

## TEQIP-III Sponsored

### A Short Term Training Program (STTP)

On

### Advances in Control and Instrumentation Education and Implementations

**CO-ORDINATORS** Dr. S. N. Sharma, Dr. H. G. Patel, Prof. M. N. Bhusavalwala.

**DATES** 08-12 July 2019 (One week)

**ORGANISING DEPARTMENT** Electrical Engineering Department, S. V. National Institute of Technology (a Deemed University and an Institute of National Importance), Surat-395007, Gujarat, India

To control dynamical objects suggests ‘modifying the behavior of the object to achieve the desired objective’. The popular devices, which help the dynamical machine achieve desired goals, began from steam engine governors, subsequently, microprocessor controllers, robots and autopilots etc. Understanding influence of these devices and their interaction with other objects involve the concepts of signals, dynamical systems and feedback. For the realization of control systems, the instrumentation element has central importance. Control and Instrumentation are linked and useful for industries. The popular examples of control applications are control of aerospace objects, networked control, supervisory control of discrete-event systems, control of electrical and mechanical systems, advanced motion control as well as control of biological systems etc. Generally, control methods involve rigour. In addition to theoretical rigour, practical and physical consequences of control must be respected. For this reason, attempts would be made to make this course ‘an excellent bridge between theory and experiments’ as well.

This course is inspired from the phenomenal success of Control and Instrumentation in diverse fields. That will be of a greater interest to academic community, professionals, young research community aspiring for understanding progresses made yet on Control and Instrumentation. The content of the Course will be useful for those wish to pursue their research in these directions as well. This Course will provide an opportunity to Practitioners to understand greater insights into Control and Instrumentation.

#### *The major topics of the course*

The main ingredients of the course are the following:

- (i) System models, i.e. linear, non-linear and stochastic models, Kalman filtering and extended Kalman filtering algorithms, higher-order non-linear filtering, signal processing via control theory etc.
- (ii) Philosophy of Industrial Automation, PLC, SCADA, control laws (PI, PID control actions) and applications, demo of industrial control system, transducers and transmitters, PC-based automation etc.
- (iii) In addition to these, a special lecture would be organised on ‘*Research papers from concepts to publications*’. The lecture will encompass all intermediate stages associated with publications in prestigious Journals, which published influential research as well as shaped present knowledge and technology, eg. Academy Journals, IEEE Transactions, ASME Transactions, Journals indexed and abstracted in SCI databases

A similar program was organised previously that was greatly appreciated by the participants of the program. This Course is aimed to make academic community and Practitioners more Control and Instrumentation *educated*. This Course will discuss essential formalisms that will help academic community and Practitioners understand advanced level concepts in related areas. The greater understanding about Control and Instrumentation will contribute to addressing the complexities of interconnected systems.

## GENERAL INFORMATION

Suitably furnished accommodations will be made available, if requested in advance, in the hostels/guest houses of the SVNIT on payment basis for out-stationed candidates on a twin sharing basis.

The breakfast, working lunch will be provided to participants. Limited seats are available in this Course. The TA and DA will not be applicable to the participants.

## REGISTRATION PROCEDURE

Applications for the participation in the 'Course' should reach in the attached format via 'registered post' at the following address:

Dr. Hiren G. Patel / Dr. S. N. Sharma (**Organising committee, *Advances in Control and Instrumentation Education and Implementations***), Electrical Engineering Department, SV National Institute of Technology, Surat, Gujarat, India, 395007. E Mail: [hpatel.svnit@gmail.com](mailto:hpatel.svnit@gmail.com). The DD (Demand Draft) drawn in favour of "Director, SVNIT, TEQIP IRG" payable at 'Surat' should be sent along with the completely filled application form. The application form can be found at the page 3 of this Course detail. In case, the Applicant is not selected for the participation in the Course, then only DD would be returned back at the stated address of the Applicant. **The last date of reaching applications is June 25 2019.** Candidates would be informed of their selection by Email *by June 28,, 2019*. The fee structure is as follows:

Academicians, Scientists and Researches	Rs 1000/-
Delegates from industries	Rs.2000/-
Students	Rs 500/-

## CONTACT US:

Dr. Hiren G. Patel / Dr. S N Sharma (**Organising committee, *Advances in Control and Instrumentation Education and Implementations***)

Electrical Engineering Department,

SV National Institute of Technology, Surat, Gujarat, India, 395007.

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# APPLICATION FORM

## TEQIP-III Sponsored A Short Term Training Program (STTP)

On

### Advances in Control and Instrumentation Education and Implementations

(Electrical Engineering Department, SV National Institute of Technology Surat, India)

8-12, July 2019

Name, Designation and Address of the Applicant

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Gender: M/F \_\_\_\_\_ Age: \_\_\_\_\_

Mobile: \_\_\_\_\_

Email: \_\_\_\_\_

Qualifications: \_\_\_\_\_

Experience: \_\_\_\_\_

Accommodation required? Yes/No

Address of Sponsoring Authority:

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PAYMENT DETAIL:

D.D.No. \_\_\_\_\_

Date: \_\_\_\_\_

Rs. \_\_\_\_\_

Bank Name: \_\_\_\_\_

Signature of the Applicant

The applicant will be permitted to participate in the above program if selected. Further, I have personally talked with the applicant and the applicant seemed to be sure to attend the course, if selected.

Signature of Head of the Institution with Seal