



# VNR Vignana Jyothi Institute of Engineering & Technology

Nizampet (S.O.), Pragathi Nagar, Bachupally, Hyderabad

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## M TECH IN ELECTRONICS AND INSTRUMENTATION ENGINEERING

### About the Department of Electronics & Instrumentation Engineering

The department has been established with M.Tech in Electronics and Instrumentation Engineering (EIE) during the academic year 2010-2011 with an intake of 18.

Instrumentation engineering is a multi-disciplinary branch focusing on the measurement, control and automation in the fields viz. the Electrical, Electronics, Manufacturing, Process Control, Chemical, Pharmaceutical, Cosmetics, Food Processing, Bio-Medical, Power Generation, etc. Application of modern instrumentation techniques greatly enhances the Productivity, Quality, Reliability of the Products, with improved Stability, Safety and Optimization of Resources. All the major R&D organizations like DRDO, ISRO, BARC, NRSC etc require the services of talented young instrumentation engineers for all their R&D activities involving highly sophisticated instrumentation systems, for all their R&D activities involving highly sophisticated instrumentation systems.

### VISION

To be a Resource Centre of **Academic Excellence** for imparting **Quality Technical Education**, meeting the need of students at National and International levels and imbibing **Strong Ethical Values**, to improve the **Standards of the Society**

### MISSION

- To impart **Quality Education** in the domain of **Electronics and Instrumentation Engineering** through effective **Learner-centric Process**.
- To provide **Industry-Specific** best-of-the-breed **Laboratory Facilities** beyond **Curriculum**, and promote diverse **Collaborative Research** for meeting the changing **Industrial and Societal Needs**.

## Faculty in the Department

S.No	Employee Name	Designation	Specialization
1.	Dr.R. Manjula Sri	Professor & Head	Biomedical Instrumentation
2.	Dr M. Sreedhar	Professor	Instrument Technology
3.	Dr K.Vidya Sagar	Professor	Instrument Technology
4.	Dr. S. Pranavanand	Assoc.Professor	Electronics and Control
5.	Dr.K. Sudha Rani	Assoc.Professor	Industrial Process Instrumentation
6.	Dr. M. Harikrishna	Assoc.Professor	Instrumentation and Control
7.	Mrs. Anitha Kulkarni	Assoc.Professor	Instrumentation and Control
8.	Dr. V. Nageshwar	Assoc.Professor	Electronics and Instrumentation
9.	Dr. C. Kiran	Assoc.Professor	Applied Physics
10.	Mrs. D.V. Shobana Priscilla	Sr.Asst.Professor	Medical Electronics
11.	Mr. C. Venkata Rambabu	Sr.Asst.Professor	Embedded Systems
12.	Dr. K. Vijay Chandra	Asst.Professor	Digital Systems and Computer Electronics
13.	Mr. A. Adithya Kashyap	Asst.Professor	Industrial Process Instrumentation
14.	Mr. S. Nagarjuna Chary	Asst.Professor	Process Control and Instrumentation
15.	Mrs. S. Vandana	Asst.Professor	Embedded Systems
16.	Mr. G. Vamsi Krishna	Asst.Professor	Instrumentation and Control
17.	Mrs. S.S.S. Bharati	Asst.Professor	Electronics and Instrumentation
18.	Dr. N. Akshay	Asst.Professor	VLSI Systems
19.	Mr. P.V. Gopi Kumar	Asst.Professor	Digital Systems and Computer Electronics
20.	Mrs.J. Jyothirmai	Asst.Professor	Embedded Systems
21.	Mrs.D. Srilaxmi	Asst.Professor	Electronics and Control
22.	Mrs.P. Sampurna Lakshmi	Asst.Professor	Embedded Systems
23.	Ms.D. Swetha	Asst.Professor	Electronics and Instrumentation
24.	Mrs.S. Bhargav	Asst.Professor	Electronics and Instrumentation
25.	Dr.B.Raja Shekar Reddy	Asst.Professor	Process Control & Instrumentation
26.	Dr.S.Senthil Kumar	Asst.Professor	Electronics and Instrumentation
27.	Mr.Ch.Venkanna	Asst.Professor	Electronic Instrumentation
28.	Dr.M.N.Reddy	Adjunct Professor	Fibre Optics & Laser Instrumentation

**13 PhDs , 15 pursuing PhDs**

## Faculty Publications in Journals & Conferences

Year	Journals	Conferences	Total
2017-18	08	04	12
2018-19	21	5	26
2019-20	21	8	29
2020-21	18	16	34
2021-22	21	14	35
2022-23	25	8	33
2023-24	23	23	46

**Citations :1085**

**Highest Citations of Single paper : 108**

### List of R&D Projects Carried Out by The Department, and Research/any Other Grants Sanctioned To The Dept.

S.No.	Title of the R&D Project or Research Grant	Sanctioning Agency, and Date of Sanction	Names of the Principal and Co-Investigators	Sanctioned Amount Rs. In lakhs	Status of the Project (Completed/ On-going)
<b>R&amp; D Projects Sanctioned</b>					
1	Identification of Actuator Dynamics and development of Electronic Circuits for Smart Materials actuated insect scale legged Robots	DRDO(CARS), Nov 2022	Dr. B.Rajasekhara Reddy Dr. S.Pranavanand	9.735	Completed
2	Real-time implementation advanced control algorithm(s) on Laboratory scale plant	TEQIP-III 2019	Dr.B. Rajasekhara Reddy.	2.85	Completed
3	RotiBOT	MSME, Govt. of India, Dec 2015	Dr. S.Pranavanand	7.35	Completed
4	Weapon Locking System-	ARDE, July 2014	Dr. S.Pranavanand	9.9	Completed
5	Sensor Measurement Unit	X_Design Ventures Pvt.Ltd. & VNRVJIET Hyderabad, Mar 2014	Dr. R.Manjula Sri	6.29	Completed
6	Implementation of Biomedical Image Processing on Embedded Hardware	UGC, Govt. of India, March 2014	Dr. R.Manjula Sri	3.00	Completed
7	Design and Implementation of Algorithm for Real-Time Patient Monitoring in Ambulance While Transit	UGC , Govt. of India, March 2014	Mr. Naregalkar Akshay Rangnath	4.45	Completed

<b>Other Grants</b>					
<b>1</b>	Design and Structural Evolution of Advanced Functional Materials Suitable for Engineering Applications	AICTE-STTP, September 2020	Dr.C.Kiran	1.92	Completed
<b>2</b>	Applications of Laser Instrumentation (Seminar Grant)	AICTE 2017	Dr. R. Manjula Sri	1.00	Completed

**Patents Filed/Published/Granted:**

<b>S.NO</b>	<b>Inventors</b>	<b>Title of the Patent work</b>	<b>Reference number</b>	<b>Date of Filed/ Published / Granted</b>	<b>Status of the Patent</b>
1)	1.Dr. S. Pranavanand 2.Mr. Haroon Rasheed	An Apparatus For Making A flat edible food	201641028787	18/04/2024	Granted
2)	1. Ms. Sampurna Lakshmi Paritala 2. Dr. Manjula Sri Rayudu 3. Dr. Srinivasa Rao Talluri	Wi-Fi-Enabled Anti-Theft System with Biometric Authentication In Fuel filling Stations	202341032074 A	23/06/2023	Published
3)	1. Mr. S. Nagarjuna Chary 2. Dr. K. Vijay Chandra	IoT-Based RO Water Purifier with Auto TDS Control	202341032344 A	23/06/2023	Published
4)	1. Dr. S. Pranavanand 2. Dr. B. Rajasekhara Reddy	Modular Enclosure for Chemical Processing	342237-001	10/02/2023	Granted
5)	1. Dr.D.N.Rao 2. Dr.R.Manjula Sri 3. Ms.Samatha 4. Ms.Manju Sahithi 5. Dr.S.Pranavanand	Drill Cabin for Safe Drive	202341003709	03/02/2023	Published
6)	1. Dr. S. Pranavanand 2. Mr. A. Nikhil 3. Dr. C.D. Naidu 4. Dr. R. Manjula Sri	Automatic Airlock Prevention System and Method Thereof	201841022148	30/01/2023	Granted
7)	1. Dr.A.Ramesh 2. Dr.S.Pranavanand 3. Dr.B.Rajasekhara Reddy	A Non-Invasive Device for Modulus Measurement Of Pavement Layers	353540-001	20/01/2023	Granted
8)	1. Dr. S. Pranavanand 2. Mr. Haroon Rasheed Dr. A. Raghu Ram 3. Dr. C. D. Naidu 4. Dr. B. Rajasekara Reddy	Cooking Appliance	376991-001	08/01/2023	Granted



9)	<ol style="list-style-type: none"> <li>1. Vallurupalli Nageswara Rao Vignana Jyothi Institute Of Engineering</li> <li>2. Dr.S.Pranavanand</li> <li>3. Dr.A.Ramesh</li> <li>4. Dr.C.D.Naidu</li> <li>5. Dr.B.Rajasekhara Reddy</li> <li>6. Mr.Eshwar Chandra Pothineni</li> <li>7. Ms. Manaswini Gogineni</li> </ol>	Automatic Water Dispenser	369341-001	18/08/2022	Published
10)	<ol style="list-style-type: none"> <li>1. Dr. K. Sudha Rani</li> <li>2. Dr. R. Manjula Sri</li> <li>3. Mr. K. Vijay Chandra</li> <li>4. Mr. Naregalkar Akshay</li> </ol>	Motorized Ankle Foot Driven Customized Prosthetic Leg with Exoskeleton	202141016519A	08/04/2021	Published

### **Social Impact Projects:**

- **Controlling A Human-Wheel Chair Interface System using Electrooculography**
- **The Roti Bot**
- **Patient Assistance & Lift monitoring (PALM)**
- **Solar-Powered Auto Irrigation System**
- **Smart Trash Bin**
- **Arsenic Free Rice Cooker and Fertilizer Free Vegetable Cleanser**
- **Real-Time Monitoring of Hydroponics Using IoT**
- **Optically operated User-assistive Robot for Patients of ALS (OUR PALS)**
- **Robostick to assist Visually Impaired People.**
- **Touchless Hand Sanitizer Dispenser System - SAN MASTER**
- **Spherical Robot**
- **Smart Refrigeration Management System Using IoT**
- **Comparison Study of Mushroom Classification Using Machine Learning and Deep Learning Techniques**
- **Synthesis and Characterization of Nano-silica and it's Effect on the Growth of Peanuts**





### **HONOURS & AWARDS:**







<b>Title</b>	<b>Name of the Awardee</b>	<b>Name of the Awarding Agency with contact details</b>	<b>Year of Award</b>	<b>Category-Institution/teacher/research scholar/student</b>
Outstanding paper award for paper titled "A Method of Cardiovascular Disease Prediction using Machine Learning" during ICRADL 2021 in the track of Applications of Deep Learning	Dr.K. Vidya Sagar	Department of Computer Science & Engineering, Shri Vishnu Engineering College for Women	2020-21	Teacher
Faculty Excellence Award	Dr. Kiran Chakravarthula	Ed & ImmiGo, Overseas Education, Immigration & Coaching, A company	2021-22	Teacher

		of CORP2CORP INC/USA		
Faculty Excellence Award	Dr. Nageshwar V	Ed & ImmiGo, Overseas Education, Immigration & Coaching, A company of CORP2CORP INC/USA	2021-22	Teacher
Certificate of Appreciation for her Commendable Contribution as an Academic Administrator	Dr.R.Manjula Sri	Malla Reddy Engineering college for Women, Hyderabad	2021-22	Teacher
Awarded for Roti maker product in the conference.	Dr.S.Pranavanand	Indian institute of Millet research institute	2023-24	Teacher
Awarded gold medal and certificate	Ms.P.Sampurna Lakshmi, Dr.R.Manjula Sri Mr.S.Bhargav & Ms.S.Vandana	INEX-2023	2023-24	Teacher

### STUDENT ACHIEVEMENTS:

#### Gold Medals PG:

Description Of The Gold Medal	Donated By	Medal Being Issued For	Branch
Sri. Pidikiti Indra Prasad Gold Medal	Smt. Pidikiti Vijaya Lakshmi	Best M.Tech student in E&I	E&I (EIE)
YEAR	Student Name with Hall Ticket Number, Percentage/CGPA		Photo
2012-2013	SWARNA LATHA B, 11071D8802,89.66%		
2013-2014	ALDHANDI SURESH, 12071D8807,88.47%		
2014-2015	K SANDHYA, 13071D8813, 84%		
2015-2016	SHAIK SALMA SULTANA, 14071D8803, 77%		

2016-2017	DEEPA DAS, 15071D8801, 9.38 CGPA	
2018-2019	K. SAMUEL MORRIS,17071D8803,9.75	
2019-2020	ADNAN ABBAS 18071D8801 9.19	
2020-2021	SYED ABDUL SAMAD,19071D8805, 9.09 CGPA	
2021-2022	MALA RAJU, 20071D8806 ,9.34 CGPA	
2022-2023	SUNKAPAKA SOUMYA,21071D8804, 8.35 CGPA	

## PG Best Projects

ACADEMIC YEAR 2013-2014				
S.NO.	BRANCH	H.T.NO.	NAME OF THE STUDENT	POSITION
1.	ELECTRONICS & INSTRUMENTATION	12071D8807	ALADANDI SURESH	First

2.	ELECTRONICS & INSTRUMENTATION	12071D8809	CHETLAPALLI DEEPIKA	Second
<b>ACADEMIC YEAR 2014-2015</b>				
1.	ELECTRONICS & INSTRUMENTATION	13071D8802	R YASHWANTH	First
<b>ACADEMIC YEAR 2015-2016</b>				
1.	ELECTRONICS & INSTRUMENTATION	14071D8805	K. RASHMI	First
2.	ELECTRONICS & INSTRUMENTATION (EIE)	14071D8804	FATIMA	Second
<b>ACADEMIC YEAR 2016-2017</b>				
1.	ELECTRONICS & INSTRUMENTATION (EIE)	15071D8801	DEEPA DAS	First
<b>ACADEMIC YEAR 2018-2019</b>				
1.	ELECTRONICS & INSTRUMENTATION (EIE)	17071D8802	TATI BHARAT KUMAR	First
<b>ACADEMIC YEAR 2019-2020</b>				
1.	ELECTRONICS & INSTRUMENTATION (EIE)	18071D8805	PENDAM SRUJANA	First
<b>ACADEMIC YEAR 2020-2021</b>				
1.	ELECTRONICS & INSTRUMENTATION (EIE)	19071D8805	SYED ABDUL SAMAD	First
<b>ACADEMIC YEAR 2021-2022</b>				
1.	ELECTRONICS & INSTRUMENTATION (EIE)	20071D8806	MALA RAJU	First
<b>ACADEMIC YEAR 2022-2023</b>				
1.	ELECTRONICS & INSTRUMENTATION (EIE)	21071D8804	SUNKAPAKA SOUMYA	First



## STUDENT PUBLICATIONS:

- Arun kumar, D.Srilaxmi, Photovoltaic water distributing system using v/f controller, International Journal of research in electronic and Computer engineering, Vol.7, Issue 2, September 2019 ,pp. – 3030-3033.
- T Bharat ,Anita Kulkarni , Design, development and implementation of online machine vision based system for inspection of pharmaceutical blister packs, International Journal of Research, Volume 8,Issue 6, June 2019.
- M.Mohan Krishna, Dr.M.Sreedhar, wireless power transfer for electric vehicle applications, International Journal of research in electronic and Computer engineering, Volume.07, Issue 02,June 2019 , pp. - 3034 – 3036.
- Samuel morris, Dr.K.Sudharani, Hitesh dhorajia, Simulation of combustion control by tweaking air-fuel ratio , International journal of research, Volume 06 Issue 08 , July 2019.
- Adnan Abbas, Dr.S.Senthilkumar , Performance analysis of DC-DC converter for robotic system, International Journal of Electrical, Electronics and Data Communication, Volume-8, Issue-2, , November 2019, pp.22-25.
- D.Srilaxmi, M.Arunkumar, Efficient solar water pumping system using maximum power point tracking ,International journal of research,Vol 6, Issue No 10 , September 2019, pp.65-68.
- Dr.R.Manjulasri, Ms.P.Srujana, Ms.D.Srilaxmi, Prediction of severity of non proliferated diabetic retinopathy using machine learning techniques, ICRICTSA- 2019, October 2019.
- Md.Yaseen Baig,Naregalkar Akshay,MC-Based Topology for Bi-directional Power Flow between EV charger and Grid, ational Journal of research and analytical reviews,Vol06,Issue No:02, , May 2019, pp.434-442.
- Mohammed Arshad Ali Khan, Rajasekhara Reddy B,Model Predictive Control using Laguerre Filters,Journal of Seybold Report,Volume 15, Issue 07, July 2020, pp.1575-1580 .
- Adnan Abbas,SenthilKumar S,Analysis of Locomotion Robot in Non-linear surface using Intelligent controller Journal of Interdisciplinary cycle research ,Volume 12 ,Issue 07, July 2020, pp 494-502 .
- Syed Abdul Samad, Senthilkumar S,Analysis and Implementation of DCS System in Bottle Filling Plant Using MATLAB Journal of Engineering Sciences,Volume 11, Issue 07, July 2020, pp.617-622 .
- K Pravallika, G Vamsi Krishna,Fuzzy-PID controller for coupled two tank interacting system,International Journal of Mechanical and Production Engineering Research and Development, Vol. 10, Issue 03, August 2020, pp.8817-8830.
- Dr.R.ManjulaSri, Srujana P, D Srilaxmi,Prediction of NPDR using machine learning techniques,Journal of computational and theoretical nano sciences,Vol.17, Issue 9/10, December 2020, pp. 4219-4222.
- N.L.N.Vishnu Vardhan Acharya, Dr.K.Sudha Rani,Modern Health Monitoring And Analysis Using Iot Technology,Turkish Online Journal of Qualitative Inquiry,Vol. 12 No. 3, June 2021, pp.4961–4972.
- Adnan Abbas, Dr. Senthil Kumar S,Analysis and Implementation of DCS in DC-DC Boost Converter for a Robotic System,ICSSIT 2020, 20-22 August 2020.
- Dr.K.Sudha Rani, Priya Madhuri,Plant Leaf Disease Detection Using Machine Learning Technique,ICCNCT – 2020, 23-24 July 2020.
- Dr.K.Sudha Rani, Priya Madhuri,Plant Leaf Disease Detection Using Machine Learning Technique,ICCNCT - 2020
- N.L.N.Vishnu Vardhan Acharya, Dr.K.Sudha Rani, Modern Health Monitoring And Analysis Using Iot Technology, Turkish Online Journal of Qualitative Inquiry, Volume. 12 No. 3, June 2021, pp.4961–4972.
- Paidipala Surender, Dr. B.Rajasekhara Reddy, Model predictive control of power converters, Turkish Online Journal of Qualitative Inquiry (TOJQI), Volume 12, Issue 5, July 2021, pp.4555 – 4565.
- Syed Abdul Samad, Dr.S.Senthilkumar, Adaptive Control Based Electric Furnace Temperature Control Using Simulink, Turkish Online Journal of Qualitative Inquiry (TOJQI), Volume 12, Issue 3, July 2021, pp.5226 – 5236 .

- Beesa Shireesha, D.Srilaxmi, Detection and Classification of Diabetic Retinopathy from fundus images using Machine Learning Techniques, Journal of Neuro Quantology, Volume 20, Issue 15, December 2022, pp. 6544-6649.
- Aitha Vamshi Krishna, Dr.K.Sudha Rani, Blood cell classification using smear images based on machine learning techniques, Journal of Neuro Quantology, Volume 20, Issue 15, December 2022, pp. 6650-6660.
- K.Srimeghana, Dr,K.Vidyasagar, Prediction of Crop Yielding rate using machine learning algorithms, Journal of Neuro Quantology, Volume 20, Issue 15, December 2022, pp. 6661-6669.
- Mohammed Sohail, Naregalkar Akshay, IoT Enabled Industrial Process Monitoring System, Journal of Neuro Quantology, Volume 20, Issue 20, December 2022, Page200-210.
- Sunkapaka Soumya, Dr.V.Nageshwar, Sentiment Analysis Using Telugu Sentiwordnet, 2nd International Conference on Futuristic Technologies (INCOFT), 24th – 26th November, 2023.
- U.Akankasha, Dr. K.Vijay Chandra, Corneal image segmentation using attention U-Net, 4th Fifteenth International Conference on Advances in Electrical, Computing, Communications and Sustainable Technologies (ICAECT 2024), 11-12, January 2024.

### **STUDENT PLACEMENTS:**

Our MTech students are been placed in companies like TCS, CAPGEMINI, L&T TECHNOLOGY SERVICES, DIGILOGIC INNOVATIVE SOLUTIONS, FUSO GLASS INDIA PVT LTD, IPD EDUCATION INDIA PVT LTD, ALTCOGNITO SYSTEMS, EV GATEWAY INDIA PVT LTD