



**VIT**<sup>®</sup>  
Vellore Institute of Technology  
(Deemed to be University under section 3 of UGC Act, 1956)

**School of Mechanical Engineering**  
**Department of Design and Automation**

*Organizes*

**National Hands-on Workshop: Control System Design using  
Linear Inverted Pendulum and Ball Balancing Table**

**29th August 2025**

**Venue:** 501, ALM Block  
**Instrumentation and Control Systems Lab**

**Sessions handled by:** Industry Experts from Acrome, Turkey

**About the Workshop**

This workshop offers an **experiential learning opportunity** in Control System Design using **experimental platforms** such as **Linear Inverted Pendulum** and the **Ball Balancing Table**. Participants will gain practical insights into how classical control theories are applied to real-world systems through **hands-on experiments**.

**Key Topics Covered**

- Introduction to Acrome Experimental Platforms (Inverted Pendulum & Ball Balancing Table)
- System Modeling and Transfer Function Derivation
- Basics of Root Locus and Control Design Principles
- P, PD, and PID Controller Design and Implementation
- Performance Measures: Overshoot, Settling Time, and Steady-State Error
- Hands-on Experiments: Real-Time Stabilization and Controller Tuning

**Benefits to Participants**

- ✓ Gain **practical exposure** to control system design
- ✓ Apply theory to **real-time hardware experiments**

**Registration Details**

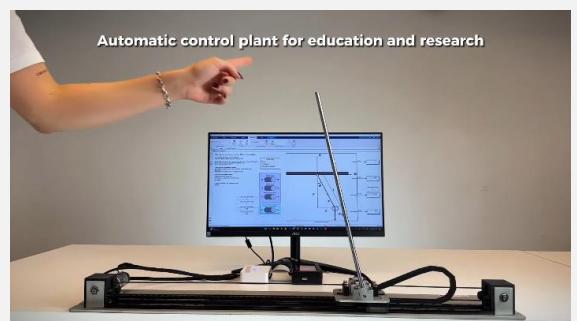
**Course Fee:** ₹200 + 18% GST

**Link:** <https://events.vit.ac.in/>

**Contact:** 7762961618 / 8668034606



**Ball Balancing Table**  
[2-DoF Control Platform](#)



**Linear Inverted Pendulum**  
[2-DoF Control Platform for Advanced Control](#)



**Coordinators**

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