



Department of Electronics and Communication Engineering

Second Quarter E – Newsletter -2022-23

Head of the Institute	Message
Dr. Anand Deshpande Principal & Director, AITM	An Institute is assessed on the basis of the Academic ambiance and outcome of the system in terms of performance and achievements of the students and staff in teaching-learning, research, innovation, Placements, and results. AITM has been known for its Academic credentials coupled with holistic growth in all directions. The new generation of competent minds must imbibe knowledge and practically they should comprehend the art of balancing brilliant technical, managerial communication, and interpersonal skills, nest. The Institute has achieved a series of milestones with the help of brilliant students, dedicated staff, and encouraging Management. We promise a wonderful experience of rich Academic and Excellent facilities coupled with professional practices and blended with an affectionate concern for our Students.
Head of the Department	Message
	Welcome to the department of Electronics and Communication Engineering at Angadi Institute of Technology and Management, Belagavi. The Department was established in the year 2009 with the aim of providing leadership in the field of Electronics & Communication Engineering with an intake of 60 students. The department is located in a sprawling environment with a state of art facilities and highly qualified faculty. The department works with the objective of addressing critical challenges faced by the Industry, Society and the Academia. Perhaps even more important is our unceasing commitment to our students, helping
Mr. Raviraj Chougala HOD	them to learn, grow, develop, and achieve their goals in their pursuit to excel in their professional career.

Institute Vision and Misssion

Vision:

To become a premier institute committed to academic excellence and global competence for the holistic development of students.

Mission:

- M1: Develop competent human resources, adopt outcome-based education (OBE) and Implement cognitive assessment of students.
- M2: Inculcate the traits of global competencies (such as domain expertise, Accountability, ethics, problem solving ability, communication skills, leadership Qualities and life-long learning) amongst the students.
- M3: Nurture and train our students to have domain knowledge, develop the qualities of global professionals and to have social consciousness for holistic development.

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Department Vision and Mission

Vision:

To impart quality and responsive education in Electronics and Communication Engineering for the overall development of students to meet the global challenges.

Mission:

- M1: Adopt a transformative teaching-learning pedagogy to empower our students with domain knowledge and practical skills in resonance with technological developments.
- M2: Impart multi-disciplinary knowledge, and train our students to develop the relevant professional competency skills.
- M3: Create a cogent ambiance to comprehend the technical and management principles, and the efficacy of life-long learning.

Department Association Inauguration and Freshers Welcome

Inaugural Function of "Association of Electronics and Communication Engineering Students- 2023 and Freshers Welcome", was organised by ECE Department, Angadi Institute of Technology and Management-AITM, Belagavi on Wednesday 12th April 2023.

Mr. Virendra Kadam, CEO & Founder, Deltasys E Forming, Belagavi was the Chief guest of the function. Dr.Anand Deshpande ,Principal and Director, AITM, Prof.Raviraj Chougala, Head of Department, Prof.Sriram Kulkarni, Event Coordinator along with all the staff presided the function. The Inaugural Ceremony began with the Invocation song, lamp lighting followed by welcoming of dignitaries. Mr. Virendra Kadam, CEO & Founder, Deltasys E Forming, Belagavi, addressed the students about the importance of 3D printing machines and CNC machines, and their applications in various industries, including automotive, aerospace, defense, and construction. The event concluded with Vote of thanks by Miss Sneha Halakatti



Vencer 2K23

Vencer was organized on 11th and 12th may 2023. It is cultural fest which is conducted every year in even semester; the fest is mainly focusing on exploring the hidden talent in budding engineers. The "Vencer" is organized every year by inviting Engineering students across Karnataka. The whole process is see-through by the invited Judges from relevant organizations. The winners of all the events are awarded by cash prizes and certificates of merit.

Objectives of Vencer 2K23:

- To encourage students to exhibit their talents.
- To motivate students to participate in technical events like paper presentation, mini projects and coding activities.
- To showcase multi talents like singing, dancing with other cultural activities.

IEEE Student Branch Inauguration

. Department of Electronics and Communication Engineering (ECE), Angadi Institute of Technology and Management-AITM, Belagavi inaugurated IEEE Student Branch at Angadi Institute of Technology and Management-AITM, Belagavi on 20th June, Tuesday at 11 a.m.

Dr. Krupa Rasane, Chair, IEEE NKSS, Dr. Virupaxi Dalal, Secretary, IEEE NKSS and Prof. Abhishek Deshmukh, Treasurer, IEEE NKSS were the Chief Guests of the function. Dr. Anand Deshpande, Principal and Director, AITM, Prof. Raviraj Chougala, Head of ECE Department, Prof. Dhanashree Kulkarni, Dean and HOD of CSE Department, Dr. Anilkumar C. K., HOD of EEE Department along with all the HODs, staff and students presided the function.

Prof. Raviraj Chougala formally welcomed all the dignitaries present on the dais, faculty and student members. He mentioned about the significance of







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IEEE and its aims about bringing together a core group of researchers from all over with a significant participation from the students.

Dr. Krupa Rasane, Chair, IEEE NKSS addressed the students about the importance of IEEE student branch, and related fields and how they are interconnected from a long time. She motivated everyone to actively participate in the workshops to get benefited, wished for the success of the student branch and inspired the participants for academically rewarding stay in AITM.

Dr. Virupaxi Dalal, Secretary, IEEE NKSS described how IEEE Student Branch Student Branches provides a networking opportunity to meet and learn from fellow students, as well as faculty members and professionals in the field to share their interests, future professions and ideas, in addition to improving their soft and hard skills. Prof. Abhishek Deshmukh, Treasurer, IEEE NKSS addressed the students about Branch and its activities that consists of participation in regional conferences, workshops and competitions. He also development spoke about of leadership, interpersonal and team building skills and establishment of a Student Branch Library with IEEE's publications.

Dr. Anand Deshpande, Principal and Director, AITM motivated students to actively participate in such events so that they get ready to face the upcoming challenging future and to become successful in their career.

The event concluded with Vote of thanks by Prof. Sriram Kulkarni, Assistant Professor, ECE, AITM.

Student Articles

NANOTECHNOLOGY APPLICATIONS

INTRODUCTION

Nanoelectronics has potential to change society and it involves manipulation of objects on the atomic level. The products will be build on





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every atom that are stronger, smarter, cheaper, cleaner, and more precise. Nanotechnology is the art and science of manipulating matter at the nanoscale, to create new and unique materials and products. It is defined as any material that has unique or novel properties, due to the nanoscale (nano metre- scale) structuring. These are formed by incorporation structuring or of subdivided *nanoparticles.They* are into nanocrystals, nanopowders, and nanotubes. APPLICATIONS OF NANOTECHNOLOGY-

1. <u>Medicine</u>

Researchers are developing customized nanoparticles the size of molecules that can deliver drugs directly to diseased cells in your body. When it's perfected, this method should greatly reduce the damage treatment such as chemotherapy does to a patient's healthy cells.

2. <u>Electronics</u>

Nanotechnology holds some answers for how we might increase the capabilities of electronics devices while we reduce their weight and power consumption.

3. <u>Food</u>

Nanotechnology is having an impact on several aspects of food science, from how food is grown to how it is packaged. Companies are developing nanomaterials that will make a difference not only in the taste of food, but also in food safety, and the health benefits that food delivers

4.<u>Fuel cells</u> – Nanotechnology is being used to reduce the cost of catalyst used in the fuel cells to produce the hydrogen ions from fuels such as methenol and prove the efficiency of memberanes used in fuel cells to separate the hydrogen ions from other gaseous such as oxygen.

5. <u>Solar Cells-</u> companies have developed nanotech solar cells that can be manufactured at significantly lower cost than the conventional solar cells

6. <u>Batteries</u> – Companies currently developing batteries using nanomanterials one such battery will be a good as new after setting on the shelf for

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decades. Another battery can be recharged significantly faster than the conventional batteries 7.<u>In Space</u>- It holds the key to making space . Flight more practical . advancement in nano materials make light weight spacecraft and space elevator possible by significantly reducing the amount of rocket fuel required, these advances can lower the cost of a reaching orbit and . travelling in space.

8. <u>In fabrics</u> – making composite fabric with nano sized particle or fabric allows improvement of fabric property wiyhout significant increase in weight thickness or stiffness as might have been the case with previously used techniques. CONCLUSION

By seeing all these applications in various sectors we can adopt or implement this technology because these materials are easily available low cost and more convient. These materials are considered to have a higher life span.

By Shreekrishna Joshi ECE Department

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