name:**Designation:****Highest Qualification:****Specialization:****Institute’s Name:****Address:****Experience:**

1. **Teaching**
2. **Industry:**

Contact Details:

1. **Phone No.:**
2. **Email Id:**

Demand Draft Details:

Number: **Date:**

Amount: **Drawn on:**

Sign of the participant**Certificate**

This is to certify that Mr./Ms./Mrs _____ is working as a/an _____ in _____ Department of this Institute. He/She will be permitted to attend this one week oriented training programme, if selected.

Authorized signatory

(Principal of the sponsoring Institute)

Stamp and Seal of the Institute

Principal: Dr. R. K. Gajjar

CoCordinators:

1. Dr. R. A. Thakker, M:
hod_ec@vgecg.ac.in,
9426333130,
Professor – EC Dept., VGEC – Chandkheda
2. Dr. Milind Shah, M:
mssvgecg@gmail.com
7874563242, Associate Professor – EC, VGEC – Chandkheda

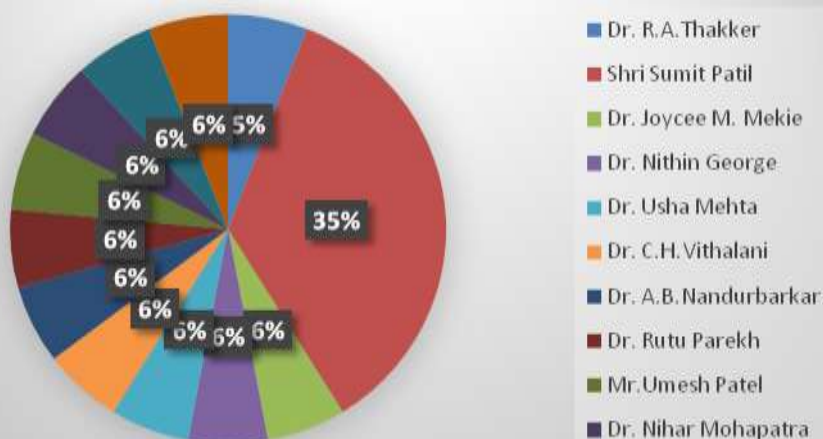
3 Schedule of FDP

DATE	TIME	CONTENT	SPEAKER
11/02/2019	09:00 TO 10:30 A.M.	Inauguration	Chief Guest: Dr. Navin Sheth VC, GTU
	10:30 TO 12:30 P.M.	FinFET Based Circuit Design	Dr. R.A.Thakker VGEC Chandkheda
	12:30 TO 01:30 P.M.	LUNCH BREAK	
	01:30 TO 03:30 P.M.	EDA tool flow	Shri. Sumit Patil Expert from CADENCE
	03:30 TO 03:45 P.M.	TEA BREAK	
	03:45 TO 05:45 P.M.	MOS Fundamentals & CMOS Circuit Design	Shri. Sumit Patil Expert from CADENCE
12/02/2019	10:30 TO 12:30 P.M.	Device Characterization for Analog Model Parameters	Shri. Sumit Patil Expert from CADENCE
	12:30 TO 01:30 P.M.	LUNCH BREAK	
	01:30 TO 03:30 P.M.	Design and simulation of CS Amplifier	Shri. Sumit Patil Expert from CADENCE
	03:30 TO 03:45 P.M.	TEA BREAK	
	03:45 TO 05:45 P.M.	CMOS device technologies for circuit design – Past , Present and Future	Dr. Nihar Mohapatra IIT, Gn
13/02/2019	10:30 TO 12:30 P.M.	Approximate Memories for Multimedia Applications	Dr. Joycee M. Mekie IIT, Gn
	12:30 TO 01:30 P.M.	LUNCH BREAK	
	01:30 TO 03:30 P.M.	ASIC design flow	Shri. Sumit Patil Expert from CADENCE
	03:30 TO 03:45 P.M.	TEA BREAK	
	03:45 TO 05:45 P.M.	Synthesis of HDL Designs using RTL Compiler	Shri. Sumit Patil Expert from CADENCE
14/02/2019	10:30 TO 12:30 P.M.	Adaptive Signal Processing	Dr. Nithin George IIT, Gn
	12:30 TO 01:30 P.M.	LUNCH BREAK	
	01:30 TO 03:30 P.M.	Machine Learning	Dr. M.V.Joshi DAICT
	03:30 TO 03:45 P.M.	TEA BREAK	
	03:45 TO 05:45 P.M.	Nano-Electronics	Dr. Rutu Parekh DAICT
15/02/2019	10:30 TO 12:30 P.M.	Overview of Testing & Verification of VLSI Design	Dr. Usha Mehta NIRMA INST.
	12:30 TO 01:30 P.M.	LUNCH BREAK	
	01:30 TO 03:30 P.M.	VLSI Signal Processing System	Dr. N.P.Gajjar NIRMA INST.
	03:30 TO 03:45 P.M.	TEA BREAK	
	03:45 TO 05:45 P.M.	Speech Signal Processing	Dr. A.B.Nandurbarkar LDCE
16/02/2019	10:00 TO 11:00 A.M.	ART OF LIVING	Dr. Nitin Padhiyar IIT Gn
	11:00 TO 12:30 P.M.	Signal Analysis Using Wavelet Transform	Dr. C.H.Vithalani GEC-Rajkot
	12:30 TO 01:30 P.M.	LUNCH BREAK	
	01:30 TO 03:00 P.M.	DSP based industry applications	Mr.Umesh Patel CEO-Arastu Systems
	03:00 TO 03:30 P.M.	TEST AND FEEDBACK	
	03:30 TO 03:45 P.M.	TEA BREAK	
	03:45 TO 05:30 P.M.	Valedictory Function	Chief Guest: Shri.K.M.Bhavsar CHAIRMAN, ISTE Guj. Section

4. Contribution of resource persons in FDP:

Sr. No.	Name of Resource Person	No. of Sessions taken	Whether from Outside/from the Institute.	Total Sessions	%
1	Dr. R.A.Thakker	1	From the Institute.	1	5.88
2	Shri Damodara M S Shri Sumit Patil Mr. Swapnil Moon (Hands on session from Industry Persons)	6	Outside the Institute.		
3	Dr. Joycee M. Mekie	1	Outside the Institute.		
4	Dr. Nithin George	1	Outside the Institute.		
5	Dr. Usha Mehta	1	Outside the Institute.		
6	Dr. C.H.Vithalani	1	Outside the Institute.		
7	Dr. A.B.Nandurbarkar	1	Outside the Institute.		
8	Dr. Rutu Parekh	1	Outside the Institute.		
9	Mr.Umesh Patel (Industry Person)	1	Outside the Institute.		
10	Dr. Nihar Mohapatra	1	Outside the Institute.		
11	Dr. N.P.Gajjar	1	Outside the Institute.		
12	Dr. M.V.Joshi	1	Outside the Institute.	16	94.12
	TOTAL	17		17	100

Resource Persons contributed in FDP



5. About Resource persons:

(a) Dr. Rajesh A.Thakker

He is a Professor and Head of Department- Electronics & Communication Engineering at VGEC-Chandkheda. He has completed his PhD from IIT Bombay. He has more than 50 papers published in reputed journals and conferences both National and International. He has delivered more than 20 Expert Talks in various Workshops, FDP, STTP and Seminars.

He is a life member in ISTE. He has guided about 25 M.Tech dissertations and 4 PhDs. He has 2 International Patents and 5 Indian Patents registered under his name.



(b) Dr. Nihar Mohapatra

He is an Associate Professor at IIT Gandhinagar. He has completed his PhD from IIT Bombay in 2003. His Research Interests are Nano-scale devices physics, Device and circuit interaction in advanced devices, Reliability of semiconductor devices, Compact Modeling, Computational Lithography and Analog IC Design. He has published numerous papers in reputed journals and conferences.



(c) Dr. Joycee M. Mekie

She is an Assistant Professor at IIT Gandhinagar. She has completed her PhD from IIT Bombay in 2009. Her Research Interests are VLSI Design and Asynchronous circuit design. She has published numerous papers in reputed journals and conferences.



(d) Dr. Nithin George

He is an Associate Professor at IIT Gandhinagar. He has completed his PhD from IIT Bhuvaneshwar in 2012. His Research Interests are Active Noise Control, Adaptive Signal Processing, Hearing Aid Design and Soft Computing. He has published numerous papers in reputed journals and conferences.



(e) Dr. Usha Mehta

Prof. Usha Mehta is currently a Professor at Institute of Technology, Nirma University, Ahmedabad. She received her Ph. D. degree in VLSI Design in 2011. She has one patent on her credit. She has been the Principle Investigator for research projects of ISRO and GUJCOST. RHBD Chip developed by her and her teammates for ISRO has been fabricated at SCL and in use by Space Application Centre.



She has authored one book and over 55 research paper in area of VLSI Design and Testing. She has delivered large number of technical talks at various conferences and workshops. She has guided six Ph.D. students.

(f) Dr. Nagendra Gajjar

He is a Professor EC Engg & PG Coordinator (Embedded Systems) at Institute of Technology, Nirma University. He has a vast teaching experience of about 30 years. His areas of specialization are Embedded Systems, VLSI Design, Digital Signal Processing, and Computer Architecture.



He has published more than 50 National and International Papers. He has guided more than 30 M.Tech Projects and guiding Ph.D Students.

(g) Dr. Arun Bhalchandrabhai Nandurbarkar

Dr. Arun Bhalchandrabhai Nandurbarkar is serving as Associate Professor in Electronics & Communication Engg. department at L.D. College of Engg., Ahmedabad. He is having teaching experience of over 23 years. He obtained PhD from M.S. University of Vadodara in 2015. His topic of research for PhD was “Waveform Coding Techniques Based on Vector Quantization”. His areas of interest are speech signal processing, image processing, RF waves, Antenna and VLSI. He has published more than 20 research papers in national and international conferences and journals.



(g) Shri. Umesh Patel

Umesh Patel is the Founder and CEO for Arastu Systems, a vision-oriented product engineering company. He is passionate engineer by heart. He has completed his graduation from MS University, Vadodara and master's from California State University. Prior to founding Arastu Systems, Umesh has contributed to many successful Silicon Valley startups since last 22 years, where he engineered and managed multiple products to achieve optimized performance and also delivered a well-balanced hardware/software/firmware SOC solutions to gain market acceptance. Currently, his company has been Managing & Developing Digital Systems using ASIC/FPGAs, Embedded, Application software for the various market applications.

(i) Dr. M.V. Joshi

He is a Professor at DAIICT Gandhinagar. He has completed his PhD from IIT Bombay. His Research Interests are Deep Learning, Computer Vision & Image Processing, Image Super-resolution, Multi-resolution Fusion, 3D estimation, Optimization techniques, Statistical methods, Computer Vision,



Machine learning, Image processing, Super-Resolution, Restoration, Signal Processing and Digital Communication. He has published numerous papers in reputed journals and conferences.

(j) Dr. Rutu Parekh

She is a Professor at DAIICT Gandhinagar. She has completed her PhD (Electrical Engineering), Sherbrooke University, Canada. Her Research interests are Develop models, codesign methodology and co simulation of hybrid circuits of emerging nanoelectronic devices with CMOS technology, low voltage low power circuits, Phase Change Memory, MEMS devices and embedded systems. She has published numerous papers in reputed journals and conferences.



(k) Dr. Chandulal Vithalani

He is a Professor & Head of E.C. Engineering at GEC Rajkot. He has completed his Ph.D from Gujarat University in 2006. He has coordinated many workshops, seminars and training. He has 31 publications in various reputed conferences and journals. He has guided many Ph.D students.



6. Details of participants:

Sr. No.	Name	Institute	ISTE LM No.	Phone No.	Email Id
1	JESIKA NIRANG KOTHARI	AVPTI, Rajkot	LM 115010	9427060734	jesikaludec@gmail.com
2	TEJAS DIGESHKUMAR DARJI	GEC, Bharuch	New Registration	8460065738	darji.tejas1988@gmail.com
3	DEEPALI HARKISHANBHAI SHAH	GEC, Gandhinagar	LM 110406	9427070927	shahdeepali2410@yahoo.com
4	SUHASBHAI HARIBHAI PATEL	GEC, Gandhinagar	New Registration	9909428845	suhas048@gmail.com
5	ALKESHKUMAR B. VAGHELA	GEC, Godhra	New Registration	9408302335	alkeshvaghe1@gmail.com
6	SANJAYKUMAR DAHYALAL JOSHI	GEC, Patan	LM 35982	8141409541	sdjoshi_74@yahoo.co.in
7	DIPESH HARSHADBHAI MAKWANA	GEC, Rajkot	New Registration	9227251812	dips164@gmail.com
8	GIREEJA DINESHCHANDRA AMIN	GGP, Ahmedabad	LM 54539	9408785849	gireeja.amin@gmail.com
9	JAINAMKUMAR S SHAH	GP, Ahmedabad	New Registration	9428291742	shahjainamic@yahoo.com
10	LOPA JILPESH VORA	GP, Ahmedabad	LM 69263	9408803778	lopa_67@yahoo.co.in
11	NAIMESH B. MEHTA	GP, Ahmedabad	LM 94445	9428355370	naimesh1968@gmail.com
12	KSHAMA RAJESH SHAH	GP, Gandhinagar	LM 95155	9909426100	kshamas@rediffmail.com
13	HARSHAL KANAIYALAL PRAJAPATI	GP, Gandhinagar	LM 95977	9228843667	harshal_ec@rediffmail.com
14	ANKIT KIRITKUMAR SHAH	LDCE, Ahmedabad	New Registration	9408572742	ankitshah.ic@ldce.ac.in
15	ARUNKUMAR B NANDURBARKAR	LDCE, Ahmedabad	New Registration	9929381501	arunnandurbarkar@ldce.ac.in
16	SHAKTISINH N GOHIL	LEC, Morbi	New Registration	9924823423	shaktipower1210@gmail.com
17	TEJAS VINODCHANDRA SHAH	SSEC, Bhavnagar	New Registration	9925983717	tvshah2000@yahoo.com
18	ALPESH HARISHKUMAR DAFADA	VGEC, Chandkheda	New Registration	9408481646	sadafda@gmail.com
19	MILIND S. SHAH	VGEC, Chandkheda	LM 12393	7874563242	mssvgec@gmail.com
20	DAVE CHINTAN BHARATBHAI	VGEC, Chandkheda	LM 123938	9726030460	cb_dave@gtu.edu.in
21	KETANKUMAR N.PATEL	VGEC, Chandkheda	LM 123937	9228591608	kn_patel@gtu.edu.in
22	ASARI GAURAVKUMAR RAVINDRA	VGEC, Chandkheda	LM 123491	9723085547	grasari.vgec@gmail.com
23	FATAK URVISHA NANDU	VGEC, Chandkheda	LM 126933	9033870916	urvishafatak@gmail.com
24	PATEL ALPESHKUMAR M	VGEC, Chandkheda	LM 126936	9428730662	am_patel@gtu.edu.in
25	NAIK JAGRUTI KETAN	VGEC, Chandkheda	LM 126932	9824010154	jaagrutiknaik9@gmail.com
26	PATEL RAHULKUMAR M	VGEC, Chandkheda	LM 43140	7359463392	er.rahulmpatel@gmail.com
27	GANESHAN NAVIN	VGEC, Chandkheda	LM 55801	8866475457	navin.ganeshan@gmail.com
28	JAGRUTI MAKWANA	VGEC, Chandkheda	LM 49723	9825613616	jaagrut_i_ec@yahoo.com

7 Day-wise attendance reports

All 28 participants are present for all 6 days. Their attendance report is as follow.

1. Attendance sheet of 11/2/2019 (Page -1)

List of Participants for FDP on "Research Opportunities in VLSI and Signal Processing" organized by EC Department, VGEC, Chandkheda Sponsored by GTU and ISTE

Date: 11/2/2019

Sr. No.	Name	Institute	Session 1 Sign	Session 2 Sign	Session 3 Sign
1	JESIKA NIRANG KOTHARI	AVPTI, Rajkot	<i>my</i>	<i>my</i>	<i>my</i>
2	MANILAL B KALARIYA	AVPTI, Rajkot	← AB →		
3	TEJAS DIGESHKUMAR DARJI	GEC, Bharuch	<i>Tejas</i>	<i>Tejas</i>	<i>Tejas</i>
4	DEEPALI HARKISHANBHAI SHAH	GEC, Gandhinagar	<i>DHshal</i>	<i>DHshal</i>	<i>DHshal</i>
5	SUHASBHAI HARIBHAI PATEL	GEC, Gandhinagar	<i>SP</i>	<i>SP</i>	<i>SP</i>
6	ALKESH BAPUBHAI VAGHELA	GEC, Godhra	<i>Vaghela</i>	<i>Vaghela</i>	<i>Vaghela</i>
7	SANJAY DASHYALAL JOSHI	GEC, Patan	<i>S.</i>	<i>S.</i>	<i>S.</i>
8	DIPESH HARSHADBHAI MAKWANA	GEC, Rajkot	<i>D.</i>	<i>D.</i>	<i>D.</i>
9	GIREEJA DINESHCHANDRA AMIN	GGP, Ahmedabad	<i>G</i>	<i>G</i>	<i>G</i>
10	JAINAMKUMAR S SHAH	GP, Ahmedabad	<i>J</i>	<i>J</i>	<i>J</i>
11	LOPA JILPESH VORA	GP, Ahmedabad	<i>L</i>	<i>L</i>	<i>L</i>
12	NAIMESH BHUPENDRABHAI MAHETA	GP, Ahmedabad	<i>NB</i>	<i>NB</i>	<i>NB</i>
13	KSHAMA RAJESH SHAH	GP, Gandhinagar	<i>Kshama</i>	<i>Kshama</i>	<i>Kshama</i>
14	HARSHAL KANAITYALAL PRAJAPATI	GP, Gandhinagar	<i>Harshal</i>	<i>Harshal</i>	<i>Harshal</i>
15	JASMINE JASVANTLAL KARAGTHALA	GP, Himatnagar	← AB →		
16	PRATIKKUMAR LIMJIBHAI GAMIT	GP, Jamnagar	← AB →		
17	ANKIT KIRITKUMAR SHAH	LDCE, Ahmedabad	<i>Ankit</i>	<i>Ankit</i>	<i>Ankit</i>
18	ARUNKUMAR B NANDURBARKAR	LDCE, Ahmedabad	<i>A</i>	<i>A</i>	<i>A</i>
19	SHAKTISINH N GOHIL	LEC, Morbi	<i>SM</i>	<i>SM</i>	<i>SM</i>
20	TEJAS VINODCHANDRA SHAH	SSEC, Bhavnagar	<i>TJ</i>	<i>TJ</i>	<i>TJ</i>
21	ALPESH HARISHKUMAR DAFADA	VGEC, Chandkheda	<i>AHD</i>	<i>AHD</i>	<i>AHD</i>
22	MILIND S. SHAH	VGEC, Chandkheda	<i>my</i>	<i>my</i>	<i>my</i>
23	DAVE CHINTAN BHARATBHAI	VGEC, Chandkheda	<i>my</i>	<i>my</i>	<i>my</i>

2. Attendance sheet of 11/2/2019 (Page -2)

List of Participants for FDP on "Research Opportunities in VLSI and Signal Processing" organized by EC Department,
VGEC, Chandkheda Sponsored by GTU and ISTE

Date: 11/2/2019

Sr. No.	Name	Institute	Session 1 Sign	Session 2 Sign	Session 3 Sign
24	KETANKUMAR N. PATEL	VGEC, Chandkheda			
25	ASARI GAURAVKUMAR RAVINDRA	VGEC, Chandkheda			
26	FATAK URVISHA NANDU	VGEC, Chandkheda			
27	PATEL ALPESHKUMAR M	VGEC, Chandkheda			
28	NAIK JAGRUTI KETAN	VGEC, Chandkheda			
29	PATEL RAHULKUMAR M	VGEC, Chandkheda	RMP	RMP	RMP
30	GANESHAN NAVIN	VGEC, Chandkheda			
31	JAGRUTI MAKWANA	VGEC, Chandkheda	JJM	JJM	JJM
32					
33					
34					
35					
36					
37					
38					
39					
40					

11/2/19

3. Attendance sheet of 12/2/2019 (Page -1)

List of Participants for FDP on "Research Opportunities in VLSI and Signal Processing" organized by EC Department,
VGEC, Chandkheda Sponsored by GTU and ISTE

Date: 12/2/2019

Sr. No.	Name	Institute	Session 1 Sign	Session 2 Sign	Session 3 Sign
1	JESIKA NIRANG KOTHARI	AVPTI, Rajkot	<i>ony</i>	<i>ony</i>	<i>ony</i>
2	MANILAL B KALARIYA	AVPTI, Rajkot	←	AB	→
3	TEJAS DIGESHKUMAR DARJI	GEC, Bharuch	<i>figus</i>	<i>figus</i>	<i>figus</i>
4	DEEPALI HARKISHANBHAI SHAH	GEC, Gandhinagar	<i>DHshal</i>	<i>DHshal</i>	<i>DHshal</i>
5	SUHASBHAI HARIBHAI PATEL	GEC, Gandhinagar	<i>shel</i>	<i>shel</i>	<i>shel</i>
6	ALKESH BAPUBHAI VAGHELA	GEC, Godhra	<i>Vaghelag</i>	<i>Vaghelag</i>	<i>Vaghelag</i>
7	SANJAY DAHYALAL JOSHI	GEC, Patan	<i>J</i>	<i>J</i>	<i>J</i>
8	DIPESH HARSHADBHAI MAKWANA	GEC, Rajkot	<i>P.</i>	<i>P.</i>	<i>P.</i>
9	GIREEJA DINESHCHANDRA AMIN	GGP, Ahmedabad	<i>G</i>	<i>G</i>	<i>G</i>
10	JAINAMKUMAR S SHAH	GP, Ahmedabad	<i>me</i>	<i>me</i>	<i>me</i>
11	LOPA JILPESH VORA	GP, Ahmedabad	<i>sv</i>	<i>sv</i>	<i>sv</i>
12	NAIMESH BHUPENDRABHAI MAHETA	GP, Ahmedabad	<i>MB</i>	<i>MB</i>	<i>MB</i>
13	KSHAMA RAJESH SHAH	GP, Gandhinagar	<i>Kshama</i>	<i>Kshama</i>	<i>Kshama</i>
14	HARSHAL KANAIALAL PRAJAPATI	GP, Gandhinagar	<i>GH</i>	<i>GH</i>	<i>GH</i>
15	JASMINE JASVANTLAL KARAGTHALA	GP, Himatnagar	←	AB	→
16	PRATIKKUMAR LIMJIBHAI GAMIT	GP, Jamnagar	←	AB	→
17	ANKIT KIRITKUMAR SHAH	LDCE, Ahmedabad	<i>Shu. A</i>	<i>Shu. A</i>	<i>Shu. A</i>
18	ARUNKUMAR B NANDURBARKAR	LDCE, Ahmedabad	<i>AB</i>	<i>AB</i>	<i>AB</i>
19	SHAKTISINH N GOHIL	LEC, Morbi	<i>SH</i>	<i>SH</i>	<i>SH</i>
20	TEJAS VINODCHAN DRA SHAH	SSEC, Bhavnagar	<i>TS</i>	<i>TS</i>	<i>TS</i>
21	ALPESH HARISHKUMAR DAFADA	VGEC, Chandkheda	<i>AHD</i>	<i>AHD</i>	<i>AHD</i>
22	MILIND S. SHAH	VGEC, Chandkheda	<i>ms</i>	<i>ms</i>	<i>ms</i>
23	DAVE CHINTAN BHARATBHAI	VGEC, Chandkheda	<i>Ch</i>	<i>Ch</i>	<i>Ch</i>

4. Attendance sheet of 12/2/2019 (Page -2)

List of Participants for FD in "Research Opportunities in VLSI and Signal Processing" organized by EC Department, VGEC, Chandkheda Sponsored by GTU and ISTE

Date: 12/2/2019

Sr. No.	Name	Institute	Session 1 Sign	Session 2 Sign	Session 3 Sign
24	KETANKUMAR N.PATEL	VGEC, Chandkheda			
25	ASARI GAURAVKUMAR RAVINDRA	VGEC, Chandkheda			
26	FATAK URVISHA NANDU	VGEC, Chandkheda			
27	PATEL ALPESHKUMAR M	VGEC, Chandkheda			
28	NAIK JAGRUTI KETAN	VGEC, Chandkheda			
29	PATEL RAHULKUMAR M	VGEC, Chandkheda	RMP	RMP	RMP
30	GANESHAN NAVIN	VGEC, Chandkheda			
31	JAGRUTI MAKWANA	VGEC, Chandkheda	JJM	JJM	JJM
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12/2/19.

5. Attendance sheet of 13/2/2019 (Page -1)

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1	JESIKA NIRANG KOTHARI	AVPTI, Rajkot			
2	MANILAL B KALARIYA	AVPTI, Rajkot	— AB —	— AB —	— AB —
3	TEJAS DIGESHKUMAR DARJI	GEC, Bharuch			
4	DEEPAI HARKISHANBHAI SHAH	GEC, Gandhinagar	D.H. Shah	D.H. Shah	D.H. Shah
5	SUHASBHAI HARIBHAI PATEL	GEC, Gandhinagar			
6	ALKESH BAPUBHAI VAGHELA	GEC, Godhra	Vaghela	Vaghela	Vaghela
7	SANJAY DASHYALAL JOSHI	GEC, Patan			
8	DIPESH HARSHADBHAI MAKWANA	GEC, Rajkot			
9	GIREEJA DINESHCHANDRA AMIN	GGP, Ahmedabad			
10	JAINAMKUMAR S SHAH	GP, Ahmedabad			
11	LOPA JILPESH VORA	GP, Ahmedabad			
12	NAIMESH BHUPENDRABHAI MAHETA	GP, Ahmedabad	MB	MB	MB
13	KSHAMA RAJESH SHAH	GP, Gandhinagar			
14	HARSHAL KANAIYALAL PRAJAPATI	GP, Gandhinagar			
15	JASMINE JASVANTLAL KARAGTHALA	GP, Himatnagar	— AB —	— AB —	— AB —
16	PRATIKKUMAR LIMJIBHAI GAMIT	GP, Jamnagar ,	— AB —	— AB —	— AB —
17	ANKIT KIRITKUMAR SHAH	LDCE, Ahmedabad			
18	ARUNKUMAR B NANDURBARKAR	LDCE, Ahmedabad			
19	SHAKTISINH N GOHIL	LEC, Morbi			
20	TEJAS VINODCHAN DRA SHAH	SSEC, Bhavnagar			
21	ALPESH HARISHKUMAR DAFADA	VGEC, Chandkheda	AMD	AMD	AMD
22	MILIND S. SHAH	VGEC, Chandkheda			
23	DAVE CHINTAN BHARATBHAI	VGEC, Chandkheda			

6. Attendance sheet of 13/2/2019 (Page -2)

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25	ASARI GAURAVKUMAR RAVINDRA	VGEC, Chandkheda	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
26	FATAK URVISHA NANDU	VGEC, Chandkheda	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
27	PATEL ALPESHKUMAR M	VGEC, Chandkheda	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
28	NAIK JAGRUTI KETAN	VGEC, Chandkheda	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
29	PATEL RAHULKUMAR M	VGEC, Chandkheda	R.M.P.	R.M.P.	R.M.P.
30	GANESHAN NAVIN	VGEC, Chandkheda	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
31	JAGRUTI MAKWANA	VGEC, Chandkheda	JJM	JJM	JJM
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7. Attendance sheet of 14/2/2019 (Page -1)

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3	TEJAS DIGESHKUMAR DARJI	GEC, Bharuch			
4	DEEPAI HARKISHANBHAI SHAH	GEC, Gandhinagar			
5	SUHASBHAI HARIBHAI PATEL	GEC, Gandhinagar			
6	ALKESH BAPUBHAI VAGHELA	GEC, Godhra			
7	SANJAY DAHYALAL JOSHI	GEC, Patan			
8	DIPESH HARSHADBHAI MAKWANA	GEC, Rajkot			
9	GIREEJA DINESHCHANDRA AMIN	GGP, Ahmedabad			
10	JAINAMKUMAR S SHAH	GP, Ahmedabad			
11	LOPA JILPESH VORA	GP, Ahmedabad			
12	NAIMESH BHUPENDRABHAI MAHETA	GP, Ahmedabad			
13	KSHAMA RAJESH SHAH	GP, Gandhinagar			
14	HARSHAL KANAIALAL PRAJAPATI	GP, Gandhinagar			
15	JASMINE JASVANTLAL KARAGTHALA	GP, Himatnagar		AB	
16	PRATHIKKUMAR LIMJIBHAI GAMIT	GP, Jamnagar		AB	
17	ANKIT KIRITKUMAR SHAH	LDCE, Ahmedabad			
18	ARUNKUMAR B NANDURBARKAR	LDCE, Ahmedabad			
19	SHAKTISINH N GOHIL	LEC, Morbi			
20	TEJAS VINODCHAN DRA SHAH	SSEC, Bhavnagar			
21	ALPESH HARISHKUMAR DAFADA	VGEC, Chandkheda			
22	MILIND S. SHAH	VGEC, Chandkheda			
23	DAVE CHINTAN BHARATBHAI	VGEC, Chandkheda			

8. Attendance sheet of 14/2/2019 (Page -2)

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27	PATEL ALPESHKUMAR M	VGEC, Chandkheda			
28	NAIK JAGRUTI KETAN	VGEC, Chandkheda			
29	PATEL RAHULKUMAR M	VGEC, Chandkheda	RMP	RMP	RMP
30	GANESHAN NAVIN	VGEC, Chandkheda			
31	JAGRUTI MAKWANA	VGEC, Chandkheda	JJM	JJM	JJM
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9. Attendance sheet of 15/2/2019 (Page -1)

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Sr. No.	Name	Institute	Session 1 Sign	Session 2 Sign	Session 3 Sign
1	JESIKA NIRANG KOTHARI	AVPTI, Rajkot			
2	MANILAL B KALARIYA	AVPTI, Rajkot	←	ABSENT	
3	TEJAS DIGESHKUMAR DARJI	GEC, Bharuch			
4	DEEPALI HARKISHANBHAI SHAH	GEC, Gandhinagar			
5	SUHASBHAI HARIBHAI PATEL	GEC, Gandhinagar			
6	ALKESH BAPUBHAI VAGHELA	GEC, Godhra			
7	SANJAY DAHYALAL JOSHI	GEC, Patan			
8	DIPESH HARSHADBHAI MAKWANA	GEC, Rajkot			
9	GIREEJA DINESHCHANDRA AMIN	GGP, Ahmedabad			
10	JAINAMKUMAR S SHAH	GP, Ahmedabad			
11	LOPA JILPESH VORA	GP, Ahmedabad			
12	NAIMESH BHUPENDRABHAI MAHETA	GP, Ahmedabad			
13	KSHAMA RAJESH SHAH	GP, Gandhinagar			
14	HARSHAL KANAIYALAL PRAJAPATI	GP, Gandhinagar			
15	JASMINE JASVANTLAL KARAGTHALA	GP, Himatnagar	---	AB	---
16	PRATIKKUMAR LIMJIBHAI GAMIT	GP, Jamnagar	---	AB	---
17	ANKIT KIRITKUMAR SHAH	LDCE, Ahmedabad			
18	ARUNKUMAR B NANDURBARKAR	LDCE, Ahmedabad			
19	SHAKTISINH N GOHIL	LEC, Morbi			
20	TEJAS VINODCHAN DRA SHAH	SSEC, Bhavnagar			
21	ALPESH HARISHKUMAR DAFADA	VGEC, Chandkheda	AMD	AHD	AHD
22	MILIND S. SHAH	VGEC, Chandkheda			
23	DAVE CHINTAN BHARATBHAI	VGEC, Chandkheda			

10. Attendance sheet of 15/2/2019 (Page -2)

List of Participants for FDP on "Research Opportunities in VLSI and Signal Processing" organized by EC Department

VGEC, Chandkheda Sponsored by GTU and ISTE

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26	FATAK URVISHA NANDU	VGEC, Chandkheda			
27	PATEL ALPESHKUMAR M	VGEC, Chandkheda			
28	NAIK JAGRUTI KETAN	VGEC, Chandkheda			
29	PATEL RAHULKUMAR M	VGEC, Chandkheda	RMP	RMP	RMP
30	GANESHAN NAVIN	VGEC, Chandkheda			
31	JAGRUTI MAXWANA	VGEC, Chandkheda	JJM	JJM	JJM
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11. Attendance sheet of 16/2/2019 (Page -1)

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1	JESIKA NIRANG KOTHARI	AVPTI, Rajkot	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
2	MANILAL B KALARIYA	AVPTI, Rajkot	ABSENT		
3	TEJAS DIGESHKUMAR DARJI	GEC, Bharuch	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
4	DEEPALI HARKISHANBHAI SHAH	GEC, Gandhinagar	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
5	SUHASBHAI HARIBHAI PATEL	GEC, Gandhinagar	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
6	ALKESH BAPUBHAI VAGHELA	GEC, Godhra	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
7	SANJAY DASHYALAL JOSHI	GEC, Patan	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
8	DIPESH HARSHADBHAI MAKWANA	GEC, Rajkot	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
9	GIREEJA DINESHCHANDRA AMIN	GGP, Ahmedabad	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
10	JAINAMKUMAR S SHAH	GP, Ahmedabad	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
11	LOPA JILPESH VORA	GP, Ahmedabad	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
12	NAIMESH BHUPENDRABHAI MAHETA	GP, Ahmedabad	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
13	KSHAMA RAJESH SHAH	GP, Gandhinagar	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
14	HARSHAL KANAIYALAL PRAJAPATI	GP, Gandhinagar	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
15	JASMINE JASVANTLAL KARAGTHALA	GP, Himatnagar	ABSENT		
16	PRATIKKUMAR LIMJIBHAI GAMIT	GP, Jamnagar ,	ABSENT		
17	ANKIT KIRITKUMAR SHAH	LDCE, Ahmedabad	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
18	ARUNKUMAR B NANDURBARKAR	LDCE, Ahmedabad	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
19	SHAKTISINH N GOHIL	LEC, Morbi	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
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21	ALPESH HARISHKUMAR DAFADA	VGEC, Chandkheda	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
22	MILIND S. SHAH	VGEC, Chandkheda	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
23	DAVE CHINTAN BHARATBHAI	VGEC, Chandkheda	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>

12. Attendance sheet of 16/2/2019 (Page -2)

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27	PATEL ALPESHKUMAR M	VGEC, Chandkheda			
28	NAIK JAGRUTI KETAN	VGEC, Chandkheda			
29	PATEL RAHULKUMAR M	VGEC, Chandkheda	RMP	RMP	RMP
30	GANESHAN NAVIN	VGEC, Chandkheda			
31	JAGRUTI MAKWANA	VGEC, Chandkheda			

16/2/19.

8. Feedback of participants and coordinator:

1. **Dr.A.B.Nandurbarkar, LDCE, Ahmedabad**

-“Excellent hands on session in Labs and all other sessions were also quite useful in research opportunity”.

2. **Prof Tejas Shah, SSEC, Bhavnagar**

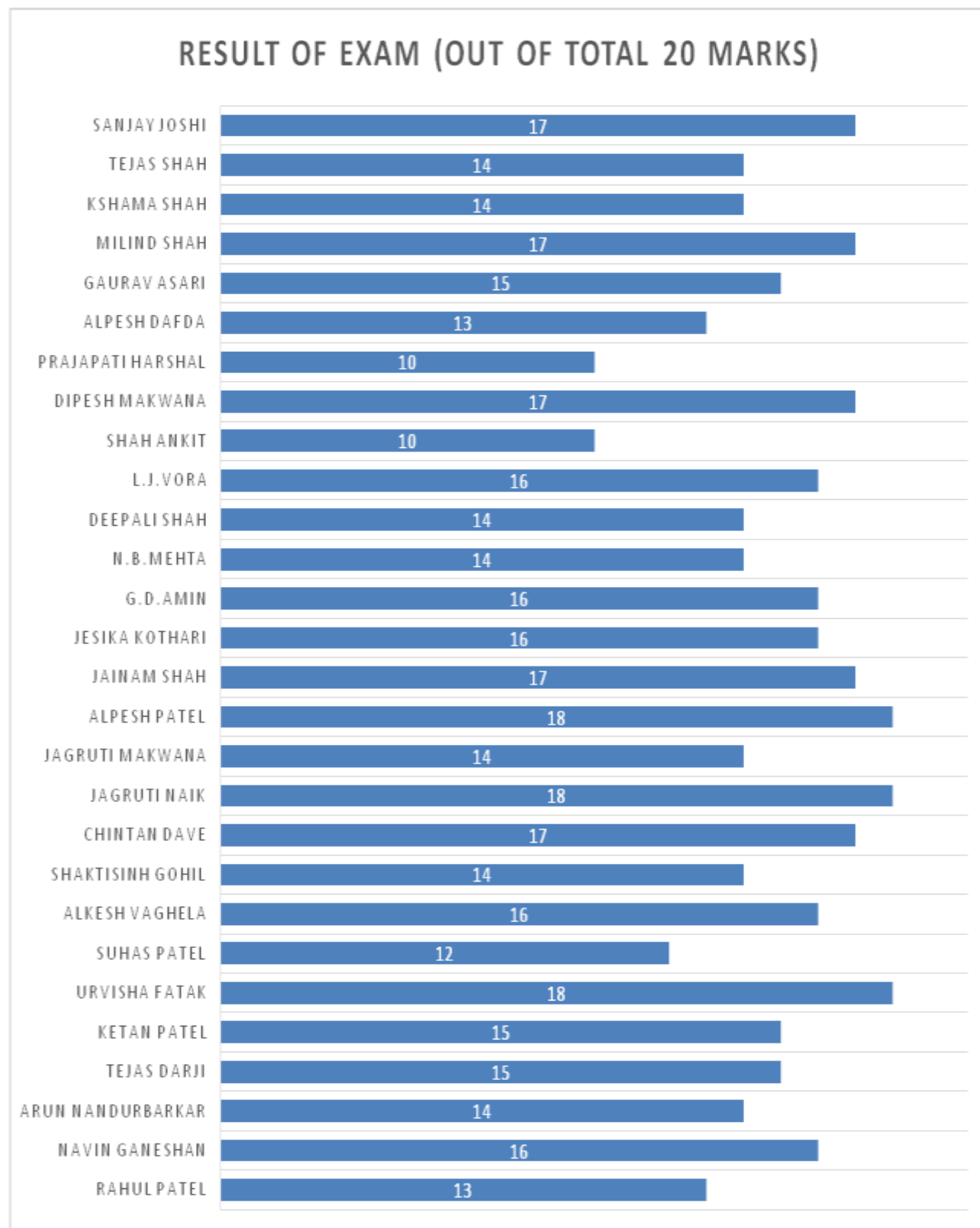
- “Overall management, Hospitability of FDP and delivery of lecture by experts and lab sessions are impressive”. This FDP provides opportunity to the participants to have hands on CADANCE tool.

3. **Dr R.A.Thakker (Coordinator) and Dr M. S. Shah (Co-coordinator)**

- It was a wonderful experience organizing ISTE - GTU sponsored one week FDP on "Research Opportunities in VLSI and Signal Processing" from 11th February to 16th February - 2019. We had good number of participants from various Institutes across Gujarat including some from Government Polytechnic. Experts were invited from IIT and other reputed Institutes and Industries as well. They shared recently reported work in the area of VLSI and Signal Processing. They also briefed participants with the research opportunities in both domains. We had good number hand-on-sessions with the support of Industry experts. Honourable Vice-Chancellor of GTU , Dr. Navin Sheth, was present in the inaugural ceremony whereas Prof. K. M. Bhavsar (Chairman, ISTE, Gujarat Section) attended valedictory session of the FDP. We received very feedback from the participants. We can say it was a nice experience organizing this FDP.

9. Examinations and Results

A 20 marks MCQ exam was taken at the end of FDP. The questions were derived by resource persons and its answer key was also collected from them. The evaluation and assessment was done by the FDP coordinator. All the participants have crossed more than 50% marks (10 out of 20) in the test. Their individual marks are as follows:



10. Some Glimpse of FDP:











11. Valedictory

The FDP was concluded with the valedictory function in which the participants were given their participation Certificates in presence of Dr. K.M. Bhavsar, Chairman, ISTE Gujarat Section, Dr.S.D Panchal (I/C Registrar GTU),Dr R K Gajjar (Principal VGEC, Chandkheda) ,Dr. R.A.Thakker (Coordinator of FDP) and HOD's of all department and faculty members of college.

Dr K.M.Bhavsar had given brief summary of activities done by ISTE. He also mentioned about important role of ISTE in providing quality training programmes to teachers and administrators of technical institutions to update their knowledge and skills in their fields of activity. Session ended with vote of thanks to all contributors who had made this FDP successful.

