



## Technical Workshop:

**Title:** TWP 501 – Microprocessor Based Digital Control System Design

**Duration:** 20 hours

**Content:**

1. Basic linear circuits: components, circuit principles.
2. Concept of impedance.
3. Semiconductor Devices: Diodes, Transistors, IGBTs.
4. Operational amplifiers and applications.
5. Digital electronics: logic devices, decoders, multiplexers, flip-flops, ADC, DAC.
6. Microcontrollers and digital signal processors (DSP): hardware capabilities, internal bus, I/O ports for digital input/output, analog to digital converters (ADC), digital to analog converters (DAC), PWM output, timers and counters, interrupts.
7. Microcontroller and DSP software: register level programming, C languages and library support for I/O functions and mathematical logic.
8. PIC 18F452 microcontroller example.
9. Motorola 58Fxxx microcontroller/DSP example.
10. Examples: Microcontroller/DSP based real time measurement and control examples.
11. Examples with Matlab/Simulink/RTW/xPC Target/xPC Hardware

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### Registration Information:

**Dates:**

**Location:**

**Cost:** \$1450.00 /person, 10% discount for each additional person from the same company.

**Name:**

**Company:**

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