



## AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

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Tamaram, Makavarapalem, Narsipatnam(RD), Visakhapatnam-531113

### LINKAGE ACTIVITY OF AIET

#### ACADEMIC YEAR 2021-22

S N o	Name of the linkage activity	Title of Activity	Name of the linkage Organization/Institute	Participant of AIET	Date of Implementation
1	Expert Lecture	Safety Operations in Industries	P. Narayana Rao, Technical Officer D-BARC Visakhapatnam Andhra Pradesh	III & IV B.Tech EEE Students	28-05-2022
2	Expert Lecture	High Power wind Energy	Professor Rajan Kumar Behara, EEE Department IIT Patna	III & II B.Tech EEE Students	27-05-2022
3	Expert Lecture	English Communication Skills	Prof. A Chiranjeevi, Founder and Chief Coach, Medha Language Theatre	I year B.Tech (All branches)	27-05-2022
4	Expert Lecture	Mechatronics in Industrial Applications	Aliasgar Calcuttawala, Chief Technical officer, Saif Automation Service LLP, Visakhapatnam	IV B.Tech CSE, ECE, EEE, MECH	27-05-2022
5	Expert Lecture	Communication System-	Dr.G Kiran Kumar,	III B.Tech ECE Students	27-05-2022

6	Expert Lecture	NOISE Finite Element Analysis of Engineering Structures	NIT, Tadapalligudem Prof. Putti Srinivasa rao, Chairman, BoS, Dept. of Mechanical Engg., Andhra University	III B.Tech Mech Students	27-05-2022
7	Expert Lecture	Machine Learning	Eswar, Miracle Systems, Visakhapatnam	III B.Tech CSE Students	27-05-2022
8	Expert Lecture	Data Mining & Data Ware Housing	Dr.T. RamaKrishnudu, Dept.of CSE, NIT Warangal	III B.Tech CSE Students	28-05-2022
9	Expert Lecture	Computational fluid dynamics	Sri. Khagesh Kumar Choudary, Scientist E, NSTL, Visakhapatnam	III B.Tech MECH Students	28-05-2022
10	Expert Lecture	Finite Element Analysis - Heat Transfer	P.Anil Kumar, Deputy Director, Placements Cell, GITAM University	IVB.Tech MECH Students	17-12-2021
11	Expert Lecture	Robotics in Industrial Applications	Ch.Jaya Sri Vatsa, Design Engineer,BOSCH, Bengaluru	III, IV B.Tech MECHStudents	24-12-2021

  
Coordinator

  
Principal  
Principal  
Ivanthi Institute of Engg. & Technology  
Tamarara, Mekaverapalem Md.  
Visakhapatnam District, Pin-531113



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Tamaram, Makavarapalem, Narsipatnam Revenue Division, Visakhapatnam-531113

**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

**CIRCULAR**

Dt. 20<sup>th</sup> May 2022

A Technical Seminar on *Safety Operations in Industries* for all the III Year I Semester & IV Year I Semester students of Electrical and Electronics Engineering Department is scheduled from 28<sup>th</sup> May 2022 at Our Department Seminar Hall. All the students should Project team leaders attend the Seminar without fail. For any further information Contact Mr. P V Dora, Assistant Professor, Electrical and Electronics Engineering Department may be consulted.

Resource Person – P.Narayana Rao, Technical Officer, D-BARC, Visakhapatnam, Andhra Pradesh.

Dr T Srinivasa Rao  
Head of the Department

EEE

Copy to: Principal, AIET

**Head of the Department**  
**Department of Electrical & Electronics Engg.**  
**Avanthi Institute of Engg & Tech.**  
**Makavarapalem, Visakhapatnam - 531113.**





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Tamaram(Village), Makavarapalem(Mandal), Visakhapatnam-531113

**Report on Guest Lecture by Industry Expert**

A guest lecture was organized by Department of Electrical & Electronics Engineering on 28 May 2022 as per the details given below:

**Topics:** Safety Operations in Industries.

**Date:** 28 May 2022

**Place:** EEE BLOCK, SEMINAR HALL

**Time:** 11AM-1PM

**Speaker:** P Narayana Rao, Technical officer, D BARC, Visakhapatnam, AP

**About the Speaker:** P Narayana Rao, Technical officer, D BARC, Visakhapatnam, AP Technical Officers are similar to Scientific Officers only with a difference that the Scientific Officers are recruited after successful completion of one year training program called OCES Training.

**Major points covered during the talk:**

- The safety and productivity of people, machines, and processes is a key element of any sustainable business.
- Industrial safety systems have been used for many years to perform safety functions in the manufacturing industries

Students of following batches attend the lecture:

**48 students** (III B.Tech - EEE)

**50 students** (IV B.Tech - EEE)

**Total- 98**

**Following faculty members also attended the lecture:**

1. Dr T Srinivasa Rao, HOD
2. P Varahala Dora, Assistant Professor
3. S Sujatha Devi, Assistant Professor

**Event Objectives:** For preventing the kind of accidents resulting in the seizing of work and loss of the production. By controlling the hazard to the minimum level, accidents in the industry can be avoided.

**Expected Outcomes:** The main goal of safety and health programs is to prevent workplace injuries, illnesses, and deaths, as well as the suffering and financial hardship these events can cause for workers, their families, and employers.

  
Coordinator

  
HOD  
Head of the Department  
Department of Electrical & Electronics Engg.  
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**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**


Students: IV & III B Tech I Sem

28-05-2022

Resource Person: P Narayana Rao, Tech Officer, D-BARC, Visakhapatnam



  
Coordinator

  
Head of the Department  
Department of Electrical & Electronics Engg.  
Avanthi Institute of Engg & Tech.  
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**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

**CIRCULAR**

**Dt. 20<sup>th</sup> May 2022**

A Technical Seminar on *High Power Wind Energy* for all the III Year I Semester & II Year I Semester students of Electrical and Electronics Engineering Department is scheduled from **27<sup>th</sup> May 2022** at Our Department Seminar Hall. All the students should Project team leaders attend the Seminar without fail. For any further information Contact Mr. S Rishikesh, Assistant Professor, Electrical and Electronics Engineering Department may be consulted.

**Resource Person – Professor Rajan Kumar Behara, EEE Department, IIT Patna**

Dr T Srinivasa Rao  
Head of the Department  
EEE

Copy to: Principal, AIET

**Head of the Department**  
**Department of Electrical & Electronics Engg.**  
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**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**  
**National Level Technical Seminar on the Emerging Trends in "High Power  
Wind Energy"**

**Dr Rajan Kumar Behera**

Professor

Department of Electrical & Electronics Engineering

IIT Patna

Ph: 6123028050



**Professional Experience:**

- Associate Professor- Department of Electrical & Electronics Engineering, IIT Patna, Bihar.
- Assistant Professor- Department of Electrical & Electronics Engineering, IIT Patna, Bihar.
- Visiting Scholar-The center of Energy Systems, Teneessee Technological University, Cookvielle University, USA
- Project Associate – Department of Materials & Metallurgical Engineering, IIT Kanpur.

**Member of Professional Bodies: 1. IEEE**

2. Senior member of IEEE (USA)





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**Report on Guest Lecture**

A guest lecture was organized by Department of Electrical & Electronics Engineering on 27 May 2022 as per the details given below:

**Topics:** High Power Wind Energy.

**Date:** 27 May 2022

**Place:** EEE BLOCK, SEMINAR HALL

**Time:** 11:30 AM-1:30 PM

**Speaker:** Professor Rajan Kumar Behara, EEE Department, IIT Patna

**About the Speaker** Present working as a Professor in EEE Department, IIT Patna. Worked as a Associate Professor in Department of EEE , IIT Patna And also visitng Scholar – The center of Energy Systems, Tennessee Technologies University, Cookvielle university- USA

**Major points covered during the talk:**

- Wind power is a domestic resource that enables U.S. economic growth.
- Wind power is a clean and renewable energy source.
- Wind power creates good-paying jobs

Students of following batches attend the lecture:

50 students (III B.Tech - EEE)

36 students (II B.Tech - EEE)

Total- 86

**Following faculty members also attended the lecture:**

4. Dr T Srinivasa Rao, HOD
5. K Narayana Rao, Assistant Professor
6. S Rishikesh, Assistant Professor

**Event Objectives:** The main objective of wind farms in the short term is to produce renewable energy power that homes and businesses can utilize. Wind farms can also help offset the use of fossil fuels, such as coal and natural gas, used to generate electricity

**Expected Outcomes:** Wind power creates good-paying jobs. · Wind power is a domestic resource that enables U.S. economic growth. · Wind power is a clean and renewable energy source

  
Coordinator

  
HOD

**Head of the Department**  
Department of Electrical & Electronics Engg.  
Avanthi Institute of Engg & Tech.  
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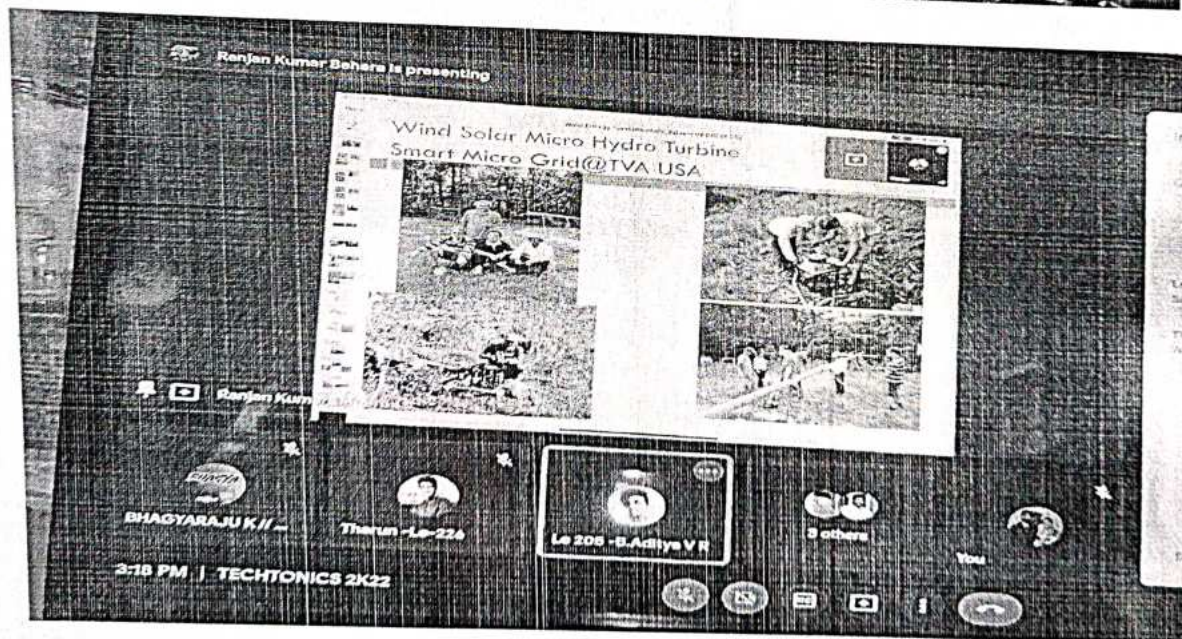
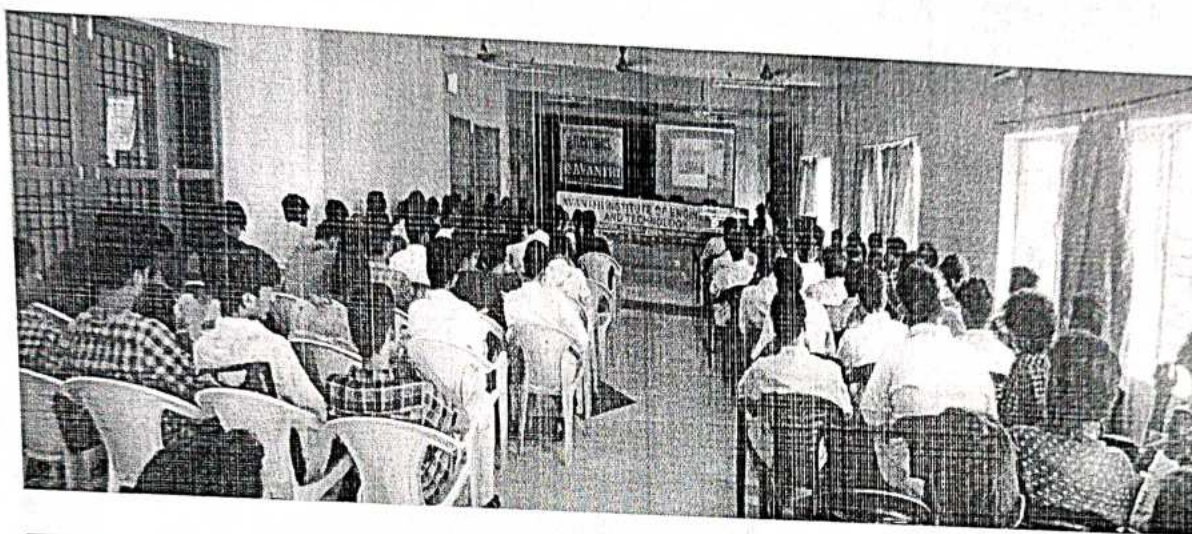
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**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**


Students: III & II B Tech I Sem

27-05-2022

Resource Person: Prof Rajan Kumar Behara, EEE Dept, IIT Patna



  
Coordinator

  
Head of the Department  
Department of Electrical & Electronics Engg.  
Avanathi Institute of Engg & Tech.  
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**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

**National Level Technical Seminar on the Emerging Trends in "High Power  
Wind Energy"**

Date: 27-05-2022

S.No	Roll No	Name of the Student	Signatures
1	19811A0201	CHENNA YOGINDRAPRASAD	Ch. Yogindraprasad
2	19811A0202	KURAMDASU SRINU	K. Srinu
3	19811A0203	MADAGALA VIJAY	M. Vijay
4	19811A0204	MOLLI BHOOLAKSHMI	M. S. Gnanesh
5	19811A0205	MOLLI SAI GANESH	M. Sai Ganesh
6	19811A0206	NEELAPATI NAGA PRAVEEN	Neelapati
7	19811A0207	SARAKAPU SURESH	S. Suresh
8	19811A0208	MAJJI SUMANTH	M. Sumanth
9	20815A0201	ADAPAKA BHANU PRASAD	A. Bhanu
10	20815A0202	ANTHIRAJU VENUGOPAL NAGENDRA	A. Nagendra
11	20815A0203	BALIBOINA PAVAN KUMAR	B. Pavan Kumar
12	20815A0204	BOJJA JAYASRI	Bojja Jayasri
13	20815A0205	CHANDAKA ASHOK	C. Ashok
14	20815A0206	CHINTHA BHUVAN KUMAR	Ch. Bhuvan
15	20815A0207	CHINTHALA HARISH	C. Harish
16	20815A0208	CHOLLANGI PRUDHVI REVANTH	C. Revanth
17	20815A0209	DADI DINA KAR	D. Dinakar
18	20815A0210	DANDUPATI SEKHAR	D. Sekhar
19	20815A0211	DASAMANTHARAO SAI GOUTHAM	D. Goutham
20	20815A0212	DEGALA RAJENDRAKUMAR	D. Rajender
21	20815A0213	DEVI PRASAD YALLAPU	D. Prasad



22	20815A0214	EDUBILLI RAVI TEJA	E. Ravi Teja
23	20815A0215	ELLA NOOKARAJU	E. Nookaraj
24	20815A0216	GANESH KANDALAM	K. Ganesh
25	20815A0217	GOLLAVILLI RAMU	G. Ramu
26	20815A0218	GUMMADI CHAKRI	G. Chakri
27	20815A0219	KALLA BALA MURALI	K. Balamur
28	20815A0220	KARRI ANDREWS	K. Andrews
29	20815A0221	KONDRA LEELA KRISHNA SAI CHAITANYA	K. Leela Krishna
30	20815A0222	MOLLI SAGAR KUMAR	M. Sagar Kumar
31	20815A0223	NAGIREDDY GANESH	N. Ganesh
32	20815A0224	NAKIREDDY JAGADEESH	N. Jagadeesh
33	20815A0225	NETTEM SRI HARSHA VAMSI	N. Harsha Vamsi
34	20815A0226	P.A.V.N.S.DEEPAK	P. Deepak
35	20815A0227	PERAM SUMANTH	P. Sumanth
36	20815A0229	PODUGU SAI HEMANTH	P. Sai Hemant
37	20815A0230	PRASADULA LAKSHMANA RAO	P. Lakshmana Rao
38	20815A0231	SAMALA SAI RAM	S. Sai Ram
39	20815A0232	SAMOJI ADINARAYANA	S. Adinarayan
40	20815A0233	SANAPATHI NOOKARAJU	S. Nookaraju
41	20815A0234	SARIPALLI DEVA PRASAD	S. Deva Prasad
42	20815A0235	URIGITI DEVA	U. De Var
43	20815A0236	VASAM JYOTHI PRAKASH	V. J. Prakash
44	20815A0237	VENUKOTI KIRAN	V. Kiran
45	20815A0238	YELLAPU NOOKA SAI CHINA APPALANAIDU	X. Sonika
46	20815A0239	YELLAPU SONIKA	X. Sonika
47	20815A0240	BHARANIKALA RAM PRASAD	B. Ram Prasad
48	20815A0241	ETHAMSETTI TULASI RAO	E. Tulasi Rao
49	20815A0242	KUNDRAPU LAKSHMI NARAYANA	K. L. Narayana
50	20815A0243	NANEPALLI PAVANKUMAR	N. Pavankumar



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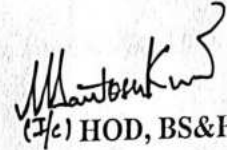
### CIRCULAR

Dt. 25<sup>th</sup> May 2022

A Technical Seminar on ENGLISH COMMUNICATION SKILLS for all the Ist Year I Semester students is scheduled on 27<sup>th</sup> May 2022 at First Year Block seminar hall. All the students should attend the Seminar without fail. For any further information Contact Mr. P Som Babu and K V N S Rama Krishna, Assistant Professors, H&BS Department may be consulted.  
Resource Person : Dr A Chiranjeevi, the founder and chief coach of Medha Language Theater

Copy to:

Principal Office/ First Year NB

  
(HOD, BS&H)

Avanathi Institute of Engg & Technology  
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**DEPARTMENT OF HUMANITIES& BASIC SCIENCES**

**EXPERT LECTURE**

**NAME OF THE EXPERT: Dr. A CHIRANJEEVI**



**DESIGNATION: The founder and chief coach of Medha Language Theater**

DATE: 27-05-2022

**About the Author:**

***DR. CHIRANJEEVI AMBARAGONDAD***

Dr. Chiranjeevi, the founder and chief coach of Medha Language Theatre is an accomplished and widely acclaimed leader in the field of English and personality development training. He is an author, educator, entrepreneur, motivational speaker and a leadership coach. Combining passion and purpose, he has transformed tens of thousands of lives – students, young hopefuls, entrepreneurs, and a number of serving professionals spawning various public and private sectors by helping them find their personal sweet-spot and blaze away to glory.

Dr. Chiranjeevi strongly believes in keeping abreast of the dynamics in the field for qualitative results in life. His quest for learning and training took him to the most prestigious global platforms, including Indian Institute of Management (IIM), Rohtak, where he had done the

Management Development Program in Strategic Management and Leadership Excellence. Adding some of colorful feathers to his crowded cap, he had been to the world's most reputed universities— Palm Beach Atlantic University in USA, Birmingham and Oxford Universities in United Kingdom— to explore the best practices of learning and training.

### **BOOKS AUTHORED:**

His flair for English language and passion for writing has seen the light in the form of his writings. Infusing confidence into the seekers of communication skills in English language, he has authored a set of five books '5 Elements of English' pouring passion and precision into them. The five books have been named after the five elements that make the world we live in—**FIRE, WATER, SKY, AIR, EARTH—and present** five tools of English Communication. He has also authored a book titled "**A to Z English**" on English and Personality Development that speaks volumes about his insight into the attitudes of the young learners in particular the English language learners.

### **CORPORATE TRAINING:**

Recognized as a trainer-par-excellence, Dr. Chiranjeevi Ambaragonda, with global exposure is a much sought-after motivational speaker and a leadership coach who is instrumental in preparing the Next-Gen Leaders. His corporate clientele list includes who-is-who in the present-day industry.

### **BIOGRAPHY:**

DR. Chiranjeevi's biography "NENE NAA AAYUDHAM" (Telugu) and NANNA ELGEGE NAANE ENI (Kannada), written by master writer Dr. Yandamoori Veerendranadh, stand a testimony to his achievement guiding numerous aspiring victors to find their path of success.

### **AWARDS AND HONOURS:**

His remarkable contributions to the society have earned him appreciations and prestigious awards in the country and abroad. Best national trainer award from (IJC) Junior Chamber International USA, Honorary doctorate from International Open University for complimentary medicine, National awards Shiksha Bharati Puraskar, Pratibha Bharati Puraskar, and Ugardi Puraskar are some of the prestigious awards he received. He also received appreciations from honorable President of India, Prime Minister of India, Chief Minister of Andhra Pradesh, Governors of Telangana, Andhra Pradesh and Maharashtra, for being instrumental in molding the careers of many across the nation.

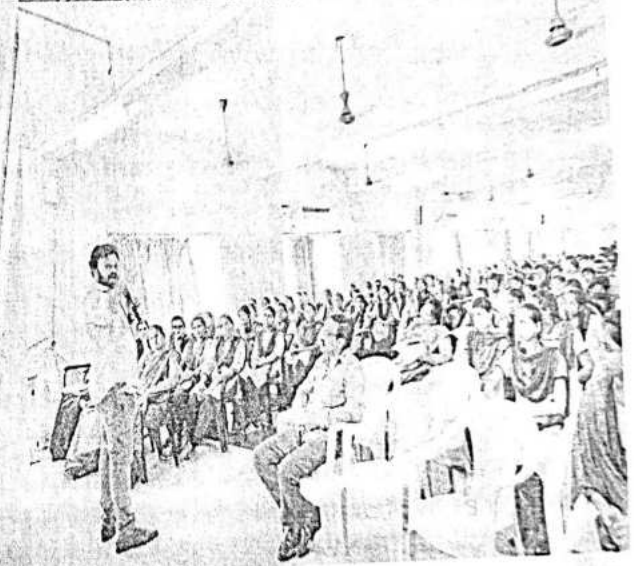
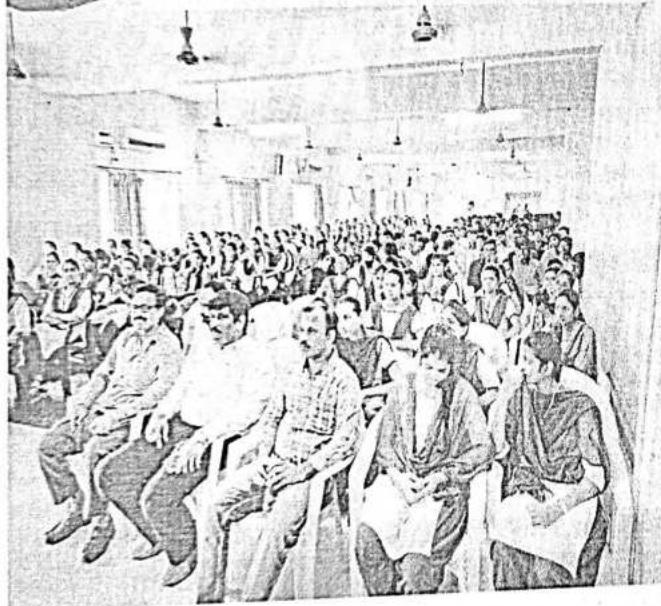
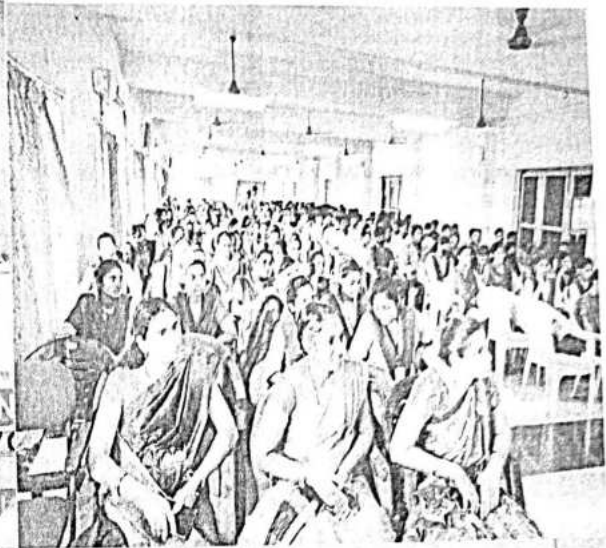
### **RAGS-TO-RICHES:**

His personal journey is in itself worth emulating. Dr. Chiranjeevi, a self-built person endured and overcame many a challenge before he could see his vision transform into reality. Undeterred by hostile circumstances, he pursued his chosen path with infinite zeal and immense patience. The journey from a 'small tuition centre' to a 'state-of-the-art training centre' for human excellence was a thorn-filled trail, which was skillfully negotiated by him, aided by his self-confidence and creativity. The rags – to – riches story is exemplified in the meteoric rise of Medha, a single point power hub for New Age Leaders.





**AVANTHI INSTITUTE OF  
AND TECHNOLOGY**  
TAMARAM, MAKAVARAPALEM



*Ramulu*  
Coordinator

*M. Santosh Kumar*  
(HOD) HOD

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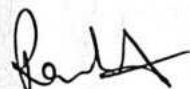



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**DEPARTMENT OF HUMANITIES & BASIC SCIENCES**

**Report of Expert lecture on ENGLISH COMMUNICATION SKILLS**

The Humanities and Basic sciences department has organized expert lecture on English communication skills on 27<sup>th</sup> May 2022. This expert lecture was conducted for all the I st Year II Semester students of all branches . Mrs K.V Sunitha (English dept ) gave brief introduction of **Dr. A.Chiranjeevi** and later on he addressed the students about lecture on English Communication Skills . Students participated actively and involved totally to make the Guest Lecture a grand success. Feedback from the students was very encouraging. The lecture came to an end with the vote of thanks by the Mrs K.V Sunitha, English faculty H&BS Department.

  
Coordinator

  
(I/c) HOD

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**CIRCULAR**

Dt. 20<sup>th</sup> May 2022

A Technical Seminar on Mechatronics in industrial applications for all the IV Year II Semester students of Mechanical Engineering Department is scheduled on 27<sup>th</sup> May 2022 at mechanical department seminar hall. All the students should attend the Seminar without fail. For any further information Contact Mr. B.Rama Krishna , Assistant Professor, Mechanical Engineering Department may be consulted

Resource Person : Sri. Aliasgar calcuttawala, chief technical officer, saif automation service, visakhapatnam

Copy to:  
Principal, AIET

  
Mr.V. HARI KIRAN  
HOD-MECH  
Head of the Department  
Department of Mechanical Engg.  
Avanthi Institute of Engg. & Tech.,  
Makavarapalem, Visakhapatnam-531113.



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## **DEPARTMENT OF MECHANICAL ENGINEERING**

### **EXPERT LECTURE**

**NAME OF THE EXPERT: Sri. Aliasgar calcuttawala**



**DESIGNATION: Chief technical officer, saif automation service, visakhapatnam**

**TOPIC: MECHATRONICS IN INDUSTRIAL APPLICATIONS**

**DATE: 27.05.2022**

#### **Applications of Mechatronics Technology in Modern Manufacturing**

Applying mechatronics in advanced manufacturing has improved efficiency and the quality of the products. Using automated processes ensure that you save time and by using seamlessly integrated procedures. Mass production had increased output and made modern manufacturing cost-effective. Technical errors are reduced as the use of intelligent sensors and parameter controllers ensures the designed operation conditions are maintained.

- **Automation in Advanced Manufacturing:** Mechatronics allows you to design a continuous chain process that incorporates modern equipment like barcodes readers as well as image and sound processors that identify and classify products as they move along.
- **Measuring of Products:** To manufacture products with the right specifications regarding size, weight, and quantity, companies need to apply mechatronic technology. Intelligence sensors and calibration systems are used to make sure of uniformity of products.
- **Control Systems:** For a manufacturing plant to maintain optimum conditions, parameters like temperature and pressure need to be properly regulated and monitored. Mechatronics ensures that this regulation is remotely automated, improving efficiency and productivity



### What Else can this Technology Do?

There is so much more you can do with this technology other than designing computer controlling electromechanical systems. Initially, mechatronics was seen to be an assimilation of mechanics and electronics, but over the years, it has been seen to cover many more fields. They include:


- Telecommunications
- Systems engineering
- Computer technology
- Control and instrumentation
- Mechanical engineering

You not only need to learn the theory but also gain hands-on experience so that you master your concepts. Today, mechatronics is a fundamental part of manufacturing. Modernization has led to advancements in the manufacturing industry that requires hi-tech input that comes with mechatronics. Many companies are looking to hire individuals who are specialized in this field to fulfill the expectations of their customers. Some of the areas a mechatronic engineer has an opportunity to work include:

- Research institutions
- Engineering laboratories
- The field of Robotics and AI
- Engineering offices and institutions
- Processing plants
- Software and data logging
- Control systems and instrumentation engineering organizations





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**DEPARTMENT OF MECHANICAL ENGINEERING**

**Report of Expert lecture on Mechatronics in industrial applications**

The Mechanical engineering department has organized expert lecture on **Mechatronics in industrial applications** on 27<sup>th</sup> May 2022. This expert lecture was conducted for all the IV Year II Semester students of Mechanical Engineering department. Mr. V. Harikiran (Head of the department, MECH) gave brief introduction of **Sri. Aliasgar calcuttawala Chief technical officer, saif automation service, Visakhapatnam** and later on addressed the students about A Technical Seminar on **Mechatronics in industrial applications**

Students participated actively and involved totally to make the Guest Lecture a grand success. Feedback from the students was very encouraging. The lecture came to an end with the vote of thanks by the V. Harikiran, HOD, Mechanical engineering Department.

  
Coordinator

  
HOD  
Head of the Department  
Department of Mechanical Engg.  
Avanthi Institute of Engg. & Tech.,  
Makavarapalem, Visakhapatnam-531113.





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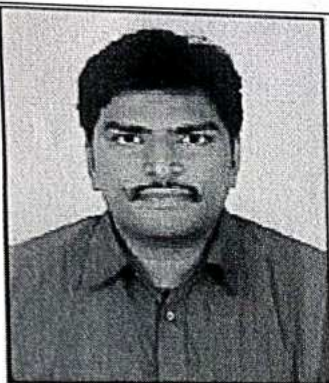
### DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING

#### REPORT OF SEMINAR

**TOPIC:** COMMUNICATION SYSTEMS-NOISE

**DATE:** 27.05.2022

**ATTENDED:** B.Tech ECE III YEARS



**Dr G Kiran Kumar**

HoD, ECE,

NIT Tadepalligudam,

Andhra Pradesh-

E-MAIL: kirankumargurralla@nitandhra.ac.in

PHONE: +91 7077166843

**AREAS OF INTEREST:** Cooperative Communication in Wireless Networks; Physical Layer Security;

**EXTERNAL**

**LINK:** <https://scholar.google.co.in/citations?user=dZwnkpAAAAAJ&hl=en>

#### Basic Communications Systems

Analysis and design of communication systems with an emphasis on digital communications based on time and frequency domain analysis. Fourier transform techniques, linear systems, and filtering are reviewed. Power and energy spectral density of communication signals. Sampling and quantization of analog signals. Baseband and binary bandpass digital modulation including line coding, pulse shaping, and both pulse and carrier modulation techniques. Wireless communication system concepts including link budgets and multiple access. Transmitter and receiver design concepts. Signal-to-noise ratio, bit error rate, and their relationship. Analog techniques such as Amplitude Modulation (AM) and Frequency Modulation (FM) radio will be reviewed for conceptual and comparative purposes.

## Noise:

**Definition:** Noise in a communication system is basically undesirable or unwanted signals that get randomly added to the actual information carrying signal. Resultantly, causes disturbances in the original signal being transmitted from an end to another. The presence of noise in the system causes **interference** in the signal being transmitted and this ultimately causes errors in the communication system. Practically, the addition of noise over the information carrying signal is an unavoidable phenomenon. And this interference automatically hinders the quality of the signal being transmitted.

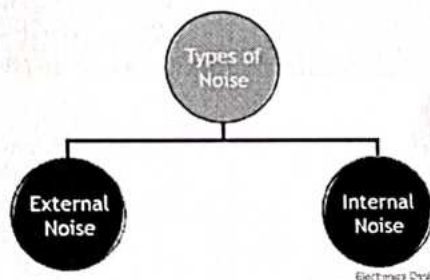
Due to the reduction in the quality of signal the receiver experiences difficulty in demodulating the transmitted signal. This eventually reduces system efficiency.

Now, the question arises how can we distinguish the various types of noise signals. So let us move further to understand the types of noise.

### Types of Noise in Communication System

Noise in the communication system is mainly classified on the basis of the source that generates that noise.

So, on the basis of source noise in the communication channel are of 2 types:



1. **External noise** includes **natural noise** and man-made noise.

#### Natural Noise

Natural noise gets generated due to either natural phenomenon or atmospheric actions like solar flares, radiation in space, electronic storms etc.

It is further classified into atmospheric and extraterrestrial noise.

#### Atmospheric Noise

The atmospheric actions produce false or spurious signals that get added with the original signal thereby causing interference in the information signal. These spurious signals propagate in the same manner as the original signal.

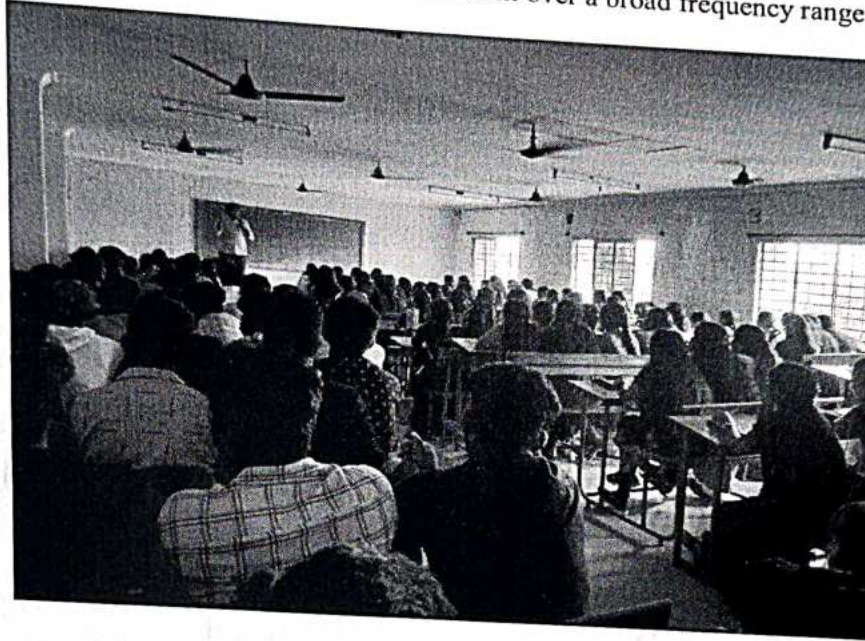
Hence the receiver at the other end collects both message as well as spurious signals.

#### Extraterrestrial Noise

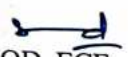


This type of noise is generated by either the sun or the outer space. This type of noise is classified into two categories:

**Solar Noise:** Solar noise is generated by the sun. As Sun is a large body with extremely high temperature thus it emits or releases high electrical energy in noise form over a broad frequency range.



  
Coordinator

  
HOD, ECE  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF ECE  
Avanthi Institute of Engg.&Tech.  
Makavarapalem, Visakhapatnam Dist-531 113.



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**CIRCULAR**

Dt. 20<sup>th</sup> May 2022

A Technical Seminar on Finite Element Analysis of Engineering Structures for all the III Year II Semester students of Mechanical Engineering Department is scheduled on 27<sup>th</sup> May 2022 at mechanical department seminar hall. All the students should attend the Seminar without fail. For any further information Contact Mr. A.N.S. Surya prakash, Assistant Professor, Mechanical Engineering Department may be consulted.

Resource Person: Prof. PUTTI SRINIVASA RAO, chairman. BoS dept. of Mechanical Engineering., Andhra University.

Copy to:  
Principal, AIET

  
V. HARI KIRAN  
Head of the Department, MECH  
Head of the Department  
Department of Mechanical Engg.  
Avanthi Institute of Engg. & Tech.,  
Makavarapalem, Visakhapatnam-531113.





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**DEPARTMENT OF MECHANICAL ENGINEERING**

**EXPERT LECTURE**

**NAME OF THE EXPERT: Dr PUTTI SRINIVASA RAO**



**DESIGNATION: PROFESSOR, DEPARTMENT OF MECHANICAL ENGINEERING,  
ANDHRA UNIVERSITY, VISAKHAPATNAM**

**TOPIC: Finite Element Analysis of Engineering Structures.**

**DATE: 27.05.2022**

**Is finite element analysis important for structural engineering?**

**Finite element analysis (FEA) is an extremely useful tool in the field of civil engineering for numerically approximating physical structures that are too complex for regular analytical solutions. Consider a concrete beam with support at both ends, facing a concentrated load on its center span.**

**Benefits of the Finite Element Analysis Process**

**1. Improved Accuracy**

Past structural design processes started by sketching, which were followed by prototype development and the manufacture of the designed structures. In such cases, the testing phase sometimes reveals that some parameters are overlooked and this leads to the failure of some structures. Such challenges are overcome through the use of F.E.A.

F.E.A. requires the designers to input all the material parameters. The inclusion of all parameters enables precise modeling of all physical stresses on each structural unit. This use of F.E.A. increases material accuracy in the design of structural components by showing how all stresses may impact on the design of a structure



## **2. Affordable and Faster Design Cycle**

In the use of F.E.A., most design iterations don't depend on manufacturing and machine shop schedules. Almost all new designed structural components can be tested in a few hours. As such, you don't have to wait for weeks or days for a hard copy to get the tests done.

## **3. Improved Design**

F.E.A. allows the designer of a structure to model a whole structural system instead of separate structural components. The modeling is helpful in improving the speed of product development. The use of different types of finite element analysis allows the designer of a structure to determine how the stress components in one part of the structure will impact the other materials and components in another separate piece of the structure.

## **4. Insights Into Crucial Design Parameters**

The use of different types of finite element analysis allows you to model the exteriors and interiors of any designed structure. Finding out how critical design factors affect the entire inside and outside of a structure is of great advantage to a designer. A designer needs to understand where failures may occur and why they will occur.

## **5. Virtual Prototyping**

F.E.A. simulations assist in reducing many iterations of the initial metal prototyping phase. The prototypes are costly because they take a lot of time and labor to build by hand. Unlike hard prototyping that may take weeks, as a designer you can use F.E.A. software to simulate the structural system you intend to build. You can also model the structure in different materials and designs within hours.

## **6. Few Hardware Prototypes**

The high-quality simulations in F.E.A. software allow structural designers to start virtual testing early in the design process. The ease of using simulations reduces the designer's reliance on many physical prototypes and thus cutting prototyping costs. This outcome implies you can cut material wastage and shorten the design cycle.

Many structures are either failing or at a point where they pose significant safety concerns. For instance, over 25% of bridges in the U.S. are handling more traffic than their design specifications or they need considerable repair work. Redesigning and prototyping such structures may take lots of time and resources if done in the physical form.

It's thus ideal for structural engineers in these areas to seek different types of finite element analysis simulations to find remedial measures that will improve the functionality of such structures.



**DEPARTMENT OF MECHANICAL ENGINEERING**

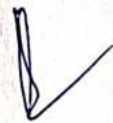
**Report of Expert lecture on Finite Element Analysis of Engineering Structures**

The Mechanical engineering department has organized expert lecture on Finite Element Analysis of Engineering Structures on 27<sup>th</sup> May 2022. This expert lecture was conducted for all the III Year II Semester students of Mechanical Engineering department. Mr. V. Harikiran (Head of the department, MECH) gave brief introduction of Dr. Putti Srinivasa Rao PROFESSOR, DEPARTMENT OF MECHANICAL ENGINEERING, ANDHRA UNIVERSITY, VISAKHAPTNAM and later on addressed the students about A Technical Seminar on Finite Element Analysis of Engineering Structures.

Students participated actively and involved totally to make the Guest Lecture a grand success. Feedback from the students was very encouraging. The lecture came to an end with the vote of thanks by the Mr. V. Harikiran, HOD, Mechanical engineering Department.



**Coordinator**



**HOD**

**Head of the Department  
Department of Mechanical Engg.  
Avanthi Institute of Engg. & Tech.,  
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**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**CIRCULAR**

Dt. 20<sup>th</sup> May 2022

A Technical Seminar on *Machine Learning* for all the III Year I Semester students of Computer Science and Engineering Department is scheduled from 27<sup>th</sup> May 2022 at First Year Block Seminar Hall. All the students should Project team leaders attend the Seminar without fail. For any further information Contact Ms. B.Santoshi, Assistant Professor, Computer Science and Engineering Department may be consulted.

Resource Person – P. Eswar Rama Naidu, Miracle Systems, Visakhapatnam

U. Nanaji

Head of the Department

CSE

Copy to: Principal, AIET





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Tamaram(Village), Makavarapalem(Mandal), Visakhapatnam-531113

**Report on Guest Lecture**

A guest lecture was organized by Department of Computer Science & Engineering on 27 May 2022 as per the details given below:

**Topics:** Machine Learning.

**Date:** 27 May 2022

**Place:** First Year BLOCK, SEMINAR HALL

**Time:** 11:30 AM-1:30 PM

**Speaker:** P. Eswar Rama Naidu, Miracle System, Visakhapatnam, AP

**About the Speaker** P. Eswar Rama Naidu, Miracle System, Visakhapatnam, AP. Senior project Manager

**Major points covered during the talk:**

- Data Pre-Processing
- Regression
- Classification
- Clustering
- Ensemble Learning
- Time Series Analysis

Students of following batches attend the lecture:

**136 students (III B.Tech - CSE)**

**Following faculty members also attended the lecture:**

1. Dr U Nanaji, HOD
2. Ms. B.Santoshi, Assistant Professor

*Santoshi*  
Coordinator

*[Signature]*  
HOD





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**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**National Level Technical Seminar on the Emerging Trends in Machine Learning**

27<sup>th</sup> May 2022



*Santhoshi*  
Coordinator

*[Signature]*  
HOD





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**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**CIRCULAR**

**Dt. 20<sup>th</sup> May 2022**

A Technical Seminar on *Data Mining and Data Warehousing* for all the III Year I Semester students of Computer Science and Engineering Department is scheduled from **28<sup>th</sup> May 2022** at First Year Block Seminar Hall. All the students should Project team leaders attend the Seminar without fail. For any further information Contact Mr. P.V.S Prabhakar, Assistant Professor, Computer Science and Engineering Department may be consulted.

**Resource Person – Dr. T. RamaKrishnudu, Associate Professor, NIT Warangal**

**U. Nanaji**

**Head of the Department**

**CSE**

**Copy to: Principal, AIET**

**Dr. T. RamaKrishnudu, Associate Professor**

**Department of Computer Science and Engineering**

**National Institute of Technology, Warangal - 506004, Telangana, INDIA**

**E-mail ID : trk@nitw.ac.in**

**Phone Number : 9866876842**



**Interests:** Distributed data mining., Big Data Analytics, Web Mining, Text Mining, Urban Computing, Social Media Analysis, Natural Language Processing.

**Education:**

- B.Tech (CSE), Jawaharlal Nehru Technological University, Hyderabad.
- M.Tech (CST), Andhra University, Visakhapatnam.
- Ph.D. National Institute of Technology, Warangal.

**Teaching Experience:** Total: 18 Years (in NIT Warangal: 15 Years )

**Areas of Research:** Data mining - Association rule mining, Distributed data mining., Big Data Analytics, Web Mining, Text Mining, Urban Computing, Social Media Analysis, Natural Language Processing

**Publications:14**

**INVITED TALKS (15):**

**CAMPUS/DEPARTMENTAL TALKS AND OTHERS:**

- TALKS (12):

**PROFESSIONAL/INSTITUTE/DEPARTMENTAL SERVICE:**

**I. PROFESSIONAL SERVICE (16):**

**II. INSTITUTE (06):**

**III. DEPARTMENTAL (06):**

**IV. LAB ESTABLISHMENT (01):**

**WORKSHOP/FDPs/TRAINING PROGRAMME/CONFERENCE (27):**

- ORGANIZED (08):
- ATTENDED (21):
- APPLICATION DEVELOPMENT (08):
- PROFESSIONAL MEMBERSHIPS (04):

**Projects:**

**Development of Prediction and Response System to Monitor Communicable Diseases in Real-Time using Deep Learning, (Approx. 9 Lakh ), SERB, --On-going.**





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**Report on Guest Lecture by Industry Expert**

A guest lecture was organized by Department of Computer Science & Engineering on 28 May 2022 as per the details given below:

**Topics:** Data Mining and Data Warehousing

**Date:** 28 May 2022

**Place:** First Year BLOCK, SEMINAR HALL

**Time:** 11AM-1PM

**Speaker:** Dr. T. RamaKrishnudu, Associate Professor, NIT Warangal, AP

**About the Speaker:** Present working as a Professor in CSE Department, NIT Warangal. Worked as a Associate Professor in Department of CSE , NIT Warangal and also 15 years experience in teaching, 14 Publications, Workshop / Edps / TRAINING PROGRAMME / CONFERENCE (27), Areas of Research: Data mining - Association rule mining, Distributed data mining., Big Data Analytics, Web Mining, Text Mining, Urban Computing, Social Media Analysis, Natural Language Processing.

**Major Topics covered during the talk:**

- Basic Elements of Data Warehouse
- Normalization VS Dimensional Modeling
- Slicing and Dicing, Drilling, Drill-up, Drill-down, Drill-within, Drill-across.
- Metadata
- KDD and Data Mining
- Bayesian Network Approach
- Neural Networks, Genetic Algorithms, Rough Sets, SVM
- Temporal & Spatial Data Mining

Students of following batches attend the lecture:

128 students (III B.Tech - CSE)

**Following faculty members also attended the lecture:**

1. Dr U Nanaji, HOD
2. P.V.S.Prabhakar, Assistant Professor

  
Coordinator

  
HOD





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**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**National Level Technical Seminar on the Emerging Trends in Data Mining and Data  
Warehousing**

28<sup>th</sup> May 2022



  
Coordinator

  
HOD





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**CIRCULAR**

Dt. 20<sup>th</sup> May 2022

A Technical Seminar on Computational fluid dynamics for all the III Year II Semester students of Mechanical Engineering Department is scheduled on **28<sup>th</sup> May 2022** at mechanical department seminar hall. All the students should attend the Seminar without fail. For any further information Contact Mr. A.N.S. Surya prakash, Assistant Professor, Mechanical Engineering Department may be consulted

Resource Person : **Sri. Khagesh Kumar chowdery. Scientist E, NSTL , Visakhapatnam.**

Copy to:  
Principal, AIET

  
Mr.V. HARI KIRAN  
Head of the Department, MECH  
**Head of the Department**  
Department of Mechanical Engg  
Avanathi Institute of Engg. & Tech.,  
Makavarapalem, Visakhapatnam-531113



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**DEPARTMENT OF MECHANICAL ENGINEERING**

**EXPERT LECTURE**

**NAME OF THE EXPERT: Sri. Khagesh kumar choudary**



**DESIGNATION: Scientist E, NSTL , Visakhapatnam.**

**TOPIC: COMPUTATIONAL FLUID DYNAMICS**

**DATE: 28.05.2022**







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**DEPARTMENT OF MECHANICAL ENGINEERING**

**Report of Expert lecture on Computational fluid dynamics**

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Students participated actively and involved totally to make the Guest Lecture a grand success. Feedback from the students was very encouraging. The lecture came to an end with the vote of thanks by the V. Harikiran, HOD, Mechanical engineering Department.

**Coordinator**

**HOD**

**Head of the Department  
Department of Mechanical Engg.  
Avanthi Institute of Engg. & Tech.,  
Makavarapalem, Visakhapatnam-531113.**



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### CIRCULAR

Dt. 16<sup>th</sup> December 2021

A Technical Seminar on Finite Element Analysis –Heat Transfer for all the IV Year II Semester students of Mechanical Engineering Department is scheduled on 17<sup>th</sup> December 2021 at mechanical department seminar hall. All the students should attend the Seminar without fail. For any further information Contact Mr. B.Rama Krishna and P Sadhana, Assistant Professor. Mechanical Engineering Department may be consulted

Resource Person : : **Mr.P ANIL KUMAR** , Deputy Director, Placements Cell, GITAM University

Copy to:

Principal, AIET

  
Mr V. HARI KIRAN

Head of the Department, MECH  
**Head of the Department**  
Department of Mechanical Engg.  
Avanthi Institute of Engg. & Tech.,  
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**DEPARTMENT OF MECHANICAL ENGINEERING**

**EXPERT LECTURE**

**NAME OF THE EXPERT: Mr.P ANIL KUMAR**



**DESIGNATION:** Deputy Director, Placements Cell, GITAM University

**TOPIC:** FINITE ELEMENT ANALYSIS – HEAT TRANSFER

**DATE:** 17-12-2021

**ABOUT TOPIC:**

variational principle is applied to the transient heat conduction analysis of complex solids of arbitrary shape with temperature and heat flux boundary conditions. The finite element discretization technique is used to reduce the continuous spatial solution into a finite number of time-dependent unknowns.

Heat transfer analysis is a problem of major significance in a vast range of industrial applications. These extend over the fields of mechanical engineering, aeronautical engineering, chemical engineering and numerous applications in civil and electrical engineering. If one considers the heat conduction equation alone the number of practical problems amenable to solution is extensive. Expansion of the work to include features such as phase change, coupled heat and mass transfer, and thermal stress analysis provides the engineer with the capability to



address a further series of key engineering problems. The complexity of practical problems is such that closed form solutions are not generally possible. The use of numerical techniques to solve such problems is therefore considered essential, and this book presents the use of the powerful finite element method in heat transfer analysis. Starting with the fundamental general heat conduction equation, the book moves on to consider the solution of linear steady state heat conduction problems, transient analyses and non-linear examples. Problems of melting and solidification are then considered at length followed by a chapter on convection.

#### What is Finite Element Analysis?

Finite element analysis (FEA) is a simulating process of the manner and assembly of an object under obtained conditions. It is used for assessing the finite element method (FEM) which includes one or more solution algorithms. General problem areas of interest are structures, heat transfer, the flow of fluid, transport, and some boundary value problems.

Thermal analysis with finite element analysis permits for resolving the heat transfer in or between solids. Heat transfer categories such as convection, conduction, and thermal radiation can be estimated.

Finite Element Method (FEM) is like a theory manual, with plenty of equations and mathematics. It is usually used for the application of FEM, to solve real engineering problems. Finite element analysis (FEA) software is a computational method for forecasting the reaction of the product.

#### Heat transfer

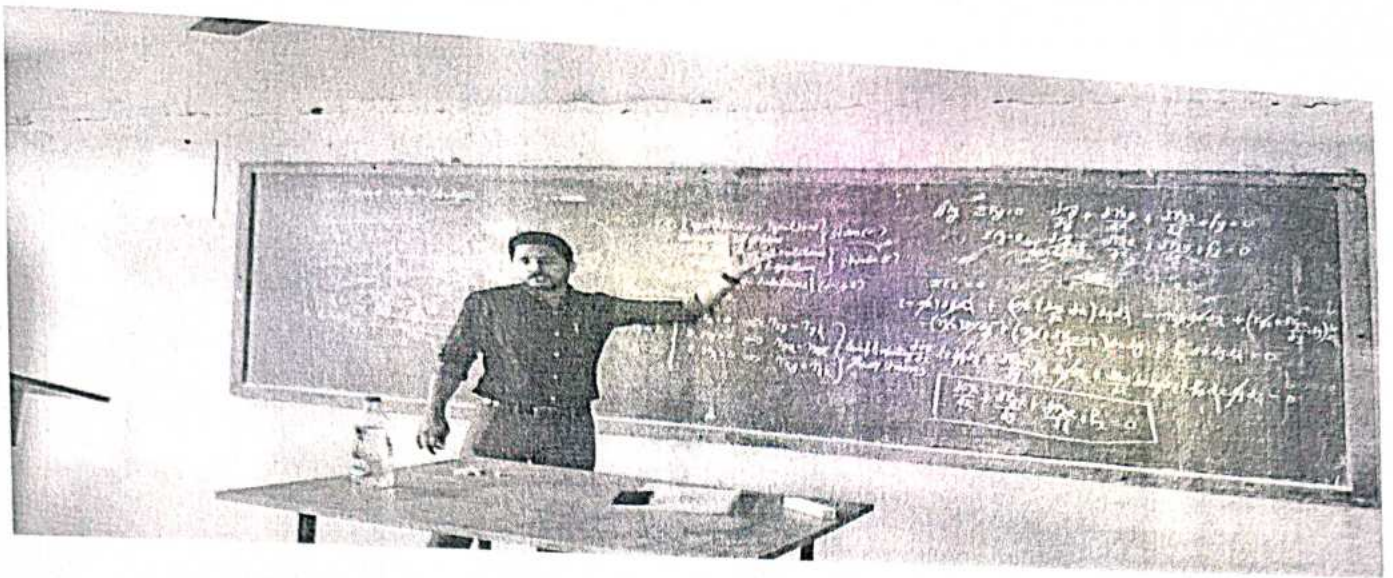
Conduction: It is the transfer of heat through solid objects without the bulk motion of the matter.

Convection: The process of heat transfer by the bulk movement of molecules within fluids is called convection. The motion of fluid increases the heat transfer and it is the dominant form of heat transfer in liquids and gases.

Thermal radiation: Radiative heat transfer is the transfer of energy via thermal radiation, electromagnetic waves, and so on.

Heat transfer problems are of critical importance in almost all areas of science, technology, engineering, and management (STEM), especially in the mechanical engineering branch. Various heat transfer problems are assisted by mass transfer.





COORDINATOR

  
HOD

Head of the Department  
Department of Mechanical Engg.  
Avanthi Institute of Engg. & Tech.,  
Makavarapalem, Visakhapatnam-531110






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**DEPARTMENT OF MECHANICAL ENGINEERING**

Report of Expert lecture on **FINITE ELEMENT ANALYSIS –HEAT TRANSFER**

The Mechanical engineering department has organized expert lecture on **FINITE ELEMENT ANALYSIS –HEAT TRANSFER** on **17<sup>th</sup> December 2021**. This expert lecture was conducted for all the IV Year II Semester students of Mechanical Engineering department. Mr. V. Harikiran (Head of the department, MECH) gave brief introduction of **Mr. P. Anil kumar** and later on he addressed the students about a Technical Seminar on **FINITE ELEMENT ANALYSIS –HEAT TRANSFER**. Students participated actively and involved totally to make the Guest Lecture a grand success. Feedback from the students was very encouraging. The lecture came to an end with the vote of thanks by the V. Harikiran, HOD, Mechanical engineering Department.

  
Coordinator

  
HOD





## AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, Permantely Affiliated to JNT University Kakinada, ACCREDITED BY NAAC and Recognized under 2(f) & 12(b) by UGC, New Delhi.)  
Tamaram, Makavarapalem, Narsipatnam Revenue Division, Visakhapatnam-531113

### CIRCULAR

Dt. 20<sup>th</sup> December 2021

A Technical Seminar on Robotics in industrial applications for all the IV Year II Semester students of Mechanical Engineering Department is scheduled on 24<sup>th</sup> December 2021 at mechanical department seminar hall. All the students should attend the Seminar without fail. For any further information Contact Mr. B.Rama Krishna and A.N.S.Surya prakash, Assistant Professor, Mechanical Engineering Department may be consulted  
Resource Person : Ch.Jaya Sri Vatsa, Design Engineer, BOSCH, Bengaluru

Copy to:

Principal, AIET

  
V. HARI KIRAN

Head of the Department, MECH

Head of the Department  
Department of Mechanical Engg.  
Avanthi Institute of Engg. & Tech.,  
Makavarapalem, Visakhapatnam-531113





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**DEPARTMENT OF MECHANICAL ENGINEERING**  
**EXPERT LECTURE**

**NAME OF THE EXPERT: CH.JAYA SRI VATSA**



**DESIGNATION:** Design Engineer, BOSCH, Bengaluru

**TOPIC:** ROBOTICS IN INDUSTRIAL APPLICATIONS

**DATE:** 24.12.2021







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**DEPARTMENT OF MECHANICAL ENGINEERING**

**Report of Expert lecture on Robotics in industrial applications**

The Mechanical engineering department has organized expert lecture on **Robotics in industrial applications** on **24<sup>th</sup> December 2021**. This expert lecture was conducted for all the IV Year II Semester students of Mechanical Engineering department. Mr. V. Harikiran (Head of the department, MECH) gave brief introduction of **CH. Jaya Sri Vatsa** and later on he addressed the students about a Technical Seminar on **Robotics in industrial applications**.

Students participated actively and involved totally to make the Guest Lecture a grand success. Feedback from the students was very encouraging. The lecture came to an end with the vote of thanks by the V. Harikiran, HOD, Mechanical engineering Department.

Coordinator

HOD

**Head of the Department  
Department of Mechanical Engg.  
Avanthi Institute of Engg. & Tech.,  
Makavarapalem, Visakhapatnam-531113**