About IIT Indore

IIT Indore is located in Indore which takes pride of being cleanest city in India. It was established in 2009 with motto of ‘ज्ञान सब्जन्तनिहिताय (Knowledge is for the well-being of everyone)’. It belongs to IIT family which is known to provide best education in Engineering and Technology across India. IITs are also declared as institute of national importance by the Government of India.

IIT Indore has shown relentless effort in providing best platform for education as well as research in several areas of science and technology. Within 10 years of its foundation, IIT Indore debuted into top 500 universities in Times Higher Education World University Rankings. Currently, it is ranked at 351-400 among global universities, 50th among Asian universities, and holds 2nd rank across India.

Course Features

- Classroom lectures
- Discussion with speakers

Course Fee

- TEQIP-III sponsored participants: NIL
- Students: INR 8000 + GST @ 18% per participant
- Faculties: INR 12000 + GST @ 18% per participant
- Participants from industry: INR 18,000 + GST @ 18% per participant
- Course fee includes study material, breakfast, lunch and tea for entire course duration

Schedule and Venue

6 days: 19-24 Aug. 2019 (10:00 AM – 05:00 PM), Discipline of Electrical Engineering, IIT Indore

Last Date of Registration

15 Aug. 2019

Registration Procedure

- Fill the registration form
- Pay the registration fee (if required)
- Send the filled registration form and proof of payment (if required) to the following email ID on or before 15th Aug. 2019: abhinoy.singh@iiti.ac.in

Number of Seats

- Unlimited for TEQIP-III sponsored participants
- Limited to 20 for other than TEQIP-III sponsored participants. Please seek a permission for registration in email before making the payment.

Mode of Payment:

Demand draft in favor of Registrar, IIT Indore

OR,

Online payment/transfer to following account:

Account number: 1476101027440
Bank name: Canara Bank
Branch: IIT Indore, Khandwa Road, Indore
IFSC Code: CNRB0006223
Brief description about the course

Industrial systems/processes are designed to show some specific response in order to perform a task. However, the response generally varies from the expectations due to several physical and non-physical factors. Control systems are used to regulate the system/process to provide the desired response. The signal processing independent to control systems is used for analysis and synthesis of signals. The signals are important to convey information about the variation of several phenomena. Both the control systems and signal processing are extensively used in modern industrial applications. The wide applicability of classical control systems includes control systems automated vehicle driving and network control to ease the busy traffic. The state space modeling based modern control systems have further helped in dealing with several industrial challenges, e.g. tracking of objects (like vehicle, satellites, enemy warheads etc.), forecasting of several phenomenon (especially related to weather and finance), stochastic modeling using parameter estimation. On the other hand, the signal processing has enhanced the performance of several systems/processes due to accurate collection of information from disturbed signals. A simple example can be considered as processing of biomedical signals (like ECG and EEG signals) for accurate diagnosis of heart and brain related disorders. This course will discuss about many recent trends of control systems and signal processing in industrial problems. Some recent results will also be discussed which can enhance their applications in emerging problems in different areas of science and technology.

Following questions will be explored:

- Why control systems and signal processing?
- What are some recent developments in control systems and signal processing?
- How control systems and signal processing have been used to enhance different areas of science and technology?

Who will benefit

- UG and PG students of Electrical Engineering, Electronics Engineering, Instrumentation and Control, Biomedical Engineering, Aerospace Engineering, and related areas.
- PhD students with expertise in control systems, signal processing, mathematics and computation, machine learning, biomedical signal processing, biomedical modeling etc.
- Faculty members with above discussed specialization.
- Industry experts involved with control systems and signal processing related applications.

Other details

Accommodation during the course:

- Limited accommodation is available on payment basis.
- To be availed on first come, first served basis.

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Indian Institute of Technology Indore,  
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E-mail: abhinoy.singh@iiti.ac.in  
Phone: 07549403709(M)

About Faculties

Coordinator: Dr. Abhinoy Kumar Singh

Dr. Abhinoy Kumar Singh received his Ph.D. degree in Electrical Engineering from IIT Patna, India, in 2016. During the PhD, he worked on algorithm development for estimation and filtering. He did his postdoctoral research from McGill University, Canada which is ranked at 31 in QS world ranking. During the postdoctoral research, he worked on developing a continuous glucose monitoring (CGM) system which is part of an underdeveloped artificial pancreas. An accurate CGM system is expected to ease type-1 diabetes treatment by providing better glucose management in patient’s body. He is currently working in the Discipline of Electrical Engineering, IIT Indore, an Inspire faculty.

Co-coordinator: Prof. Ram Bilas Pachori

Prof. Ram Bilas Pachori received the Ph.D. degree in Electrical Engineering from IIT Kanpur, India, in 2008. He worked as a Postdoctoral Fellow at University of Technology of Troyes, France during 2007-2008. He served as an Assistant Professor at Communication Research Center, IIIT Hyderabad, India during 2008-2009. He served as an Assistant Professor in the Discipline of Electrical Engineering, IIT Indore, India during 2009-2013. He worked as an Associate Professor in the Discipline of Electrical Engineering, IIT Indore, India during 2013-2017 where presently he has been working as a Professor since 2017. He is also a Visiting Professor at School of Medicine, Faculty of Health and Medical Sciences, Taylor’s University, Subang Jaya, Malaysia since December 2018. He worked as a Visiting Scholar at Intelligent Systems Research Center, Ulster University, UK during December 2014. He is an Associate Editor of Electronics Letters, Biomedical Signal Processing and Control journal and an Editor of IETE Technical Review journal. He is a senior member of IEEE and a Fellow of IETE. He has more than 160 publications which include journal papers, conference papers, books, and book chapters.
Registration Form

SHORT-TERM COURSE
ON
Control System and Signal Processing: Solutions to Biomedical Problems

Name:

Designation:

Institution/Organization:

Address:

E-mail id:

Phone/Mobile No.:

Payment details
Cheque / Demand Draft no. ________ dated__________ bank________________amount in Rs.

__________ drawn at______________

Applicant's Signature

Place:

Date: