

SPONSORSHIP CERTIFICATE

Dr. / Mr. / Mrs.
is an employee of our Institute/Organization
and is hereby sponsored to participate in the
Workshop on "Advanced Signal Processing –
Theory and Practice" during 10 - 13
August 2011 at Thiagarajar College of
Engineering, Madurai-15.

Date :

Place :

Signature of Head of the Institution
(with seal)

Participants

The workshop is addressed to faculty of Engineering Colleges, Research Scholars, PG Students of Communication Systems, Wireless Technologies, Applied Electronics and Computer and Communication Engineering, and UG students of Electronics and Communication Engineering. The completed applications should reach the coordinator on or before 5th August 2011.

Registration Fee

The registration fee includes workshop kit, presentation materials, certificate of participation, lunch and refreshment for four days.

Faculty : Rs. 2000/-

Students : Rs. 1000/-

The number of seats is limited to 30

Mode of Payment

All payments should be made by a crossed Demand Draft in favour of "The Principal, Thiagarajar College of Engineering." payable at Madurai.



WORKSHOP ON ADVANCED SIGNAL PROCESSING - Theory and Practice

10 - 13 August, 2011



Organised by

TIFAC CORE in WIRELESS TECHNOLOGIES
and

DEPT. OF ELECTRONICS & COMMUNICATION ENGG
THIAGARAJAR COLLEGE OF ENGINEERING

MADURAI - 625 015 TAMILNADU

NB : Brochure and registration form can also be
downloaded from www.tce.edu

Course Co-ordinator
Dr. S.J. Thiruvengadam

College

Thiagarajar College of Engineering is one among the several educational, industrial and philanthropic institutions founded by Late. Sri Karumuttu Thiagarajan Chettiar. This 54 year old Institution is a Government Aided Autonomous Institution, accredited by NBA, approved by the All India Council for Technical Education and affiliated to Anna University. The college offers 9 Undergraduate, 13 Post graduate and Research programs leading to PhD degree in Engineering, Science and Architecture disciplines.

ECE Department

Department of Electronics and Communication Engineering offers an UG programme in Electronics and Communication Engineering and PG programmes on Communication Systems and Wireless Technologies. This DST FIST supported department has completed 14 research projects with research organizations like DRDL, RCI, DEAL, BrahMos Aerospace and ISRO and consultancy works for companies like Motorola, Honeywell, Texas Instruments, TVSICS, Amphenol Antel, in Wireless Communication system. The Signal Processing Lab in the department is facilitated with MATLAB, LabVIEW and VisualDSP++ software, BF533, BF537, TigerSHARC, ADSP 2181 based trainer kits from Analog devices and TMS 320c50, 5402, 6711 based kits from Texas Instruments.

TIFAC CORE

Mission REACH launched by TIFAC, DST, Govt. of India aims to create a constellation of world class COREs (Centre of Relevance and Excellence) in diverse disciplines across the country. The objective of TIFAC CORE at TCE is to generate trained manpower in emerging Wireless Technologies, to carryout collaborative research and product development in the allied areas of Wireless technologies

Course Goal

- ◆ To determine the output of a LTI system excited by a random process.
- ◆ To model a discrete time random signal as output of linear shift invariant filter.
- ◆ To determine the Wiener filter coefficients from the auto correlation and cross correlation of random sequences.
- ◆ To find the coefficients of forward and backward filters for prediction of a random sequence.
- ◆ To determine the filter coefficients and minimum error of an LMS adaptive filter.
- ◆ To estimate the frequency content and angle of arrival of a sinusoid corrupted with white noise.
- ◆ To apply adaptive Wiener filter for channel equalization and echo cancellation.

Course Outline

Introduction to Random signals: Random sequence, Autocorrelation, Autocorrelation matrix, Power spectral density, Spectral Factorization, Parametric modeling. Filtering: Wiener filter, Principle of orthogonality, Normal equations, Levinson algorithm, Schur algorithm, Lattice realization, Kalman filter. Adaptive Filtering: Adaptive wiener filter, LMS algorithm, RLS algorithm, Fast RLS algorithm. Prediction: Forward and backward predictors. Parameter Estimation: Sinusoidal spectral estimation and Angle of arrival estimation –Window method, Eigen Vector method Applications: System Identification, Noise reduction, Adaptive Channel Equalizer, Adaptive Echo Canceller, Adaptive Line Enhancer.

Contact Details

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Last Date for Registration : 5th August, 2011

REGISTRATION FORM

WORKSHOP ON ADVANCED SIGNAL PROCESSING - Theory and Practice

10 - 13 August, 2011

DEPARTMENT OF ECE

THIAGARAJAR COLLEGE OF ENGINEERING

1. Name :

2. Designation :

3. Educational Qualification :

4. Institution :

5. Experience :

6. Address for Communication

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7. Email ID :

8. Phone :

9. Fee Particulars :

DD. No & Date :

Amount :

Date :

Bank :

Date :

Signature