REGISTRATION FORM

One Week National Level Online Faculty Development Program (FDP-I)

on

"Research Areas in Bio-Medical Signal Processing"

FDP-I 12th -17th October 2020

Name:_____

Designation:_____

Institution/Organization:_____

Address:

Contact Number:_____

Email:_____

Qualifications:_____

Experience in years:

Teaching: Research: Industry:

Signature of the Head of the institution / HoD / Participant

Last date for Registration: 10th October 2020

Address for Communication:

Dr. U Yedukondalu
Associate Professor, ECE Dept.
Sri Vasavi Engineering College,
Tadepalligudem-534101, AP
Mail: aictefdp2020.ece@gmail.com
Mobile. No: 8008465666(w) & 9849437940

Dr. Purnima K Sharma
Associate Professor, ECE Dept.
Sri Vasavi Engineering College,
Tadepalligudem-534101, AP
Mail: aictefdp2020.ece@gmail.com

Patrons

Sri. G. Satyanarayana
President

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

Co-Patron

Sri. Ch. Apparao
Director – Technical

Chairman

Dr. GVNSR Ratnakara Rao
Principal

Convener

Dr.E. Kusuma Kumari
Professor & HoD, ECE

Organizing Committee:
Faculty members of ECE Department

Registration link:

https://forms.gle/PJriwkVB5CUNPPFdA

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.**

The number of Participants will be limited to **150**

***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.

AICTE Sponsored

ONE WEEK NATIONAL LEVEL ONLINE FACULTY DEVELOPMENT PROGRAM

on

"Research Areas in Bio-Medical Signal Processing"

FDP-I

12th -17th October 2020

Coordinator:

Dr. U. Yedukondalu
Assoc.Prof. of ECE

Co Coordinator:

Dr. Purnima K Sharma
Assoc. 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 JNTUK Kakinada, AP)

(Accredited by NBA – UG in EEE, ECE, CSE & ME and NAAC with 'A' Grade)

www.srivasaviengg.ac.in

...out 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 Pedatadepalli, 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 Kakinada 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 ECE Department:

Vision of the Department is to develop the department into a centre of excellence and produce high quality, technically competent and responsible Electronics and Communication engineering. 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 undergraduate program in B.Tech (ECE). The department also offers PG programme with VLSI & Embedded Systems (VLSI & ES) specialization having an intake of 18. The department has a pool of well qualified, highly experienced and 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.

Note: The FDP is planned in three phases. The basic concepts and fundamentals in the first FDP, current technologies and applications in the second FDP and futuristic trends and challenges in the third FDP. However they are independent.

Objectives of FDPs:

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.

Course Contents:

- Bio-Signal Processing and Applications.
- Transform Techniques.
- Acquisition of Bio-signals.
- Bio-Medical Instrumentation.
- Medical Image Processing.
- Biosensors and Transducers.
- Classification Techniques.
- Development of Algorithms.
- Hands on sessions on the above topics.

Resource Persons:

Prof. M. Ramasubba Reddy,
Professor, Dept. of Applied Mechanics, IIT Madras, Chennai.

Prof. Shaik Rafi Ahamed,
Professor of EEE, IITG, Guwahati.

Prof. Ch. Srinivasa Rao,
Professor of ECE, JNTUK UCEV, Vizianagaram.

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

Dr. Anil Kumar Vuppala
Associate Prof. of ECE, IIITH, Hyderabad.

Dr. Vinay Kumar Mittal
Professor & Head (Research Consultancy & Smart Campus) K L University.

***Hands on sessions by industry professionals**

Resource Persons

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Professor,
Dpt., of Applied Mechanics
IIT Madras, Chennai.

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Professor & Head
(Research Consultancy & Smart Campus)
Department of ECE,
K L University

Tentative Schedule*

Date & Day	TIMINGS	TOPIC
12-10-2020 FN (MONDAY)	9:30 AM- 10:00 AM	**Inauguration**
	10:00 AM – 11:30 AM (Session-1)	**Session by Prof. Shaik Rafi Ahamed,** **Topic:** Introduction to Bio-Medical Signal Processing
	02.00 PM - 03.30PM (Session-2)	**Session by Prof. N. Balaji** **Topic:** Research Aspects in Bio-Medical Signal Processing
13-10-2020 (TUESDAY)	10:00 AM – 11:30 AM (Session-1) 02.00 PM - 03.30PM (Session-2)	**Session by Prof. M. RamaSubba Reddy** **Topic:** Introduction to Bio-Medical Instrumentation
14-10-2020 (WEDNESDAY)	10:00 AM – 11:30 AM (Session-1) 02.00 PM - 03.30PM (Session-2)	**Session by Prof. Ch Srinivasa Rao,** **Topic:** Different Transform Techniques used in Bio-Medical signal processing
15-10-2020 FN (THURSDAY)	10:00 AM – 11:30 AM (Session-1) 02.00 PM - 03.30PM (Session-2)	**Session by Dr. Vinay Kumar Mittal** Topic: Bio-Medical Signal Processing & Its Applications
16-10-2020 (FRIDAY)	10:00 AM – 11:30 AM (Session-1) 02.00 PM - 03.30PM (Session-2)	**Session by Dr. Anlil Kumar Vuppala** **Topic:** Research opportunities in Medical Speech Processing
17-10-2020 (SATUARDAY)	10:00 AM – 11:30 AM (Session-1) 02.00 PM - 03.30PM (Session-2)	**Hands on Session on Bio-medical Signal Processing**
	3:30 PM- 4:00 PM	**Valedictory**

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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-I

12th -17th October 2020

The department of Electronics and Communication Engineering, Sri Vasavi Engineering College has conducted a Faculty Development Program (FDP-I) on "**Research Areas in Bio-Medical Signal Processing** "from 12th to 17th October 2020. The FDP program received an overwhelming response with more than 100 participants from various institutes/colleges approved by AICTE .This FDP is planned for one week to comprise 2 technical hands- on sessions & 10 Lecture Sessions on topics Bio-Signal Processing and Applications, Transform Techniques, Acquisition of Bio-signals, Bio-Medical Instrumentation, Medical Image Processing, Biosensors and Transducers, Classification Techniques, Development of Algorithms.

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:

Resource Persons

Prof. M. Ramasubba Reddy
Professor,
Dpt., of Applied Mechanics
IIT Madras, Chennai.

Prof. Shaik Rafi Ahamed
Professor
Department of EEE
IITG, Guwahati.

Prof. Ch Srinivasa Rao
Professor, Department of ECE
JNTUK UCEV,
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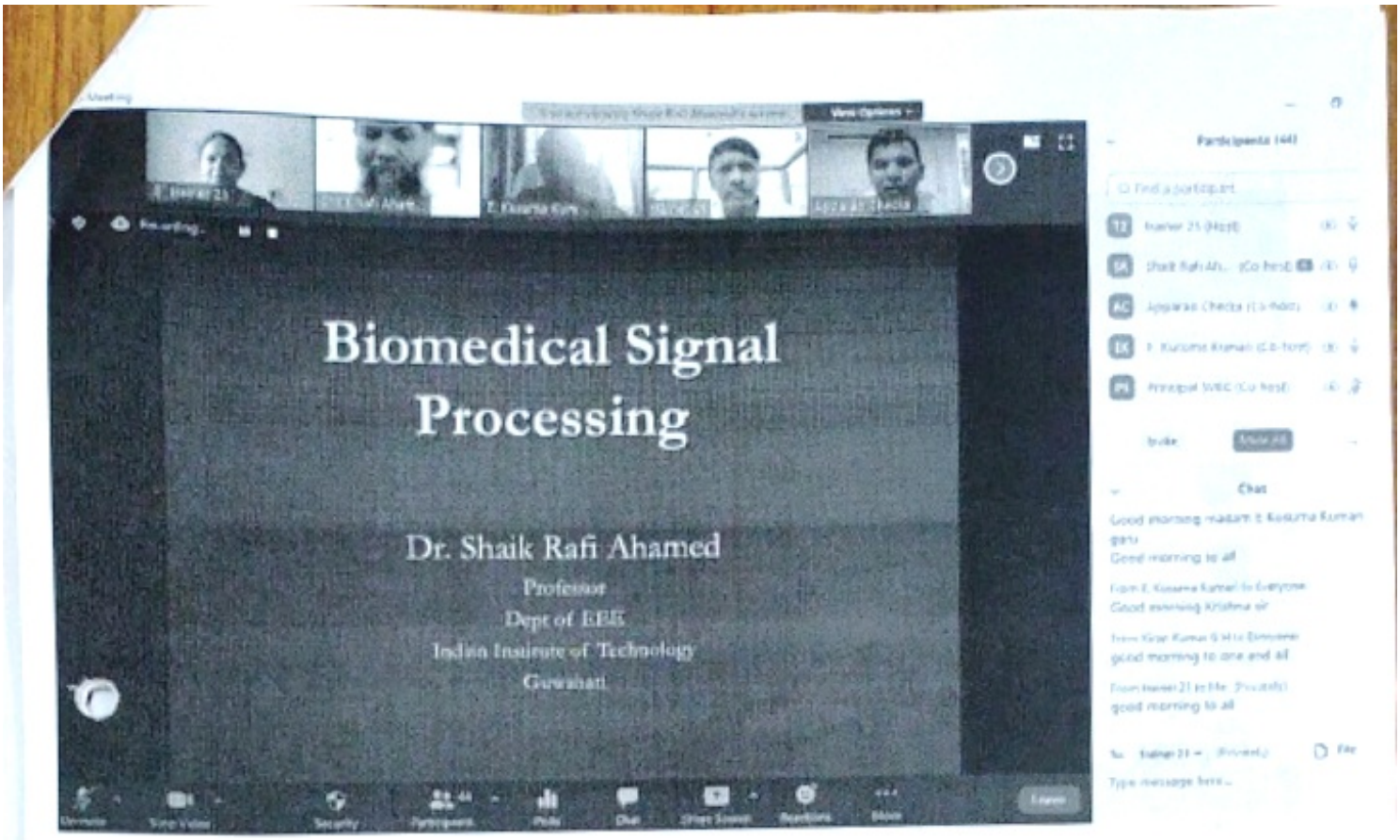
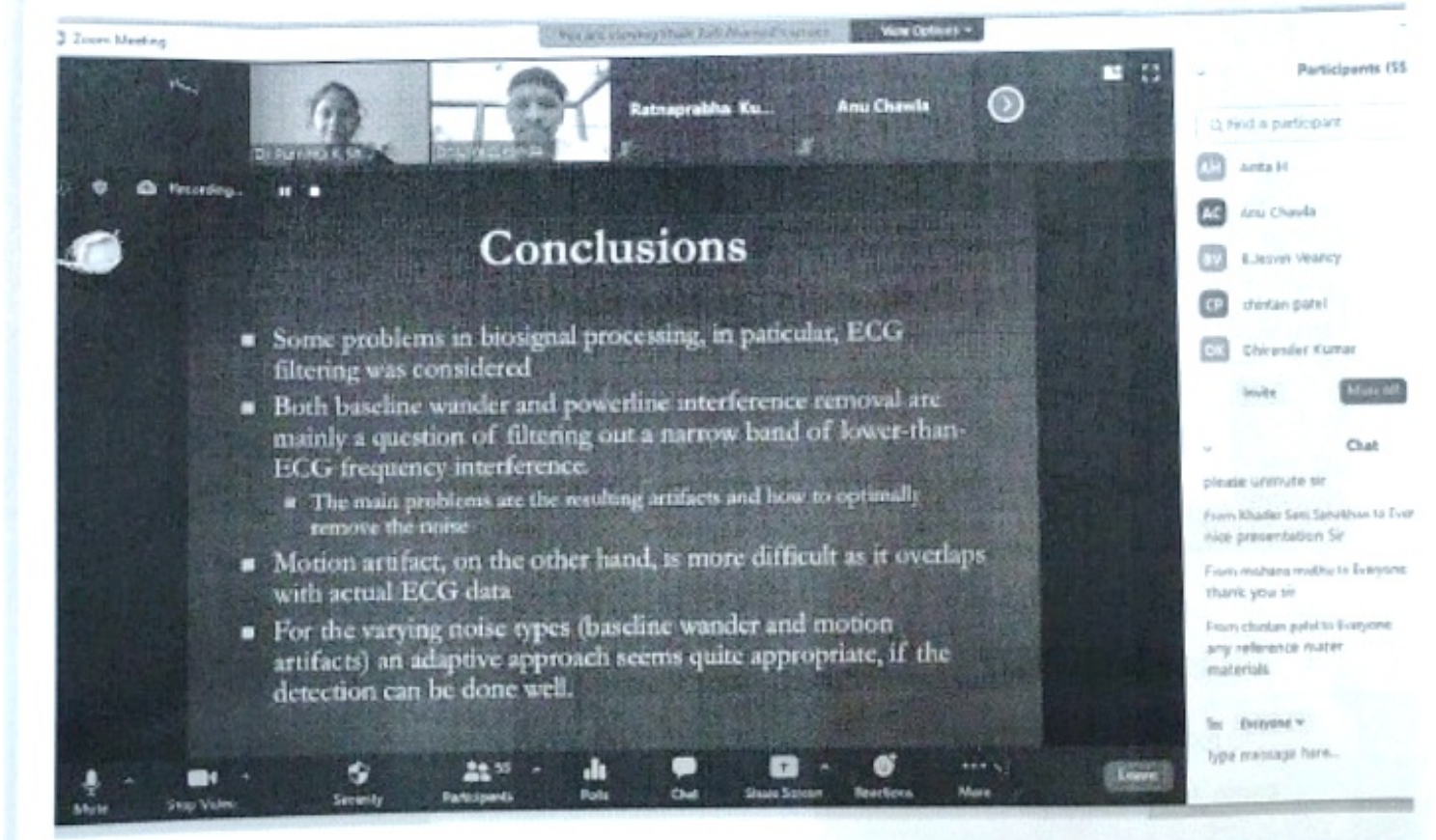
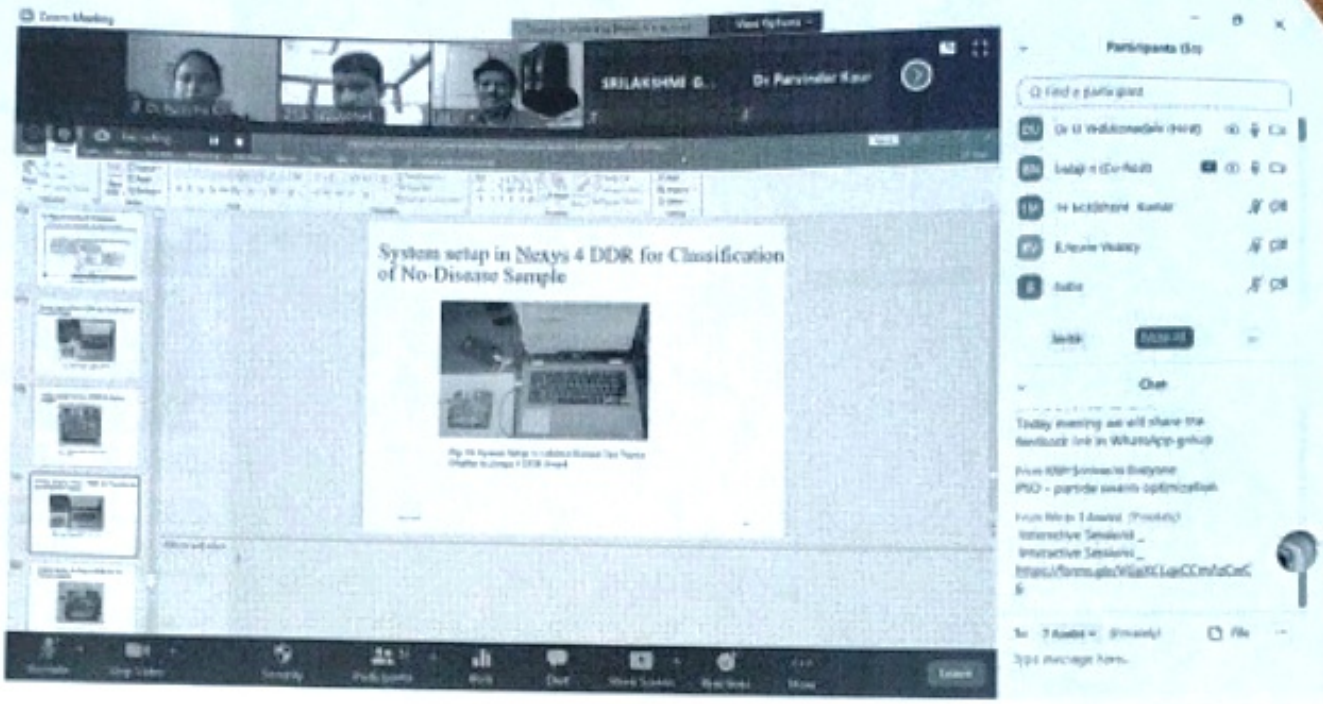

Biomedical Signal Processing
Dr. Shaik Rafi Ahamed
Professor
Dept of EEE
Indian Institute of Technology
Guwahati


Conclusions
Some problems in biosignal processing, in paticular, ECG filtering was considered
Both baseline wander and powerline interference removal are mainly a question of filtering out a narrow band of lower-than-ECG frequency interference.
The main problems are the resulting artifacts and how to optimally remove the noise
Motion artifact, on the other hand, is more difficult as it overlaps with actual ECG data
For the varying noise types (baseline wander and motion artifacts) an adaptive approach seems quite appropriate, if the detection can be done well.



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.

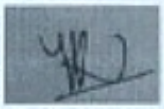
GVNS Ratnakara Rao, HoD, Dr E Kusuma Kumari, Coordinator, Dr U Yedukondalu. On 17/10/2020. It's the constant endeavor of the Institute to improve the quality of its continuing academic courses. Participants' observation/feedback is critical in improving the quality of the courses. Some suggestions were 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 Purnima K Sharma, 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 Three more Phases as per the guidelines given by AICTE as for following scheduled:

FDP Tentative Schedule:

II Week: 16- 11-2020 to 21-11-2020 (FDP-II)
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