



Visvesvaraya Technological University

"Jnana Sangama", Belagavi - 590 018

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REGISTRAR

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Date: 19 JAN 2018

CIRCULAR

Sub: One-Day Workshop on "**Sonar Signal Processing**" at K S
School of Engineering & Management, Bengaluru

With reference to the above, this is to inform that the K S School of Engineering & Management, Bengaluru is conducting one day workshop on "**Sonar Signal Processing**" on **3rd February 2018**

Contact Details:

Prof. Karthik P,
Chief Coordinator
Prof., Dept., of ECE,
KSSEM, Bengaluru
Mob: +919739319167
Email: karthik.p@kssem.edu.in

You are requested to bring this information to the notice of concerned faculty and students of your institution to participate in the workshop.

By order,
Sd/-
REGISTRAR

To,

1. The Principals of all Engineering Colleges affiliated and the constituent Engineering College, VTU, Belagavi.
2. The PG Co-Ordinator, VTU Extension Centre / Regional Centre for PG Studies in Bangalore, Belagavi, Kalaburagi & Mysuru
3. Copy to the In-charge Regional Director, VTU's Regional Office at Bengaluru, Belagavi, Kalaburagi & Mysuru for information and circulate to colleges among your respective region.
4. CNC to upload


REGISTRAR

K.S. School of Engineering and Management
Registration Form for
One-Day workshop
on
Sonar Signal Processing
3rd Feb 2018

Name:.....

Deisgnation:.....

Organisation:.....

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Mobile No.....

e-mail:

**Signature of the Signature of the Seal &
Candidate Principal/Employee**

Send the filled, signed and scanned registration form to karthik.p@kssem.edu.in within **30th Jan 2018**. The registration fee of **Rs. 500** will be collected during registration. Only first 100 registrations will be considered. Please note that registrations start by 9.00 am and first session starts by 9.30 am sharp on 3rd Feb 2018

Patrons (from VTU)

Dr. Karisiddappa, Hon'ble Vice Chancellor, VTU

Dr. H.N. Jagannatha Reddy, Registrar, VTU

Patrons (from INAE)

Dr. Vasudev. K. Atre, Former Director General of DRDO and Former Adviser to Defence Minister

Dr. A.R. Upadhya, Former Director, NAL

Patrons: (from Kammavari Sangham)

Sri. Y. Ramachandra Naidu, President

Sri. K. Venkatesh Naidu, Secretary

Sri. D. Rukmangada, Treasurer

INAE-VTU Coordinating Team

Dr. A.R. Upadhya, Former Director, NAL

Dr. Neelesh B Mehta, Professor, ECE, IISc

Dr. Suresh D.S., Exececutive Council and Academic Senate Member, VTU

Dr. K. Gayathri Reddy, Regional Director, Bangalore Regional Centre, VTU

Dr. S.N. Sridhara, Principal/Director, KSSEM

Dr. Suresh L, Principal, CIT, Bangalore

Organisers and Facilitators:

Dr. S.N. Sridhara, Principal/Director, KSSEM

Dr. Girish V Attimarad, Prof & Head, Dept. of ECE

Dr. Karthik P., Professor, Dept. of ECE

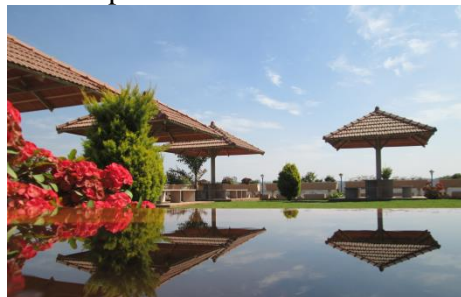
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Prof., Dept. of ECE, KSSEM

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Email: karthik.p@kssem.edu.in



Kammavari Sangham (R), 1952

K.S. School of Engineering and Management, Bengaluru

offers

One-Day Workshop
on
Sonar Signal Processing
on
3rd Feb 2018

in collaboration with

Visvesvaraya Technological University

Belagavi

&

Indian National Academy of Engineering

New Delhi



About the College

K.S. School of Engineering and Management (KSSEM) was established in the year 2010 by KammavariSangham and is approved by AICTE, New Delhi, and affiliated to Visvesvaraya Technological University (VTU), Belagavi. KSSEM offers BE and M.Tech in Civil Engineering, Mechanical Engineering, Electrical Engineering, Electrical and Electronics Engineering and Computer Science Engineering and MBA in HR, Finance and Marketing.

KSSEM is located amidst green campus of 7 acres and has marvellous infrastructure and high-end equipment and research facility. Within a short span of about 7 years, KSSEM has produced quality papers in research journals and has fetched research grant from various funding agencies. It has produced good results in VTU examinations and obtained ranks.

About the Programme

SONAR (SOund Navigation And Ranging) is an acronym for the technique or the equipment that uses sound propagation to detect, localise, or communicate with objects in water, or to navigate vessels on or under the surface of water. The role of sound in sonar is similar to that of electromagnetic waves in radar. There are two types of sonar, viz. active and passive. An active sonar transmits a sequence of sound pulses into water and listens for echoes. A passive sonar listens for the sound emitted by the underwater target. A sonar receiver system consists primarily of (1) an array of sensors, called

hydrophones, for making acoustic measurements in water, and (2) a processor for extracting relevant information from the measurements. In an active sonar, the information bearing signal is a sequence of echoes distorted by the underwater sound channel and contaminated by ambient noise and reverberation. In a passive sonar, the received signal is a distorted and noisy version of the sound radiated by the target. The nature of processing depends on the nature of application and the operational environment.

This FDP is designed to help the aspirants seeking knowledge in the domain of SONAR. After providing an introduction to sonar and underwater sound propagation, the participants will be exposed to the basic signal processing techniques employed for target detection and localisation, and principles of underwater acoustic communication. The knowledge acquired in the FDP will help the participants to write research project proposals in the areas of sonar and underwater communication for submission to various funding agencies, and to carry out research leading to the award of Ph.D.

Who can attend

Students, Faculty, Candidates from industry and corporates. Candidates belonging to any stream of engineering, science and mathematics can attend this FDP.

Last Date for Registration: 30th Jan 2018.

Registration Fee: Rs. 500 (includes training material in e-copy, lunch & tea and certificate)

Venue: Aryabhata Seminar Hall, KSSEM.

Note: For outstation participants, information on near-by lodging facility will be provided on request.

Objectives

- 1.To provide an introduction to SONAR and underwater acoustics.
- 2.To provide an introduction to the basics of array signal processing.
- 3.To provide an introduction to underwater target detection and localization techniques.
- 4.To introduce the principles of underwater acoustic communication.
- 5.To demonstrate sonar signal processing algorithms through simulations.

Schedule

- 09.00-09.30 Registration
09.30-09.45 Inauguration
09:45– 11:15Active and passive sonar – signal,noise, and reverberation
11:30 – 13:00 Array signal processing
13:00 – 13:45 Lunch break
13:45 – 15:15 Target detection and localisation
15:30 – 17:00 Underwater acoustic communication
17:00 – 17:30 Coffee break
17:30 – 18:30 Simulations and demonstration

Resource persons

1. **Prof. G. V. Anand**, PES University, Bangalore. Formerly Professor and Chairman, ECE Dept., Indian Institute of Science, Bangalore.
2. **Prof. Sanjeev Gurugopinath**, PES University, Bangalore.
3. **Prof. Venkatesh Vadde**, PES University, Bangalore.
4. **Mr. P. V. Nagesha**, PES University, Bangalore.