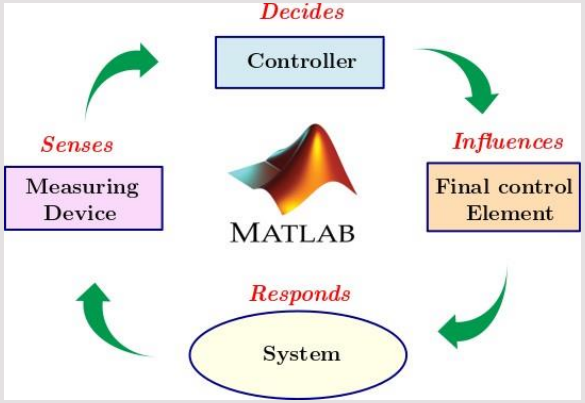
VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

A Value Added Programme

On

Control Systems Design and Analysis Using MATLAB

Dates: 9th, 10th, 16th, 17th and 23rd November 2024



Organized by

School of Electrical Engineering
Vellore Institute of Technology,
Vellore-632014.

ABOUT THE VAP

Control systems are crucial in several fields of engineering for their potential to achieve efficient, safe and reliable operations. Control systems are used to enhance production, safety and efficiency in various fields including automotive, aerospace and petrochemical industries. Sensor data plays vital role for the effective functioning of control systems. Control systems engineers use MATLAB and Simulink for different stages of feedback design including system modelling, controller design, controller deployment and performance analysis. Hence, considering the importance of control systems in the industries, this VAP aims to discuss the principles of feedback control and emphasize the practical insight into the tools for modelling and simulating the dynamical systems using MATLAB.

TECHNICAL SESSIONS

- Mathematical modeling of dynamical systems
- Creating and analysing the responses of LTI models
- Stability analysis of a feedback system in time- and frequency domains
- Performance analysis of feedback systems in Simulink
- PID controller design and implementation Issues
- Feed-forward control and cascade control
- Model predictive control, Internal model control
- Design of pole placement controller
- State observer design and linear quadratic regulator
- Stabilization control of inverted pendulum

ABOUT VIT

VIT was established with the aim of providing quality higher education on par with international standards. It persistently seeks and adopts innovative methods to improve the quality of higher education on a consistent basis. The campus has a cosmopolitan atmosphere with students from all corners of the globe. Experienced and learned teachers are strongly encouraged to nurture the students. The global standards set at VIT in the field of teaching and research spur us on in our relentless pursuit of excellence. In fact, it has become a way of life for us. The highly motivated youngsters on the campus are a constant source of pride. Our Memoranda of Understanding with various international universities are our major strength. They provide for an exchange of students and faculty and encourage joint research projects for the mutual benefit of these universities. Many of our students, who pursue their research projects in foreign universities, bring high quality to their work and esteem to India and have done us proud. With steady steps, we continue our march forward.

ABOUT THE SCHOOL OF ELECTRICAL ENGINEERING

The School of Electrical Engineering (SELECT) has over 98 faculty members who pursued their UG, PG and Doctoral degrees from top-notch universities. The school offers B.Tech. (Electrical and Electronics Engineering), B.Tech. (Electronics and Instrumentation Engineering), M.Tech. (Power Electronics and Drives), M. Tech. (Control and Automation), Ph.D and Integrated Ph.D in Engineering. Both B.Tech. and M.Tech. programmes attract the Intelligent students from the country and abroad. The B.Tech. Electrical and Electronics Engineering and B.Tech. Electronics and Instrumentation Engineering Programmes are accredited by the Engineering Accreditation Commission of ABET. All UG & PG programmes of

the school are accredited by the Institution of Engineering and Technology (IET), U.K. The placement record of the school has always been impressive. Almost 100% of the students secure job from the campus placement and many of them are recruited in core companies. Danfoss Advance Drives Lab, Schneider Electric Smart Energy Monitoring Lab, Fluke Testing and Calibration Lab, Q-Max Automated Test Engineering Lab (Alumni Sponsored Lab) and NxP Semiconductors, India, have established Centre of Excellence for students R&D activities under the guidance of faculty members and industry experts.

Resource Persons

Dr. Vinodh Kumar E
SELECT, VIT

Dr. Medarametla Praveenkumar
SELECT, VIT

Dr. Jitendra Kumar Goyal
SELECT, VIT

Dr. Maddela Chinna Obaiah
SELECT, VIT

Dr. Selvakumar K
SELECT, VIT

REGISTRATION

Registration fee : Rs.200/-

* Registration fee excludes 18% GST.

Mode : Offline

Target group: UG and PG students

Maximum 30 participants will be accommodated in the VAP. Hence, the preference will be given according to first come first serve basis. Prospective participants can register for the VAP through the following link.

https://events.vit.ac.in/

IMPORTANT DATES

Last date for registration: 01-Nov-2024

Dates of VAP: 9th, 10th, 16th, 17th & 23rd November 2024

Co-ordinators

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ORGANIZING COMMITTEE

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