

Declaration

I hereby declare that the information furnished above is true to the best of my knowledge. I agree to abide by the rules and regulations governing the programme. If selected, I shall attend the course for the entire duration.

Place:

Date:

Signature of the
applicant

SPONSORSHIP CERTIFICATE

Certified that Mr./Ms./Dr.

.....

is an employee of this institution and is hereby sponsored for the STTP on 'System Identification and Parameter Estimation' at College of Engineering Trivandrum during the period 09/12/2019 to 13/12/2019. He/she will be permitted to attend the course, if selected.

Place:

Date:

Name & Signature of
the Sponsoring Authority

(Seal of the Institution)

Address for Correspondence:

Dr. Sreeja S (Mobile: 9447906670)

Asst. Professor, Dept. of Electrical Engineering,
College of Engineering, Trivandrum.

E-mail: sreejas@cet.ac.in; alprijaps@gmail.com

Registration

Fill the online form at <https://bit.ly/2OfSVud>.
The scanned copy of the signed sponsorship certificate has to be uploaded in the online form. Maximum number of seats is limited to 30.
The original sponsorship certificate duly signed will be collected during the programme.

Eligibility

The FDP is open for faculty members of APJ Abdul Kalam Technological University (KTU) affiliated Engineering colleges. Participation certificates will be issued to all the participants who have attended the FDP on all days.

TA/ Accommodation

Participants have to make their own arrangements for travel, boarding, and lodging. No TA/DA will be paid. Working lunch and refreshments will be provided

Important Dates

Last date for application	30/11/'19
Intimation of selection	02/12/'19
Confirmation of participation	02/12/'19

Faculty Development Programme
Sponsored By



on

SYSTEM IDENTIFICATION AND PARAMETER ESTIMATION

9th December - 13th December, 2019

Coordinators:

**Dr. Lal Priya P S
&
Dr. Sreeja S**

Organized by



**Department of Electrical Engineering
College of Engineering Trivandrum
Thiruvananthapuram
KERALA - 695 016**

College of Engineering, Trivandrum

College of Engineering Trivandrum was established in 1939 as the first Engineering College in the then Travancore State. Over the past 70 years it has grown to the most sought-after institute of engineering studies in the State of Kerala. The college has eight full-fledged engineering departments offering eight undergraduate, 27 postgraduate and Ph.D. programmes under the University of Kerala. The college has more than 3500 students, 300 teaching staff and 290 non-teaching staff. Ever since the inception, the college has maintained its commitment to high quality education. It has a vast and strong alumni base, spread across the globe.

About the Department

Department of Electrical Engineering, College of Engineering Trivandrum began its operations along with the establishment of the College in 1939. The department offers an undergraduate B.Tech Programme in Electrical & Electronics Engineering and four M.Tech Programmes (Control Systems, Power Systems, Electrical Machines and Guidance & Navigational Control). The department is recognised as a QIP centre for Ph.D programme by the Ministry of Human Resources Development.

Objectives of the Programme

The course aims to provide an insight into the identification and control of relevant dynamic model from input-output perturbation data. It also aims to develop the estimate of parameters by on-line fusion of dynamic model predictions with measurements through extensive simulation/ case studies/demonstration.

Course Content

System Identification

- Linearization and grey-box models
- Identification of Grey-box models
- Identification of Black-box models with Output Error (OE), ARX and ARMAX structure
- Identification of innovation form (black-box) of state space models, relationship with steady state Kalman predictor,
- Practical issues in system identification

State and Parameter Estimation

- Linear and non-linear mechanistic models
- Linear perturbation models and observability
- Kalman filter (KF) from optimization viewpoint,
- Extended Kalman filter (EKF)
- Simultaneous estimation of model parameters/unmeasured inputs using KF and EKF and random walk model
- Examples of simultaneous state and parameter estimation

Resource Persons

Prof. Sachin C. Patwardhan, Professor, Dept. of Chemical Engineering, IIT Bombay

Prof. Mani bhushan, Professor, Dept. of Chemical Engineering, IIT Bombay

Faculty Development Programme

on

System Identification and Parameter Estimation

REGISTRATION FORM

Name :

Designation :

Official Address :

Mailing Address :

Mobile :

e-mail :

Qualifications :

Specialization :

Experience :

Food Preference : Veg / Non-Veg