

Introduction

The data acquisition and control (DAQ) is a process of measuring real world physical properties and converting the resulting samples into digital numeric values that can be analyzed to extract information. The complexity of the experimental apparatus and the need for decoding information from the acquired signals had also enforced changes in the way, data acquisition systems (DAS) work. In this workshop we plan to deal with modern trends with evolutions and design considerations that have improved the field of data acquisition system.

This training course is designed for scientists & engineers to provide a comprehensive overview on modern trends in DAQ for analyzing and monitoring different types of industrial processes/ systems.

On completion of this training course, the participants will acquire a good knowledge about IOT (Internet of Things), wireless sensor networks, introduction to mobile robots and sensor data fusion in a simple manner. An off the shelf mobile robot will be used during the workshop which will require some Arduino programming, and practical use of FPGAs (Field-programmable Gate Array) for data acquisition applications using FPGA training KIT. FPGA's are widely used now a days for industrial data acquisition to space missions and nuclear reactors. This course will also cover current/ future trends in data acquisition, process control, industrial networking control, SCADA (Supervisory Control and Data Acquisition), RFID (Radio Frequency ID), and Arduino (which simplifies the process of working with microcontrollers).

Course Outline

- Sensor data acquisition, visualization, and fusion in mobile robots
- Industrial Internet of Things.
- FPGA-based data acquisition systems
- Wireless sensor network (WSN)

Course Program

- Lecture Sessions
- Practical Sessions
- Technical Tour
- Panel Discussion

Objectives

- Skilled & literate Human Resource Development (HRD) to cope with the emerging technologies.
- Provide practical knowledge of data acquisition.
- Interactive exposure to HMI (Human Machine Interface), and IAD (Industrial Automation Components).

Eligibility

Scientists, engineers, and academicians intended to join the course should be well versed with the use of computers.

Registration

Registration Form duly recommended by the Head of Establishment/ Organization should reach the Course Coordinator on or before SEP 15, 2017

(Soft copy of the Registration Form is available at <http://www.sidnlps.org.pk>)

Course Fee

Per participant Rs 5, 000/-
(Payable at Registration Desk by cross cheque in favor of Head LAO, PINSTECH, A/C# 19693-3).

Course fee covers cost of course material, regular lunch/ intersession tea etc.

Accommodation/ Travel

Participants will have to make their own arrangement of stay in Islamabad or Rawalpindi. Also, TA / DA if any is the responsibility of nominating establishment.

Workshop Venue

Dr. I. H. Usmani Auditorium,
PINSTECH, Islamabad.

Pick & Drop to Venue

Enrooted pick & drop from Rawalpindi / Islamabad to the training course venue (PINSTECH, Nilore) will be provided by the course organizers. For further information, please contact

Mr. Zahid Munir, PS, MIS.

Ph: 051-9248801-7 Ext. 4407

Mobile No: 03335225260

E-mail: zmunir@pinstech.org.pk

Course Coordinator

*Engr. Muhammad Athar Farooq, DCE,
Head Data Acquisition and
Processing Group, MIS, PINSTECH*

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051-9248808

Advance Training Course on Data Acquisition, Control and Processing

09-13 October, 2017

Management Information System (MIS) Division,
PINSTECH, P.O. Nilore, Islamabad

Registration Form *

Name: _____

Photograph

Father's Name: _____

CNIC No.: _____
(Please attach CNIC copy)

Highest Qualification: _____

Experience: _____

Designation/Post: _____

Organization/Establishment: _____

Mailing Address: _____

E-Mail: _____

FAX: _____

Ph. Off: _____ Home: _____

Mobile: _____

Signature (Participant): _____

Date: _____

Recommendation by the Head of nominating
Establishment:

Signature _____
Stamp _____

Patron-in Chief **Mr. Muhammad Naeem, S.I,H.I**
Chairman, PAEC

Patron

Dr. S. M. Javaid Akhtar
Member (Science), PAEC

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Committee* **Engr. Iqbal Hussain Khan, CE**
Director General, PINSTECH

Dr. Shafiq A. Mujahid
Director Coordination, PINSTECH

*Organizing
Committee*

Dr. Syed Zubair Ahmad, DCS
*Head Management Information
System Division.*

Engr. Muhammad Athar Farooq
*Deputy Chief Engineer, Head DAPG,
MIS, PINSTECH*

Mr. Zahid Munir
PS, MIS, PINSTECH

Dr. Amin Akram
PS, MIS, PINSTECH

Mr. Muhammad Kashif
SS, MIS, PINSTECH

Faculty

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*Head Management Information
System Division*

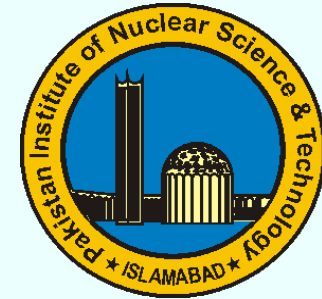
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Professor, COMSATS, Islamabad.*

Dr. Umar Ahmad
*Department of Electrical Engineering,
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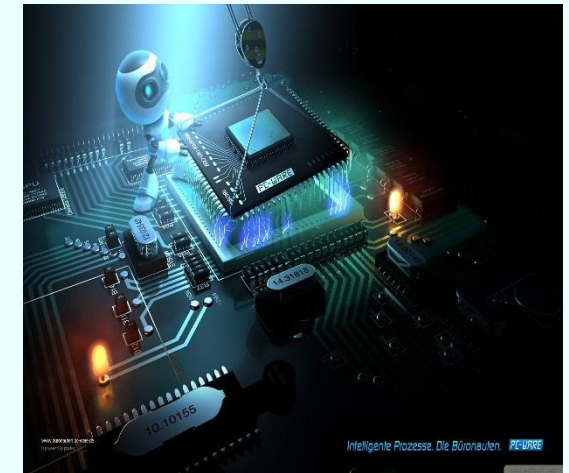
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Management Information System Division
Directorate of Coordination
**Pakistan Institute of Nuclear Science & Technology
(PINSTECH)**
P.O. Nilore, Islamabad