

Registration Form
Faculty Development Program
On
Fractional-order Modeling,
Control and Applications
(29th February- 4th March 2016)

Name:-----

Designation:-----

Academic Qualification:-----

Specialization:-----

Teaching Experience (in Yrs.):-----

Department:-----

Institute/College:-----

Mailing Address:-----

Mobile No.-----

E-mail:-----

Amount-----DD No.-----

Bank Name:-----Date:-----

Signature of Applicant

I hereby sponsor Dr./Mr./Mrs. -----
To participate in the faculty development program on,
“**Fractional-order Modeling, Control and Applications**”.
The applicant will attend the course, in case the admission is
offered to him/her.

**Signature of Sponsoring
Authority With seal**

Participation

This faculty development program is interdisciplinary. Participation is open for all AICTE approved engineering college/ institute's faculty on ‘first come first serve’ basis.

Registration

Application is invited in the prescribed format duly sponsored by the head of the Institute. Payment of registration fees should be made through demand draft of Rs.2,500/- (Two Thousand Five Hundred only) payable at Pune in favour of “**The Director, College of Engineering, Pune**”. The selected applicant must send an acceptance E-mail to confirm his/her participation in the program.

Correspondence

Dr.V.N.Pande, Associate Professor

Mobile No.: -9422915473

Mrs.A.V.Tare, Assistant Professor

Mobile No.: -9850739571

Electrical Engineering Department
College of Engineering Pune-411 005.

E-mail: fdp.elec@coep.ac.in

Advisoray Committee

Prof. B.B. Ahuja, Director, COEP

Prof. B.N. Chaudhari, Deputy Director, COEP

Prof. D.B. Talange, TEQIP Coordinator, COEP

Prof. S.S. Dhambhare, Head, Electrical Engg. Dept.

Prof. Mrs. M.A. Joshi, President, IET Pune local center

Organising Committee

Dr. Mrs. A.A. Dharme

Mrs. S.P. Ghanegaonkar

Mrs. V.S. Rajguru

Dr. Mrs. S.V. Jadhav

Mr. A.P. Deshpande

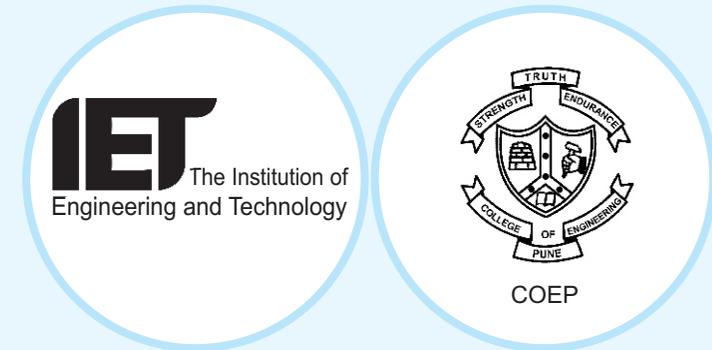
Dr. R.T. Ugale

Mr. S.M. Kakade

ISTE Approved

Faculty Development Program
(Under TEQIP - II)
On
Fractional-order Modeling,
Control and Applications
(29th February- 4th March 2016)

Sponsored by



Coordinator

Dr.V.N.Pande

Associate Professor

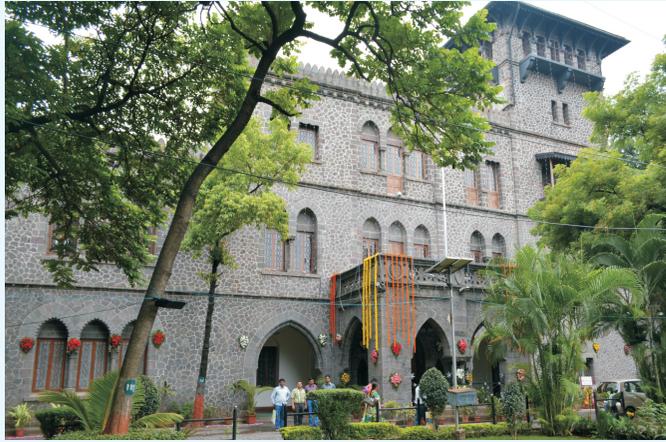
Co-Coordinator

Mrs. A.V.Tare

Assistant Professor

Electrical Engineering Department
College of Engineering, Pune

About College of Engineering Pune



The College of Engineering (COEP) is one of the oldest colleges in Asia founded in 1854. The college started with course in civil engineering and therefore became “Poona Civil Engineering College”. Subsequently, in the year 1911, the nomenclature was changed to “The College of Engineering, Poona”. It was initially affiliated to the University of Bombay and later to the University of Pune. The degree programs in civil engineering, mechanical engineering and electrical engineering were started in 1908, 1912 and 1932 respectively. Since then, the college has gone on expanding and adding new departments and new wings by the year.

In 2003, the college was awarded autonomous status, thus giving it the freedom to set its own curricula and manage its own finances. This has been the biggest change as far as pedagogy at COEP is concerned. Since autonomy, the institute has galloped ahead marching towards all milestones in its ambitious vision by way of progress in all facets of functioning. It is a flagship engineering education institute of the Maharashtra state.

It has state-of-art, modern laboratories developed with the collaboration of industries. The World Bank aided TEQIP-I and TEQIP-II projects have further enriched the laboratories to motivate the research and department culture. The institute is ranked within 15 in surveys carried out by various agencies/organizations.

Today, COEP offers ten UG and twenty-three PG programs, and has more than 3800 students enrolled in its various courses.

About Department of Electrical Engineering

The Department of Electrical Engineering is running UG program since 1932 and PG programs in Power Systems and Control Systems since 1952. It has 84 years long history of technical education. It has a team of 22 faculty members. Nine faculty members are Ph holders, out of which six faculty members have obtained their Ph.D. from the IITs and have good exposure to the research culture. Their research papers are published in peer reviewed journals like IEEE and IEE. The department has developed excellent laboratories in the domain of electrical machines, power system simulation and control systems. These laboratories are proving helpful in elevating the UG and PG education offered by the department. The excellent computational facilities and simulation platforms such as Maxwell, PSCAD, LabView, dSPACE, PSIM are very useful for engineering education and research. Regular Ph.D. students are enrolling for Ph.D. program. Department is recipient of sponsored research project from AICTE, DST, DRDO. Few faculty members are engaged in industrial consultancy with companies like Emerson, L&T, Bosh etc. Special training programs for industry persons are organized by the department. The department has 10 plus faculty members who work in the area of electrical machines, power electronics, control systems, renewable power. The power electronics, digital electronics, digital signal processing, power system, electrical machines and control systems are key courses offered to UG and PG program. The department has used TEQIP funds and DST-FIST fund effectively to create the state of the art infrastructure. The indigenously developed laboratory set ups are attracting the attention of elite institutes including the IITs. Some of these set ups are first-of-its-kind in the country.

Scope and objective of FDP

Control System is an interdisciplinary branch of engineering and mathematics that deals with the modification of dynamic systems to obtain the desired performance in terms of a set of specifications or a reference model. We can modify the performance of the dynamic system only after knowing its model, method of its analysis, ways to specify the required behavior and techniques to implement them. Usual tools to model the

dynamic systems are integrals and derivatives. Fractional-order Control (FOC) uses the fractional calculus to model and control the systems dynamic. In certain point of view, FOC proves itself to be superior over the conventional control methods. Thus now a day, FOC is the topic of budding researchers. Keeping this in mind, the objectives of this FDP are to introduce the faculty in engineering and technology about the concept of Fractional-order Modeling and Control, to give an exposure regarding Fractional-order Control methodology, to open a new research avenue in this field for researcher and to make the participants conversant with the actual applications.

Contents of the course

- Fractional Calculus
- Fractional-order Modeling
- Various Control Techniques implemented with FOC
- Application of Fractional - order Control
- Case studies with practical systems
- Laboratory sessions for simulation/implementation of different FO control methodologies.

Resource Faculty

Expert Faculty & Researchers will be invited from premier Institutes like IITs, IIST, and NITs.

1. **Prof. P. S. V. Nataraj**
Systems and Control Engineering, IIT Bombay
2. **Dr. N. Selvaganeshan**
Department of Avionics, IIST, Trivandrum
3. **Prof. Mohan V. Aware**
Electrical and Electronics Department, VNIT, Nagpur
4. **Prof. Varsha Gejji**
SP Pune University, Pune.
5. **Prof. Vishwesh Vyawahare**
RAIT, Nerul, Navi Mumbai
6. **Prof. Mukesh D. Patil**
RAIT, Nerul, Navi Mumbai
7. **Prof. B. M. Patre**
SGGS, Nanded