

Organizing Committee

Patrons

Sri. G. Sathanarayana

President

Sri. Ch.V.V. Subba Rao
Secretary & Correspondent

Co-Patron

Sri. Ch. Apparao
Director - Technical

Chairman

Dr. GVNSR Ratnakara Rao

Principal

Dr.E. Kusuma Kumari
Professor & HOD, ECE

Organizing Committee:

Faculty members of ECE Department

About the college

"Sri Vasavi Engineering College (Autonomous)" was established in the year 2001 by "Sri Vasavi Educational Society" with a desire to share the responsibilities of the society for the development of quality Technical Education. The college is situated at Peddapalli, a peaceful and pollution-free location, 5 km away from the main town Tadepalligudem, West Godavari District. The town is well known as the commercial hub of Coastal Andhra Pradesh and is well connected by road (NH16) and rail (Chennai to Kolkata). The college has a sprawling campus of 25.02 acres surrounded by green fields and coconut groves. The college is recognized by AICTE and permanently affiliated to JNTU Kakinda and also recognized by UGC under section 2(f) & 12(B). The College got UGC Autonomous in the year 2018. The college offers UG, PG and Diploma Programs in Engineering (EEE, ECE, CSE, ME & CE, CST and ECT) along with MBA. The college is accredited by NAAC with "A" Grade. UG Programs offered by the departments of EEE, ME, ECE & CSE are accredited by NBA.

About the Department

Vision of the Department is to develop the department into a center of excellence & produce high quality, technically competent & Responsible Electronics & Communication Engineers. The Department of ECE is established in the year 2001 with a view to develop quality engineers to meet the current trends. The department offers UG program in B.Tech (ECE). The department also offers PG program with VLSI & Embedded systems specialization having an intake of 18. The department has a pool of well qualified, highly experienced & research-oriented faculty members covering all the major areas.

About FDP

Biomedical signal processing and instrumentation is an emerging stream that has got both industrial and research significance. Medical practitioners and Engineers are developing new ways to process bio signals using a variety of mathematical tools and algorithms used in both therapeutic and diagnostic instrumentation. The course aims to impart solid foundation in mathematical and signal processing tools on biomedical signals and medical imaging for feature extraction using MATLAB and Lab VIEW.

Objectives of FDP

To improve the knowledge of participants in biomedical signal processing and motivate the participants to work with Bio-medical signals.
To unfold various research areas under biomedical signal processing and provide opportunity to contact with experts in the related areas. To provide sound mathematical and theoretical prerequisites necessary for carry out research in this field.

Registration link:

<https://forms.gle/BNAlbMpqulJoimfw7>

The FDP is open to faculty members of AICTE approved Institutions, Research scholars and persons from industry and R&D organizations from all over country.

Registration Fee: ***NIL***

Online meeting link will be provided through Whatsapp: <https://chat.whatsapp.com/LpHDkZUC3nu4NsazhZLRTF>

The number of Participants will be limited to 100

*Note: E-Certificates will be provided to those participants who attend all the sessions of the program and also appear for the online test as per the norms of AICTE.

The test will be on the last day and certificates will be given to all the eligible candidates with 80% attendance and 60% score in the Quiz.

AICTE Sponsored



ONE WEEK NATIONAL LEVEL ONLINE FACULTY DEVELOPMENT PROGRAM

On

"Research Areas in Bio-Medical Signal Processing"

FDP-III

14th -19th December 2020

Coordinator

Dr. U. Yedukondalu

Assoc. Prof. of ECE

Co-Coordinator

Mr. P. Gopala Reddy, Asst. Prof. of ECE
Mrs. Y. Sujatha, Sr Asst. Prof. of ECE

Organized by



Department of
Electronics & Communication Engineering











Sri Vasavi Engineering College

(Autonomous)

Tadepalligudem, West Godavari District - 534101

(Approved by AICTE and affiliated to JNTU Kakinda, AP)
(Accredited by NBA - UG in EEE, ECE, CSE & ME and NAAC with 'A' Grade)

www.sriivasaviengg.ac.in

| | | | | |
|---|---|---|--|---|
|  <p>Dr. Anil Kumar, Rose Professor Department of ECE Chandigarh College of Engineering and Technology</p> |  <p>Dr. Santosh Nannuru Assistant Professor Department of ECE IIT, Hyderabad</p> |  <p>Dr. Vijay Bhaskar Semwal Assistant Professor Department of CSE MANIT, Bhopal</p> |  <p>Dr. Anil Kumar Vuppala Associate Professor, Department of ECE IIT Hyderabad</p> |  <p>Dr. Deepak Joshi Assistant Professor Department of ECE IIT Delhi</p> |
|  <p>Dr. Nithin S Kale Co-Founder & Chief Technology Officer Nano Shift Technologies Bombay.</p> |  <p>Dr. Shruti Jain Associate Professor, Department of ECE Jaypee University of Information Technology, Waknaghat, Distt. Solan, Himachal Pradesh, INDIA</p> |  <p>Dr. Jitendra Virmani Indo-Swiss Training Centre (ISTC) (Skill-Based Autonomous Govt Institute Duly Approved By AICTE, New Delhi) CSIR-Central Scientific Instruments Organization (CSIR- CSIO) (Ministry of Science & Technology, Govt of India) Sector 30-C, Chandigarh-160030 (India)</p> |  <p>Dr. P. Subail Parvaze Research Consultant, Philips Innovation Campus, Bangalore</p> |  <p>Dr. S Mahesh Anand Founder & CTO, SCS-India Visiting Faculty @ Great Lakes Institute of Management Great Learning - PG Program in Business Analytics and Artificial Intelligence</p> |

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Report On
AICTE Sponsored



ONE WEEK NATIONAL LEVEL ONLINE
FACULTY DEVELOPMENT PROGRAM

on

"Research Areas in Bio-Medical
Signal Processing"

FDP-III

16th -21st November 2020

We got a grant of Rs 4,55,333 for conduct of Faculty Development Program on **"Research Areas in Biomedical Signal Processing"** under AQIS 2019-20 during the financial year 2020-21 dated 30th July 2020. As per the guidelines by the AICTE through Email dated 14th September 2020, we informed our willingness to organize a four-week FDP on the same title through online and also sent tentative scheduled for the same to the director and also got approval for the same.

In this connection the Department of Electronics and Communication Engineering, Sri Vasavi Engineering College has conducted a Faculty Development Program (FDP-II) on **"Research Areas in Bio-Medical Signal Processing"** from 16th to 21st November 2020. The FDP-II Program received an overwhelming response with more than 100 participants from various institutes/colleges approved by AICTE. This FDP-II is planned for one week to comprise 2 technical hands- on sessions & 10 Lecture Sessions on topics Applications of Bio-Medical Signals, Acquisition of Bio-Signals, Ultra-Wide Band Antenna Technology for Bio-Medical/ Healthcare Applications, RF Energy Harvesting Systems for Bio-Medical/ Healthcare Applications, Role of Information in Bio-Medical Systems, Feature Extraction and Classification of Bio-Medical Signals, Bio-Medical Classification Techniques, Human Gait Analysis Using Wearable Sensor, Development of Algorithms in Bio-Medical Signal Processing, Moving average filter to suppress additive noise in Bio-signals using Matlab, Derivative filters for event detection in Bio-Signals (QRS detection in ECG) using Matlab and Time Domain Feature Extraction from Biomedical signals (EEG) using Matlab and Fourier Domain Feature Engineering in Biomedical signals using Matlab.

About FDP:

Biomedical Signal processing and instrumentation is an emerging stream that has got both industrial and research significance. Medical practitioners and Engineers are developing new ways to process bio signals using a variety of mathematical tools and algorithms used in both therapeutic and diagnostic instrumentation. The course aims to impart solid foundation in mathematical and signal processing tools on biomedical signals and medical imaging for feature extraction using MATLAB and Lab VIEW. This Faculty Development Program introduce the fundamental principles of Bio medical signal processing. Hands on training with experts is also given to the participants. The detailed report about the FDP is given as below:



| Date & Day | TIMINGS | TOPIC |
|---------------------------|---------------------------------|---|
| 16-11-2020 (MONDAY) | 9:30 AM- 10:00 AM | Inauguration |
| | 10:00 AM – 11:30 AM (Session-1) | Session by Prof. N Balaji, Topic: Applications of Bio-Medical Signals |
| | 02.00 PM - 03.30PM (Session-2) | Session by Prof. G. Rama Murthy Topic: Acquisition of Bio-Signals |
| 17-11-2020 (TUESDAY) | 10:00 AM – 11:30 AM (Session-1) | Session by Dr. Taimoor Khan Topic: Ultra-Wide Band Antenna Technology for Bio-Medical/ Healthcare Applications |
| | 02.00 PM - 03.30PM (Session-2) | Session by Dr. Taimoor Khan Topic: RF Energy Harvesting Systems for Bio-Medical/ Healthcare Applications |
| 18-11-2020 (WEDNESDAY) | 10:00 AM – 11:30 AM (Session-1) | Session by Prof. L Pratap Reddy, Topic: Role of Information in Bio-Medical Systems |
| | 02.00 PM - 03.30PM (Session-2) | Session by Dr. Kunal Pal Topic: Feature Extraction and Classification of Bio-Medical Signals |
| 19-11-2020 (THURSDAY) | 10:00 AM – 11:30 AM (Session-1) | Session by Prof. Samarendra Dandapat Topic: Bio-Medical Classification Techniques |
| | 02.00 PM - 03.30PM (Session-2) | Session by Dr. Vijay Bhaskar Semwal Topic: Human Gait Analysis Using Wearable Sensor |
| 20-11-2020 (FRIDAY) | 10:00 AM – 11:30 AM (Session-1) | Session by Dr. Ravi Kumar Jatoth Topic: Development of Algorithms in Bio-Medical Signal Processing |
| | 02.00 PM - 03.30PM (Session-2) | Session by Dr. Hanumanth Rao T V K Topic: Development of Algorithms |
| 21-11-2020 (SATURDAY) | 10:00 AM – 11:30 AM (Session-1) | Session by Dr. S Mahesh Anand Hands on session |

| | | |
|--|--------------------------------|---|
| | 02.00 PM - 03.30PM (Session-2) | Topic: Time domain feature Extraction from Bio-Signals (EEG) using MATLAB and Fourier domain feature Engineering in Bio-Signals using MATLAB Hands on session |
| | 3:30 PM- 4:00 PM | Valedictory |

Resource Persons:



Prof. Samarendra Dandapat
Professor,
Department Of EEE,
IIT Guwahati, Assam



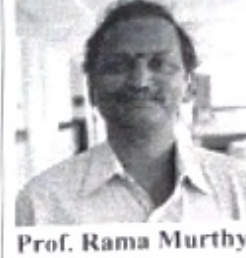
Prof. L. Pratap Reddy
Professor,
Department of ECE,
JNTU Hyderabad



Dr. Vijay Bhaskar Semwal
Assistant Professor
Department of CSE
MANIT, Bhopal



Prof. N. Balaji
Professor,
Department of ECE
Director IQAC,
JNTUK, Kakinada



Prof. Rama Murthy
Professor,
Department of CSE
Mahindra University,
École Centrale School
of Engineering,
Hyderabad



Dr. Ravi Kumar Jatoth
Associate Professor,
Department of ECE
NIT Warangal



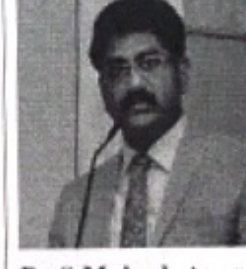
Dr. Hanumanth Rao T V K
Associate Professor,
Department of ECE
NIT Warangal



Dr. Kunal Pal
Associate Professor
Department of
Biotechnology and
Medical Engineering,
NIT Rourkela,



Dr. Taimoor Khan
Assistant Professor
Department of ECE
NIT Silchar



Dr S Mahesh Anand
Founder & CTO, SCS
India
Visiting Faculty @
Great Lakes Institute
of Management
Great Learning - PG
Program in Business
Analytics and
Artificial Intelligence

Zoom Meeting

balaji N

Participants (37)

Find a participant

- DU Dr U Yedukondala (Host, me) [Mute] [Share Screen]
- BN balaji N (Co-host) [Mute] [Share Screen]
- PV Pradyumna Velluri... (Co-host) [Mute] [Share Screen]
- VK Vinod Kumar mull... (Co-host) [Mute] [Share Screen]
- BA 99-Srinivas Rao Chevula [Mute] [Share Screen]
- AG Akanksha Gupta [Mute] [Share Screen]
- AB ALI BING MOHAMMAD [Mute] [Share Screen]
- ET Chaitan Tansingani [Mute] [Share Screen]
- CS Chaitan S. Patel [Mute] [Share Screen]
- CL Chokkathil L S S Pavan Kumar [Mute] [Share Screen]
- DA Dr. A PURNA RAMESH [Mute] [Share Screen]

Join [Mute All]

Chat

Type here to search

Zoom Meeting

Rama Murthy...

Participants (32)

Find a participant

- DU Dr U Y... (Host, me) [Mute] [Share Screen]
- BM Rama Murthy... (Co-host) [Mute] [Share Screen]
- PV Pradyumna Velluri... (Co-host) [Mute] [Share Screen]
- AG Akanksha Gupta [Mute] [Share Screen]

Join [Mute All]

Chat

Good afternoon to all C V KEERTHI
LATHA Stanley college of engineering
and technology for women Hyderabad
Telangana

From Me to Everyone:
Good afternoon to all

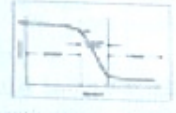
From N. Srinivas to Everyone:
how to select sampling frequency at..?

Go... Everyone [File]

Type message here...

Anti-aliasing Filter

- One way of avoiding the problem of aliasing is to apply an anti-aliasing filter to the signal, prior to the sampling stage, to remove any frequency components above the "folding" or Nyquist frequency (half the sampling frequency).
- An anti-aliasing filter is a low pass filter.



Type here to search

Zoom Meeting
Join from the web

One Week National Level Online Faculty Development Program
On "Research Areas in Bio-Medical Signal Processing" FD
16-21 November 2020
Organized by
Department of Electronics and Communication Engineering
Sei Vasavi Engineering College, Tadepallidudem, Andhra Pradesh

Ultra-Wideband Antenna Technology for Biomedical/Healthcare Applications

By
Dr. Taimoor Khan
IETE-Prof SVC Aiyu Memorial Award-2020
F IET (India), F IETE (India), SM IETE (USA), SM URSI (Belgium)
Assistant Professor
Department of Electronics and Communication Engineering
National Institute of Technology Silchar, Assam, India
Email: taimoor@silchar.ac.in

Dr. Taimoor Khan
1978 Prof. SVC Aiyu Memorial Award-2020
1992 Gold Medal, 1993 Silver Medal, 1994 Bronze Medal
Department of Electronics and Communication Engineering
National Institute of Technology Silchar, Assam, India
Email: taimoor@silchar.ac.in

Participant: V Raghunath R...

Zoom Meeting

Participants: Neha Tripathi, Chintan s patel

Role of Information Technology in Biomedical Systems

Advances in Instrumentation

- Developments in Radiology
- Instantaneous Tests
- Continuous Monitoring

Chat

From Neha Tripathi to Chintan s patel
Good Morning Sir

From Chintan s patel to Neha Tripathi
Felt happy to see Sir after long time...

From Neha Tripathi to Chintan s patel
Good morning to all

Type here to search

Zoom Meeting
Join the Webinar

Understanding the Effect of Caffeinated Coffee on Cardiac Physiology and Cognition



Dr. Kunal Pal

PIC: Medical Electronics and Instrumentation Laboratory

Department of Biotechnology and Medical Engineering National
Institute of Technology, Rourkela, Odisha, India

Presented at :

FDP on "Research Areas in Bio-Medical Signal Processing"
(16-18 November, 2020)

Sri Vasavi Engineering College, West Godavari, AP, India

11/18/2020

RABSP

NET, Rourkela



Vinodkumar M...

DHUPAM ARU...

Zoom Meeting

Udara Yedukon... Vinod kumar m... Samarendra Da... Pradyumna Vell...

Recording

Heart

- Located in the thoracic cavity between the lungs in the mediastinum
- Two-thirds of the heart is located on the left side of the body
- Its apex or cone shaped and rests on the diaphragm
- Average weight is 300 grams

EEE IIT Guwahati S. Dandapat

Participants (28)

Find a participant

| U | Ud... | (Host, rel) | Ultimate | More |
|----|-------------------|-------------|----------|------|
| SD | Samarendra... | (Co-host) | | |
| AS | AU BANG MOHA... | (Co-host) | | |
| PM | Pradyumna Vell... | (Co-host) | | |
| VK | Vinod kumar m... | (Co-host) | | |
| VK | Vinod kumar m... | (Co-host) | | |
| AS | Anita H | | | |
| CS | Chintan s patel | | | |
| DA | Dr. Abhay Shukla | | | |
| E | ECITDPH-042 | | | |
| GR | Gopale Reddy P | | | |

Invite

Chat

Type here to search

10:11 AM

Zoom Meeting

EMST

Deep Learning-based Approaches

- Unlike ML-methods, DL-methods do not require manual feature extraction as they automatically discover high-level feature representations from the raw data itself.
- Achieves better generalization results by understanding pathological ECG features well across the patients.

Figure: Comparison between Traditional Methods and Deep Learning Methods

Dr. Hong D. Zhou, H. Sheng, & Wei C. Bai, J. Opportunities and challenges of deep learning methods for electrocardiogram data analysis

EEE IIT Guwahati

S. Dandapat

Participants (43)

UF Utkarsh Yadav... (Host, me) (0) (0) (0)

SD Samarendra... (Co-host) (0) (0) (0)

AB All About MOHA... (Co-host) (0) (0) (0)

K KSH Srinivas (Co-host) (0) (0) (0)

MB Muhammad Berg (Co-host) (0) (0) (0)

PV Pradyumn Yellam (Co-host) (0) (0) (0)

SR Sureshwar Rao D... (Co-host) (0) (0) (0)

VR Vinod Kumar... (Co-host) (0) (0) (0)

VK Var Kumar (Co-host) (0) (0) (0)

AG Akanksha Gupta (0) (0) (0)

CS Chandan's patel (0) (0) (0)

Invite

Chat

Zoom Meeting

IoT Devices

Smart alarm clock

Smart glass/multimedia display

Toys for kids

Connected coffee machine

Smart alarm clock

Smart glass/multimedia display

Fitness tracker

Washing machine

M Vinod Kumar

Participants (23)

UF U Yadav... (Host, me) (0) (0) (0)

DV Dr. Vinay Khat... (Co-host) (0) (0) (0)

MY M Vinod Kumar (Co-host) (0) (0) (0)

AG Akanksha Gupta (0) (0) (0)

CS Chandan's patel (0) (0) (0)

GR Gopala Prady F... (0) (0) (0)

JM J. MAHESH KUMAR (0) (0) (0)

EL Keerthi Laksh... (0) (0) (0)

NU MD ZAKIR HUSSAIN (0) (0) (0)

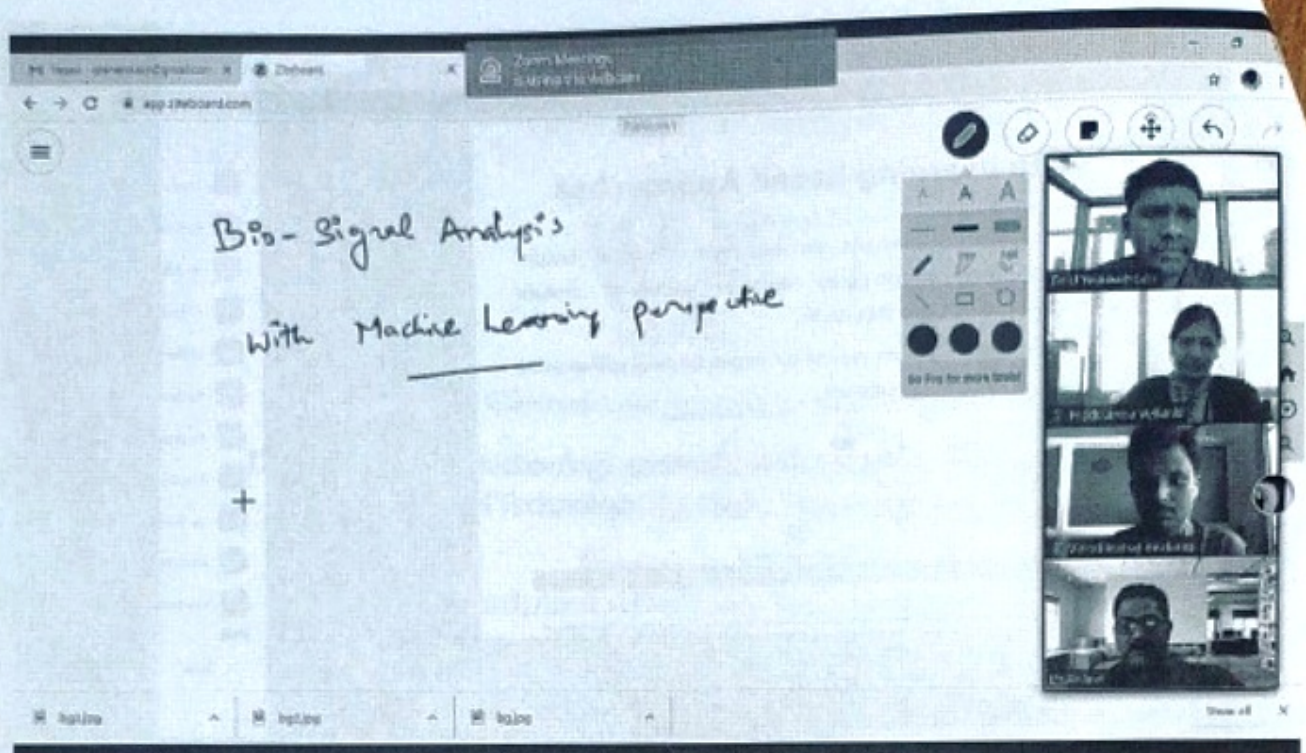
HI Praveen H D (0) (0) (0)

VR Radha Krishna Nagala... (0) (0) (0)

IL ABO (0) (0) (0)

Invite

Chat



Valedictory Session:

Receiving an overwhelming response from participants, the one-week FDP came to an end with the Valedictory Session, graced by Hon'ble Principal, Dr. GVNS Ratnakara Rao, HoD, Dr E Kusuma Kumari, Coordinator, Dr Yedukondalu Udara. On 21/11/2020. It's the constant endeavor of the Institute to improve the quality of its continuing academic courses. Participants' observation/feedback is critical in improving the quality of the courses. Some suggestions were given by the participants on timing, few topics and field visits for further improvement of the course structure. Vote of Thanks was delivered by **Dr Yedukondalu Udara**, Associate Professor, ECE Department SVEC, in which she has been paid her gratitude towards all the dignitaries who has spared their time and come from a far distance places to share their expertise with the participants. Nevertheless, she has given thanks to sponsoring body of this FDP i.e. AICTE with these words, "**We are**

highly thankful to the AICTE for providing financial assistance to organize this FDP in our campus and hope we will find the support in future also for organizing such kind of activities.”

E- certificates were distributed to all the eligible participants.

We are planning Two more Phases as per the guidelines given by AICTE as for following scheduled:

FDP Tentative Schedule:

III Week: 14-12-2020 to 19-12-2020 (FDP-III)

IV Week: 01-02-2021 to 06-02-2021 (FDP-IV)


Coordinator

Dr U Yedukondalu

HOD

Dr E Kusuma Kumari