



**J.B.INSTITUTE OF ENGINEERING & TECHNOLOGY**

UGC AUTONOMOUS

(Accredited by NAAC, Permanently Affiliated to JNTUH)

YENKAPALLY (V), MOINABAD (M), RANGA REDDY, DISTRICT  
HYDERABAD. , MOINABAD, Hyderabad, 500075



# **Report**

## **On Guest Lecture about**

## **WEARABLE BIO-SENSORS**

### **on**

### **10<sup>th</sup> April 2023**

Organized by

IETE STUDENT FORUM, JBIET



## **Department of Electronics and Communication Engineering**

---

### **Vision of Institute:**

To be a centre of excellence in Engineering education, research and application of knowledge to benefit society with ethical values.

### **Mission of Institute:**

1. To provide world class engineering education, encourage research and Development.
2. To evolve innovative applications of technology and develop entrepreneurship.
3. To mould the students into socially responsible and capable leaders.

### **Vision of ECE Department:**

To be a guiding force enabling multifarious applications in Electronics and Communications Engineering, promote innovative research in the latest technologies to meet societal needs


### **Mission of ECE Department:**


1. To provide and strengthen core competencies among the students through expert training and industry interaction.
2. To promote advanced designing and modeling skills to sustain technical development and lifelong learning in ECE.
3. To promote social responsibility and ethical values, within and outside the department.

### **About the Department:**

The Department of ECE is best known for its talented and dedicated professionals renowned for their excellence in various specializations in the field of Electronics & Communication Engineering. For the last 20 years, the students of ECE, who walked out of the portals of the institute successfully, holding their degrees, were immediately inducted into the MNCs of high reputation in India & abroad. The intake of B. Tech Program is 120 and of MTech program in VLSI System Design is 12. Department of ECE is having professional societies like IETE, IEEE, Department clubs CLIQUE etc.

## Circular and poster

**J.B. INSTITUTE OF ENGINEERING & TECHNOLOGY**  
(UGC Autonomous)  
(Accredited by NBA & NAAC, Approved by AICTE & Permanently Affiliated to JNTUH)



**Department of Electronics and Communication Engineering**

Date: 01-04-2023


**Circular**


This is to inform all B.Tech students that, IETE Students Forum (ISF) branch of ECE is organizing Guest Lecture on "WEARABLE BIO-SENSORS" APRIL 10, 2023 at 10:30 AM. Hence requesting to inform all the B.Tech students to be present on the day.

Copy to

1. Principal
2. HODs ECE, ECM, EEE,
3. Class In charges

*Towheed S*  
**Dr. Towheed Sultana**  
HODECE

**J. B. INSTITUTE OF ENGINEERING & TECHNOLOGY**  
UGC Autonomous,  
Accredited by NBA & NAAC & Approved by AICTE & Permanently Affiliated to JNTUH  
Shakhar Nagar, Venkateswara Village, Malenahalli Mandal, R.R. District, Hyderabad -500073



Guest Lecture about


# Wearable Sensors


APRIL.10, 2023  
@10:30AM

Resources Person : Prof.Rajender Kumar  
Associate Professor,  
ACE Engineering College

@MNR Auditorium

**Department of Electronics & Communication Engineering**





## SUMMARY OF EVENT:

Guest lecture Date: APRIL.10, 2023

Number of participants: 95

OBJECTIVE	Awareness in BIO-SENSORS
CONVENOR	Mr.Rajkumar D Bhure
RESOURCE PERSONS	Prof.Rajender Kumar
COORDINATOR(S)	Mr.D Srikanth

## PROGRAM REPORT

Wearable biosensors are a type of wearable technology that can monitor various physiological and biological parameters of the wearer. These sensors are typically integrated into clothing, accessories, or devices that can be worn on the body. They have gained significant popularity in recent years due to advancements in technology and their potential to provide valuable health and fitness insights. Here are some key aspects of wearable biosensors:

### 1. Types of Parameters Monitored:

- **Heart Rate:** Many wearable devices use optical sensors to measure heart rate continuously. This data is essential for tracking exercise intensity, stress levels, and overall cardiovascular health.
- **Activity and Movement:** Accelerometers and gyroscopes are commonly used to monitor physical activity and provide metrics such as step count, distance traveled, and sleep quality.
- **Temperature:** Some wearables can measure skin temperature, which can be useful for monitoring fever or changes in body temperature.



- **Electrodermal Activity (EDA):** These sensors measure the skin's electrical conductance and can provide insights into stress and emotional responses.
- **Blood Pressure:** Some advanced wearables offer blood pressure monitoring capabilities.
- **Blood Glucose:** Continuous glucose monitoring is a growing area of development for wearables, particularly for people with diabetes.

## 2. Applications:

- **Health and Fitness:** Wearable biosensors are commonly used for fitness tracking, enabling users to monitor their physical activity, sleep, and overall well-being.



- **Medical Monitoring:** Some wearables are prescribed by healthcare professionals for monitoring specific health conditions, such as heart arrhythmias or sleep disorders.

- **Stress Management:** EDA sensors can help users understand and manage their stress levels by providing real-time feedback.

- **Research:** Researchers use wearable biosensors to collect data for various studies, such as sleep research, sports performance analysis, and disease management.

## 3. Data Collection and Analysis:

- Wearable biosensors collect a continuous stream of data, which is typically transmitted to a paired Smartphone or other devices for storage and analysis.
- Machine learning and data analytics play a crucial role in making sense of the collected data, turning it into actionable insights for users and healthcare professionals.

## 4. Challenges and Considerations:

- **Accuracy:** Ensuring the accuracy and reliability of the data collected by wearable biosensors is critical, especially for medical applications.

- **Privacy and Security:** Protecting the sensitive health data collected by these devices is a significant concern.
- **Battery Life:** Most wearable's are battery-powered, so optimizing power consumption is essential for extended use.
- **Comfort and Design:** Wearables need to be comfortable to wear and designed to fit seamlessly into users' daily lives.



#### 5. Future Developments:

- Wearable biosensors continue to evolve with advancements in miniaturization, sensor technology, and connectivity.
- Integration with other health-related technologies, such as telemedicine and electronic health records, is expected to expand their capabilities.
- The development of more specialized sensors and applications for specific medical conditions is likely to grow.

Overall, wearable biosensors have the potential to empower individuals to take a more active role in monitoring and managing their health while providing valuable data for medical professionals and researchers. However, it's important to carefully consider the accuracy and privacy implications when using such devices.

#### Strengths

1. Participants who have attended the Guest Lecture on "Image Processing and its Application" given a good response and expressed gaining more knowledge within a short time period.
2. The Speaker have given an idea about scope of Research in this Area.
3. Participants felt more effective and demonstrations are useful

#### Suggestions:

1. Participants Expected to have hands-on Session
2. Duration of the program should be little bit extended



S.No	Roll No	Student Name	S.No	ROLL NUMBER	Student Name
1	19671A0401	ATTURI AKANKSHA	1	19671A0451	BHARATH CHANDRA VIPPARTHI
2	19671A0402	ALLAMANENI AMRUTH	2	19671A0453	BILLAKANTI SAI NITHISH
3	19671A0403	ARELLI KIREETI	3	19671A0454	B TARUN
4	19671A0404	B DINESH REDDY	4	19671A0455	CHILUVERU VARUN
5	19671A0405	BALAJI KONKISA	5	19671A0456	CHINTHALA DEVAYANI
6	19671A0406	BANOTH SAIRAM	6	19671A0457	DANTHAM SANTHOSH
7	19671A0407	BHUKYA NAVEEN	7	19671A0458	DAREDDY SHIVA REDDY
8	19671A0408	BURRI THARUN KUMAR	8	19671A0459	DASARI VAMSI KRISHNA
9	19671A0409	CHEEPURUPALLI SAI SREE	9	19671A0460	DULAM AKSHAYA
10	19671A0410	D CALIX BENNY RUFUS	10	19671A0462	GITTE SRISAILAM
11	19671A0411	DESHINI SRAVANI	11	19671A0463	GORIGE SRAVYA
12	19671A0412	DHARANIKOTA SATHWIK	12	19671A0464	GOURARAM MANIDEEP GOUD
13	19671A0413	DHONDI KHOBBANI SNEHITH KUMAR	13	19671A0465	G. BALU
14	19671A0414	D NEMISH	14	19671A0466	TALARI AJAY KUMAR
15	19671A0415	DAREDDY HARSHITHA	15	19671A0467	GOPALA YASHWANTH RAJ
16	19671A0416	G CHARITHA	16	19671A0468	KASULA MANOJ
17	19671A0417	GARIGE SWAGATH	17	19671A0469	KEESARI RENUSREE
18	19671A0418	GOPU NANDINI RANI	18	19671A0470	KINNERA HEMANTH
19	19671A0419	GULAM SADEEDUDDIN	19	19671A0471	KORADALA AMEEKSHA
20	19671A0420	HRUTHIK RAO AVRINENI	20	19671A0472	KUSUMADARI KESHAV KUMAR SAI
21	19671A0421	JEDIPALLY UDAY KIRAN REDDY	21	19671A0473	KODELA MAHESH
22	19671A0422	JAIDI VINEELA	22	19671A0474	MADINENI NAVYA
23	19671A0423	KANDUKURI SAISRIKAR	23	19671A0475	MALISETTI VAMSHI
24	19671A0424	KONDRA RAKSHITH REDDY	24	19671A0476	MEDA NIKHITA
25	19671A0425	KOYYADA RAKESH	25	19671A0477	MILKURI SHIVANI
26	19671A0426	K AKHILA	26	19671A0478	MOHAMMAD SAMEER PASHA
27	19671A0427	KALLEM SARIKA	27	19671A0479	MOOLA PRANAYA
28	19671A0428	LINGAMPELly SRIKARNA	28	19671A0480	MUTHYALA LOKESH KUMAR
29	19671A0429	LOKAM AKHILESH	29	19671A0481	MALIGIREDDY RADDHIKA
30	19671A0430	LALAM SHIVA	30	19671A0482	OLAPU LAXMAN
31	19671A0431	M KAVYA	31	19671A0483	P SANDHYA
32	19671A0432	MD IMRAN PASHA	32	19671A0484	PASUPULETI VENKATESH
33	19671A0433	MODUGU SUNIL	33	19671A0485	POLASANI VAMSHI DESHAI
34	19671A0434	M SOUMITH REDDY	34	19671A0486	PAMIDI ANUDEEP CHOWDARY
35	19671A0435	N AKHILA	35	19671A0487	P VARUN KUMAR
36	19671A0436	NARSING BHARATH REDDY	36	19671A0488	SANAM SAMPURNA CHANDRA SHEKHAR
37	19671A0437	NEHRU SAI	37	19671A0489	SURU VINOD
38	19671A0438	PERUKA VINEETH	38	19671A0490	SURAIYA SHABNAM
39	19671A0439	PAMIDI NAMRATHA	39	19671A0491	TOLUPUNURI HARSHITH KOUNDINYA
40	19671A0440	PARIPELLI VAMSHI	40	19671A0492	TAKKALAPELLI AKHIL RAO
41	19671A0441	PARVATHI SAITEJA	41	19671A0493	VEERAMALLA RANITH REDDY
42	19671A0442	RENUKUNTLA TEJASWAROOP	42	19671A0494	VEMPALLI LASYA
43	19671A0443	S UDAY SHANKAR	43	19671A0495	YANNA MAMATHA
44	19671A0444	SABAVATH RAKESH NAIK	44	19671A0496	YELLA KAVYA
45	19671A0445	SANA NAGA VENKATA SUBHASH NAIDU	45	19671A0497	VENKATAPURAM PAVAN KUMAR
46	19671A0446	THOTA SRAVAN KUMAR	46	19671A0498	V. SATYADEV
47	19671A0447	SANKA SATHVIK	47	19671A0499	BHUKYA VIJAY KUMAR
48	19671A0448	TALARI HARSHITHA	48	19671A04A0	MUNUGALA YESHWANTH REDDY
49	19671A0449	VANNELA MITHILESH	49	20675A0408	KURUMALLA VAMSHI
50	19671A0450	VINUKONDA SNEHA	50	20675A0409	SATHU GEETHABHAVANI
51	20675A0401	DHANSHETTY KASHINATH	51	20675A0410	M TARUN KUMAR
52	20675A0402	RAVIKUMAR RADHIKA	52	20675A0411	RANGU SRUJALA
53	20675A0403	NAKKA SANDEEP	53	20675A0412	NAGULA VINEETH KUMAR
54	20675A0404	RIZWANA	54	20675A0413	KOLLURI ANURAG
55	20675A0405	THALLA SWATHI	55	20675A0414	THANNERU PRAKASH
56	20675A0406	CHITHALAPETA RAJA REDDY	56	18671A0423	KORANI VAMSHI VARDHAN (Re-admn)
57	20675A0407	KOMARI SHIREESHA	57	18671A0424	KORRA BALRAM
58	18671A0467	RATHNAM THIRUMALESH (Re-admn)	58	18671A0435	K PAVAN (Re-admn)
			59	18671A0453	ADIRINTI PRAPULLA KUMAR (Re-admn)
			60	16671A0403	ADARSH KALLEPALLY (Re-admn)

CONVENOR

Mr.Rajkumar D Bhure

Towheed's

HOD, ECE

Dr. Towheed Sultana