



Pragati Engineering College
(AUTONOMOUS)



A Report on

Guest Lecture

On

**“Lab VIEW for Engineers: Tools,
Techniques and Applications”**

on 11th September 2025

Organized by

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Under

ECE Student Association

Department of Electronics and Communication Engineering
organizing

Guest Lecture on

"Lab VIEW FOR ENGINEERS :
TOOLS, TECHNIQUES AND APPLICATIONS"

by

Dr. P. Vinay Kumar

Assistant Professor of ECE,

UCEK, JNTUK, Kakinada

11th September-2025



Pragati Engineering College
(AUTONOMOUS)





Learning is Supreme Duty

PRAGATI ENGINEERING COLLEGE

(Approved by AICTE, Permanently Affiliated to JNTUK Kakinada & Accredited by NBA)

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

DATE: 12.09.2025

A Report on

Guest Lecture

on

“Lab VIEW for Engineers: Tools, Techniques and Applications”

On 11th September 2025, a Guest Lecture on “LabVIEW for Engineers: Tools, Techniques, and Applications” was organized by the Department of ECE for the second-year B.Tech ECE students under the ECE Student Association. The session was conducted in EG-6 Computer Lab-I. The lecture was delivered by Dr. P. Vinay Kumar, Assistant Professor, Department of ECE, JNTUK University, who served as the resource person. The event was coordinated by Mrs. L. Gaviramma, Assistant Professor, Mr. T. Sekhar, Assistant Professor, and Mr. M Ravi Kumar, Assistant Professor, Department of ECE.

Total 70 Students were Participated in this Guest Lecture from Both II and III Year

About the Resource Person:

Dr. Vinay Kumar Pamula is an Assistant Professor in the Department of Electronics and Communication Engineering at University College of Engineering Kakinada (UCEK), Jawaharlal Nehru Technological University Kakinada (JNTUK). His academic and research interests span signal processing, communication systems, control systems, and embedded system applications.

He has contributed to teaching and mentoring undergraduate and postgraduate students in core areas of Electronics and Communication Engineering. Dr. Pamula is actively engaged in research projects, curriculum development, and faculty development programs, with a keen interest in bridging the gap between theoretical foundations and practical engineering applications.

Authored more than 40 research papers. Visited China, Italy, Australia, Hong Kong, Malaysia and Sri Lanka for paper presentation in the International Conferences. He is a Life Member of ISTE, Instrument Society of India-IISc Bangalore and Senior Member of IEEE.

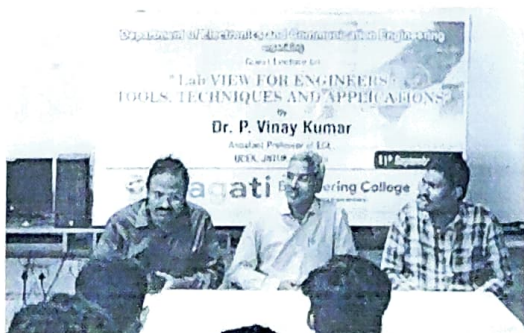


Photo of Inviting the Guests on to the dais (Dr. G Naresh, Prof. and Principal, Recourse Person Dr. P Vinay Kumar, Assist. Prof., ECE, JNTUK and Dr. V Prasanth, Assoc. Prof. and HOD-ECE



Photo of Addressing the Guest Lecture by Dr. G Naresh, Prof. and Principal and Dr. V Prasanth, Assoc. Prof. and HOD-ECE

Dr. G. Naresh, Professor and Principal given the inaugural speech, "In today's rapidly evolving technological world, engineers must not only understand theoretical concepts but also acquire hands-on expertise with modern tools. LabVIEW is one such powerful platform that bridges classroom learning with real-world applications in industries such as electronics, automation, and communication. I am delighted that our Department of ECE has taken this initiative to organize a Guest Lecture on '*LabVIEW for Engineers: Tools, Techniques, and Applications*.' I extend my heartfelt gratitude to Dr. P. Vinay Kumar, Assistant Professor from JNTUK University, for accepting our invitation and sharing his valuable knowledge with our students. I encourage all the students to actively participate and make the best use of this opportunity for their academic and professional growth."

Dr. V. Prasanth, Associate Professor and Head of the Department of ECE is given the inaugural speech, "It gives me immense pleasure to welcome you all to this Guest Lecture. LabVIEW is a globally recognized tool widely used for simulation, testing, and measurement in the engineering domain. Such programs are designed to enrich the practical understanding of our students beyond the syllabus and to expose them to the latest technologies in the industry. I sincerely thank Dr. P. Vinay Kumar for being here with us as the resource person and sharing his expertise. I also appreciate the efforts of our faculty coordinators for successfully organizing this event. I hope our students will gain valuable insights and apply them effectively in their future projects and careers."

Introduction:

Lab VIEW (**L**aboratory **V**irtual **I**nstruments **E**ngineering **W**orkbench) is a system design platform and development environment widely used for data Acquisition, instrument control, and system design and analysis and industrial Automation.

Objective of the workshop:

- To introduce students to the basics of LabVIEW software.
- To provide Hands-On experience in graphical Programming.
- To explain the role of LabVIEW in real-time measurement, automation, communications, and control systems.
- To motivate students to apply thr LabVIEW for academic projects and research.

Session Highlights:

The workshop was conducted by Dr. P. Vinay Kumar, who delivered an insightful and interactive session. The following key topics were covered:

Morning Session (10:30 AM – 12:00 PM)

The morning session focused on an **Introduction to LabVIEW** and its fundamentals. The resource person explained how LabVIEW, as a graphical programming environment, simplifies engineering applications through intuitive visual design. The following key topics were covered:

- **Features and Advantages of Graphical Programming:** An overview of LabVIEW's user-friendly environment, its drag-and-drop interface, and its advantages over traditional text-based programming.

- **Understanding the Concept of Data Flow:** Explanation of the data flow model in LabVIEW, where the execution depends on the availability of data, enabling parallel and efficient computation.
- **Loops, Arrays, and Case Structures:** Introduction to iterative programming using *for* and *while* loops, handling datasets with arrays, and conditional execution with case structures.
- **Signal Processing and Data Handling:** Basics of numeric operations, signal generation, filtering, and control of data inputs/outputs were demonstrated to give students practical exposure.
- **Real-Time Relevance:** The importance of LabVIEW in modern engineering practices was highlighted, especially its applications in testing, automation, and embedded systems.

The session gave the students a clear conceptual foundation and prepared them for the hands-on practical demonstration planned in the afternoon session.



Photos Delivering Lecture on Introduction of Lab VIEW by Resource Person in morning Session

Afternoon Session (1:00 PM – 3:30 PM)

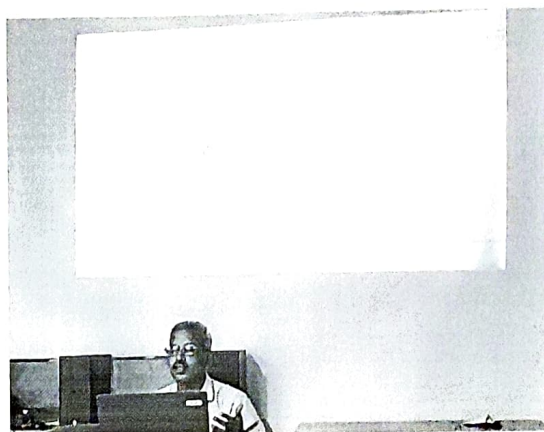
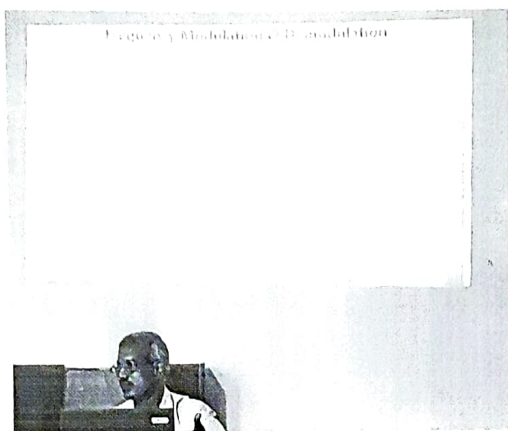
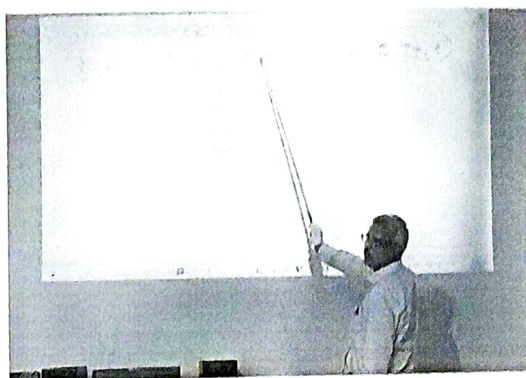
Practical Demonstration:

The afternoon session included hands-on training with LabVIEW, such as:

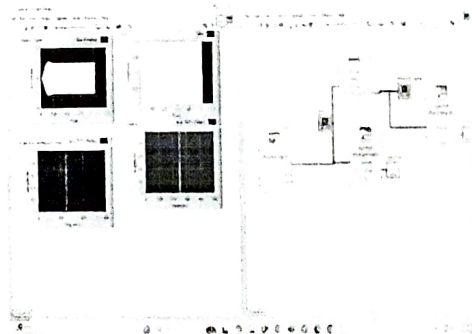
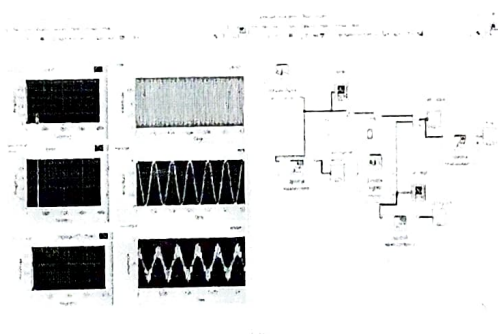
- Creating a simple LabVIEW programming interface.
- Explanation of different functional blocks.
- Real-time examples including:
 - Spectrum analysis of signals
 - Basic mathematical operations
 - AM modulation and demodulation
 - Half-wave rectifier
 - ASK modulation and demodulation
 - Digital communication case studies

Applications of LabVIEW:

The session also highlighted the widespread use of LabVIEW as a popular graphical programming software tool across industries and research domains. Its major applications include RF communication, control systems design, measurement and instrumentation, and various other engineering fields.



Photos of afternoon session



Screen Shots of Hands -on done by Students

Outcomes:

- Student gained fundamental knowledge of LabVIEW software and graphical programming environment.
- Improved understanding of how to use graphical programming for problem solving.
- Motivation to explore LabVIEW for mini-projects, major projects, and research work.
- Better insight into industrial applications of LabVIEW software.

The Guest Lecture concluded with the presentation of a memento to the resource person, **Dr. P. Vinay Kumar**, as a token of appreciation. A special note of thanks was delivered by **Dr. V. Prasanth**, Associate Professor and Head of the Department of ECE, acknowledging the efforts of the resource person and the organizers

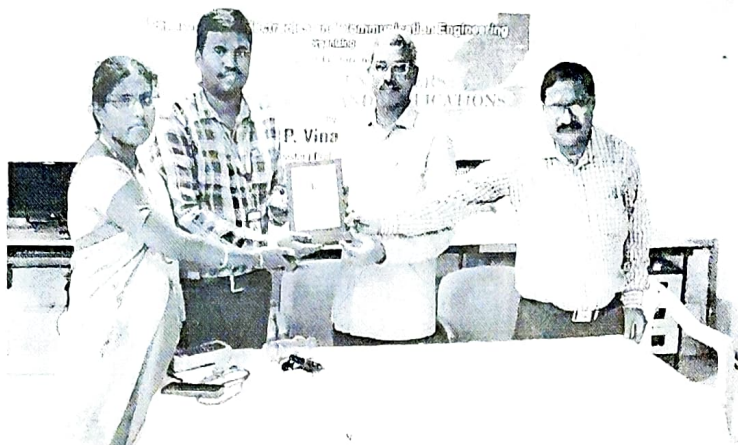


Photo of Presentation of a memento to the resource person

The Department of ECE extends its heartfelt gratitude to Dr. P. Vinay Kumar, Assistant Professor, Department of ECE, JNTUK University, for delivering an insightful Guest Lecture on "LabVIEW for Engineers: Tools, Techniques, and Applications." His valuable inputs enriched the knowledge of our students and provided them with a deeper understanding of practical applications.

We also express our sincere thanks to Dr. G. Naresh, Professor and Principal, for his constant encouragement and support, and to Dr. V. Prasanth, Associate Professor and Head of the Department of ECE, for his guidance in organizing this event. Appreciation is also extended to the faculty coordinators and student volunteers whose efforts contributed to the successful conduct of the program.

Finally, we thank all the participants for their active involvement, which made the event meaningful and impactful.



Group photo taken with Resource Person along with faculty and Students

[Signature]
Coordinator

