

# "Digital Signal Processing"

During

(2-4 January, 2018)









## **Organized by**

Electronics Engineering Dept.

BVM Engineering College

An Autonomous Institution
(managed by Charutar Vidya Mandal)

Vallabh Vidyanagar-388120

TEQIP II Sponsored & ISTE Approved
Three days national workshop
on
"Digital Signal Processing"
During
(2 - 4 January, 2018)

#### **About CVM**



Charutar Vidya Mandal (CVM) is one of India's leading NGO and non-profitable charitable organization working in the field of education founded to cater education to the rural mass of Gujarat. In this age of the Global Village, when global interdependence and competition are upon us, CVM is trying to educate and train our youngsters to keep up and keep pace with the

best and the brightest in the world. CVM is offering all the programmes of study appropriate to the modern age, and maintaining high standards of education. CVM is always supporting all the activities for Students and faculties' development. – Dr. C. L. Patel, Chairman, CVM

**About BVM** 

With the motto of Work is worship, BVM is a Premier Institution of CVM founded in 1948. BVM is the First Approved Degree Engineering College of the Gujarat state. More than 20000+ engineers have graduated from BVM College. It offers B.Tech and M.Tech degree courses. The college is affiliated to the



Gujarat Technological University. BVM is the first Autonomous Engineering institute of Gujarat to obtain academic autonomy for all its UG & PG programs, from University Grant Commission (UGC). It is a matter of pride, that the Institute has successfully completed prestigious World Bank Assistance Project, TEQIP-II of INR 10 crores and further has been awarded with TEQIP-III grant of INR 7 crores. Majority programs of BVM are awarded accreditation by NBA-AICTE. BVM is listed in top 200 Engineering institutes in NIRF ranking 2017.

#### **About Department**

The Departments of Electronics Engineering is the most efficient departments of BVM Engineering college and offer Ph.D and B.Tech programs. The departments have highly qualified, well experienced and dedicated faculty members. The departments are equipped with advanced instruments and equipment for research facilities. Experts from leading industries and educational institutes are invited frequently for guest lectures on recent developments for the benefit of student and staff.

**About TEQIP-III** 

Technical Education Quality Improvement Programme (TEQIP) of Government of India aims to improve the quality of Technical Education by providing inputs like modernization of

laboratories/workshops, library, faculty development, networking between institutions, curricula development, research and improve Interaction with Industries etc., to become dynamic, demand driven, quality conscious, responsive to rapid economic and technological developments occurring both at national and International levels.

### Objectives of the workshop:

The world of science and engineering is filled with signals: images from remote space probes, voltages generated by the heart and brain, radar and sonar echoes, seismic vibrations, and countless other applications. Digital Signal Processing is the science of using computers to understand these types of data. This includes a wide variety of goals: filtering, speech recognition, image enhancement, data compression, neural networks, and much more. DSP is one of the most powerful technologies that will shape science and engineering in the twenty-first century. This workshop is designed to give exposure on various applications of the DSP and hands-on on DSP.

With technical advancement and impetus on quality education and globalization, it is much required to enhance and update the technical education through research and development. Keeping in mind the above scenario, this workshop is in tune with the above objectives for the discipline of Computer, Electrical, Electronics and related Dept.

#### **Inaugural Session:**

The Workshop Inaugural Function was held on 2<sup>nd</sup> January, 2017 at 10:00 am onwards. The workshop was inaugurated by Research Associates Mr. Shyamal Dhua, Yaman Dang, Ijaz Ahmed, Swapnil Thakur from IIT Bombay, Dr. T. D. Pawar, Head, Electronics Engineering Department and Convener of the Workshop, Dr. D. M. Patel and Dr. J. M. Rathod, Technical Chairs and Dr. Mehfuza Holia and Prof. M.M. Solanki Coordinator of the workshop.



arget Selection

. Statistical Dr. T. D. Pawar, Head Electronics Dept, gave a brief introduction about the workshop. He encouraged the participants to avail utmost benefit from the workshop and explore themselves in the area of Digital Signal Processing. He appealed all the students and faculty members to work for the betterment of the society and nation at large.





Dr. Mehfuza Holia, Coordinator of this program expressed the vote of thanks. She thanked CVM and TEQIP-III for its continuous motivation and help extended to conduct such programs. She expressed her heartfelt gratitude to Dr. V. M. Gadre, Professor, IIT Bombay for mentoring this workshop.







# **Program Schedule:**

	Day 1, Date: 02/0	11/2018 Tuesday
Duration	Topic	Expert
09.30 10.00	Registration & Break fast	
10.00 10:30	Inaugural Function	
10.00. 10.00	DSP course Objectives:	
10:3012:00	Introduction to	Shyam Dhua, IITB
10.3012.00	ezDSP5515 kits	
	Introduction to CCS IDE	Ijaz Ahamad, IITB
12:00 1:00 -	with experiments	ijaz ilitalitat, iliz
1:00 2:00		Lunch Break
	Hands on Experiments	Yaman Dang, IITB
2.003.30	with DSP	3, 3, 3, 3,
	Tea break	
3.30 3:45	rea break	
		0 11 ml 1 11mp
3:45 5:15	Hands on Experiments	Swapnil Thakur, IITB
	with DSP	/0010 W-11
Day 2, Date: 3/01/2018 Wednesday		
10.00	TEA / BREAKFAST	
10.00	Introduction to Texas DSP	Development in Power Sector-Research
11:30	Processors	areas
11.00	Hands on Examples with	aroas
11.00 1.00	CCS studio and	
11:301:00	TMDSDSK6713 &	Sajad Rather, Edgate Technologies
	LCDKC6748	
1:00 2:00	Lunch Break	
2.003.30	MATLAB SIMULINK	
	Model Based Lab	
	Real Time Examples	Sajad Rather, Edgate Technologies
	Audio Processing	
	Audio ECHO	
3.30 3:45	Tea break	
3:45 5:15	MATLAB SIMULINK	
	Model Based Lab	
	Real Time Examples	Sajad Rather, Edgate Technologies
	FIR Filter design ;	
Day 3, Date: 4/01/2018 Thursday		
09.30	TEA / BREAKFAST	
10.00		
10.00	Hands on DSP	Dr. T. D. Pawar , BVM Engg. College
11:30	Experiments	21. 1. 2. 1 a. a. a. ; 2 a. a. 2. a. s. c. c. s. c.
	Introduction and Vector	
11:301:00	Network	Dr. J. M. Rathod, BVM Engg. College
	Analyzer and Its Applications	
1:00 2:00	Аррисацоня	Lunch Break
1.00 2.00		Dr. Kiran Parmar, Professor and Head
2.003.30	DSP Applications with	Electrical Dept, Adani Institute,
2.00 3.00	MATLAB	Ahmedabad.
2 20 2.45	<u> </u>	
3.30 3:45	Tea break	
3:45 5:15	Quiz/Feedback Valedictory	
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Eight Speakers delivered expert talks on practical implementation of Digital signal processing. Hand on experiments were provided on ezDSP5515 kits. Image processing Applications were demonstrated on hardware. Experts from Texas Instruments have shown the implementation of Audio/Video Processing on DSP/ image processing hardware. DSP Experiment done on MATLAB, have been demonstrated. Demonstration of Vector Network Analyzer and its Applications have been shown to participants. Applications of DSP were covered in this workshop.



## **Valedictory Session:**

The valedictory function of the National workshop on "Digital Signal Processing" was scheduled on 4<sup>th</sup> January, 2018, 04:00 pm onwards. Dr. Kiran Parmar, Head Electrical Engineering Department, Adani Institute was the chief guest at the function. Dr. Indrajit Patel, Principal, Dr. S. D. Dhiman, TEQIP-III Coordinator, Dr. T. D. Pawar, Head, Electronics Engineering Department, Dr. D. M. Patel, Dr. J.M. Rathod, Dr. Mehfuza Holia, Prof. M.M.



Solanki were present on the dias.

Dr. Indrajit Patel, Principal BVM College emphasized on the importance of research for the development and progress of the society and nation at large. He also encourage participants to avail maximum benefit from such workshops and enhance their knowledge in their respective fields which can lead to a research based environment. Dr. S. D. Dhiman, TEQIP-III Coordinator, gave a brief report of the various activities carried out at the institution under TEQIP-III. Dr. Kiran Parmar, Head Electrical Engineering Department, Adani Institute, congratulated BVM family for the successful completion of the workshop. He focused on the various advanced areas of research in Engineering and Technology. Prof. Milind Solanki, one of the coordinator of the program expressed a vote of thanks. Valuable feedbacks were provided by the participants and certificate distribution was done by the dignitaries on the dais.



Prof. M. M Solanki