





# DEPARTMENT OF INSTRUMENTATION ENGINEERING



**PRESSURE MEASUREMENT USING CARDIAC RHYTHM & PHOTOPLETHYSMOGRAM**  
 Funded by Centre for Technology Development and Transfer (CTDT)  
 Mechanical Engineering, College of Engineering, Guindy, Anna University, Chennai-25.

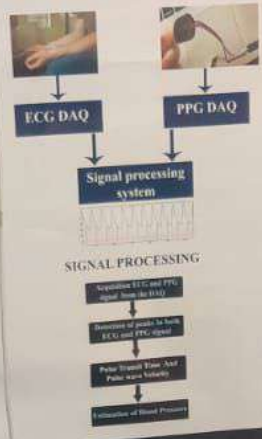
**OBJECTIVE**

Development of the system which measure the Blood Pressure continuously without using cuff from the electrical activity of the heart and photoplethysmogram.

**NEED OF THE PROJECT**

- In hospitals, For the accidental patients and infants, Blood pressure measurement is very tough and so less monitoring will be very useful.
- For anesthesiologist, to determine the amount of drug to be given, they need exact blood pressure value which can be obtained through this module.

**METHODOLOGY**



**RESULTS**



**Systolic Blood Pressure**



**CONCLUSION**

ECG acquisition is done using the DAQ. Likewise PPG data acquisition is done using the DAQ. The peak interval in the PPG Peak interval is computed from the PTT from the PWV. System is initiated.

Guided by  
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**DESIGN AND DEVELOPMENT OF SOFTWARE BASED AUDIO-VIDEO SYSTEM**  
 Funded by Department of Science and Technology (DST), Government of India, Project Number: DST/ICPS/EE/13/2013

**Principal Investigator:** Dr. S. Poornima  
**Co-Principal Investigator:** Dr. S. Poornima  
**Project:** Centre for Medical Electronics, Anna University, Chennai  
**Department of ECE**

**Objectives:**

- To develop a software based audio-video system for providing clinically significant results along with a proper analysis.
- To add custom required endological investigations.

**Methodology:**

- The software system is a software, low-cost and efficient system for investigations using computer language for obtaining precise results with automated endological investigations.
- Multiple audio language words for speech analysis and text-to-speech.
- The software system is well calibrated, low cost, durable and easy to use through web & mobile.
- The developed software system is easy to install in any computer with additional hardware components except the hardware.

**Software based Audio-video system**

Dr. S. Poornima, Chandrasekaran, Sankaranarayanan & Perumal in light were published in Early detection of hearing loss.

**MAKERS LAB**  
 prototyping ideas

**FACILITIES**

**DIGITAL FABRICATION**  
 3D PRINTING | PCB PRINTING | LASER CUTTING

**LIST OF THINGS (IOT)**  
 RASPBERRY PI | ESP8266 | ARDUINO | SENSORS | MODULES | BATTERY | LCD DISPLAY | GY-521 | SOLDERING KIT | RAZOR ALEXA | ECHO DOT | GOOGLE MINI

**ELECTRONIC WORK BENCH**  
 BREADBOARD | DC LOAD | POWER SUPPLY | SOLDERING IRON | SPOUT WELDING

