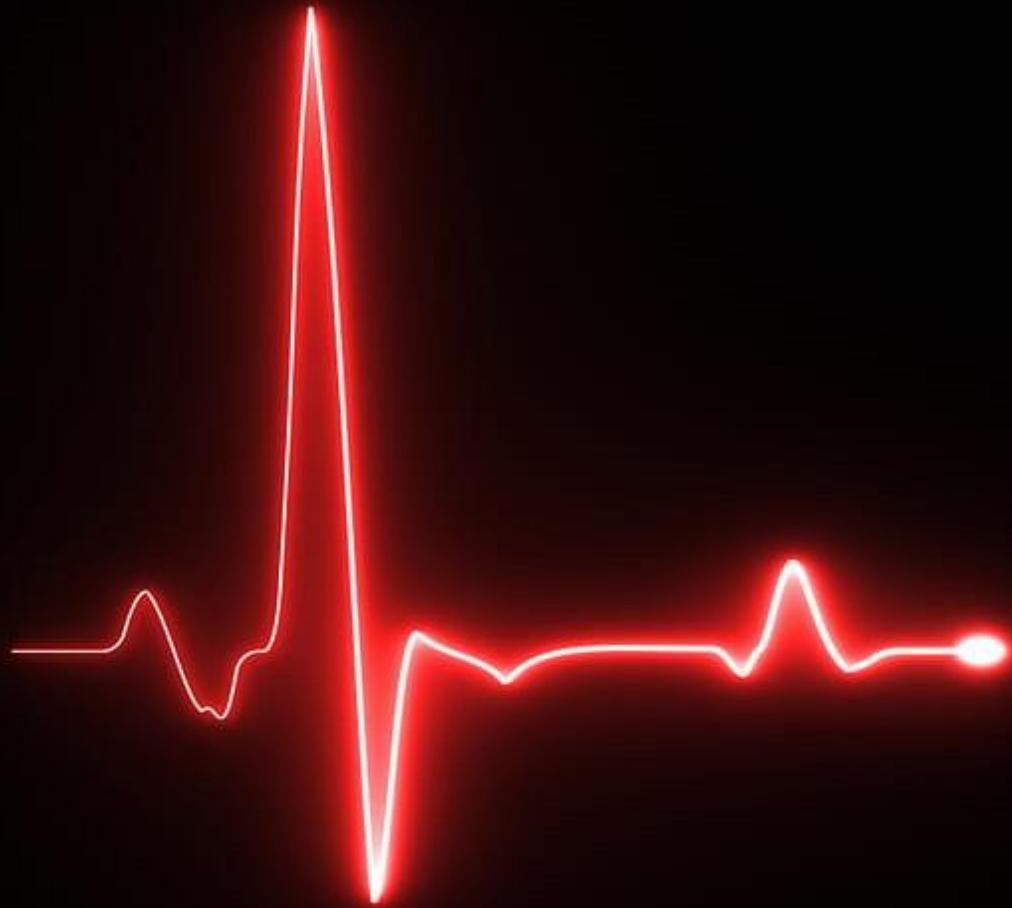


THE PULSE

NEWSLETTER
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



Vision

To emerge as a centre of academic excellence in the field of Electronics & Communication Engineering to address the dynamic needs of the industry upholding moral values.

Mission

- Impart in-depth knowledge in Electronics & Communication Engineering to achieve academic excellence.
- Develop an environment of research to meet the demands of evolving technology.
- Inculcate ethical values to promote team work and leadership qualities befitting societal requirements.
- Provide adaptability skills for sustaining in the dynamic environment.

MESSAGE FROM FACULTY

Air Pollution

Dr. Sarwesh P*

India is highly vulnerable to atmospheric pollution in recent years, especially in city areas, due to exponential growth in urbanization and industrialization. The increasing level of pollutants in the atmosphere worsened the ambient air quality. The Air Quality Index has been increasing at an alarming rate in major cities of India. State of India's Environment (SoE) Report, 2019 says air pollution takes the responsibility of 12.5 % of death in the country. The major contribution of this critical situation is due to the pollution developed by dust and constructions, waste burning, non-electrical vehicles, diesel generators, industries and domestic cooking, the same report says air pollution in India is vital hazard than smoking. There for we may loose our atmosphere if it continues.

COVID-19 Lockdown has a substantial positive impact on air pollution. Air pollutants concentrations are reduced during phase-I and phase-II of the lockdown. Pollutants, especially NO_x and PM_{2.5} concentrations, are drastically reduced compared to the previous years. NO_x concentrations are reduced by ~20% in Bangalore, whereas ~50% in Delhi. PM_{2.5} concentrations are reduced by ~41% in Delhi and ~55% in Bangalore. Forecasting of pollutants is helpful in providing the valuable information for the optimal air pollution control strategies. All the pollutants during forecasting showed a rising trend except Sulphur dioxide, since preventive measures need to be addressed in various types of air pollutants in the world.



EVENTS

Highlights of the Month:

- Dr. Aneesh.V has delivered an Invited Talk on “Robotics in Agriculture and Sensors in Smart Farming” at JUNIA ISA, Lille, France under Faculty Mobility Program 2021-2022, held on 07.10.2021.
- Dr. Chidambaram. S has delivered an Invited Talk on “Applications of Hyperspectral Imaging in Precision Agriculture” at JUNIA ISA, Lille, France under Faculty Mobility Program 2021-2022, held on 07.10.2021.
- Organized a Technical Talk on “Introduction to Machine Learning” delivered by Dr.K.Hemachandran, Program Chair-MBA(BA, AI&ML) and Professor(BA, AI&ML), School of Business, Woxen University, Hyderabad held on 23.10.2021.
- Dr. Vinay Jha Pillai has delivered an Invited Talk on “Medical Imaging” at Modern College of Business and Science, Muscat, Oman held on 26.10.2021.
- Dr. Chidambaram. S has delivered an Invited Talk on “Introduction to Nuclear Safety and Security” at National Level Online Seminar on Machine Learning and Big Data Processing Related to Safety and Security of Nuclear Utilization, Organized by Hindusthan Institute of Technology, Coimbatore, held on 27.10.2021.

Research/ Publications:

- S.Sujatha published an article entitled as “A versatile approach based on convolutional neural networks for early identification of diseases in tomato plants”, in International Journal of Wavelets, Multiresolution and Information Processing, October 2021.
- Dr.G.Sushanth published an article entitled as “A versatile approach based on convolutional neural networks for early identification of diseases in tomato plants”, in International Journal of Wavelets, Multiresolution and Information Processing, October 2021.
- An article entitled as “Cross Layer Design with Weighted Sum Approach for Extending Device Sustainability in Smart Cities” by Dr. Sarwesh P has been accepted for publication in an International Journal of Sustainable Cities and Society(SCS), accepted on 12.10.2021.
- Consultancy services carried out by Dr.S.Suganthi and Prof.D.Shashikumar on 'NFC Antenna Characterization for Smart Card Applications' with the consultation amount of Rs.10620.00 for OptiPace Technologies Pvt. Ltd., Bangalore on 23.10.2021 using the antenna measurement facility available in RF and Microwave Laboratory.

STUDENT CONNECT

THE DICHOTOMY PARADOX

Imagine that you're about to set off walking down a street. To reach the other end, you'd first have to walk half way there. And to walk half way there, you'd first have to walk a quarter of the way there. And to walk a quarter of the way there, you'd first have to walk an eighth of the way there. And before that a sixteenth of the way there, and then a thirty-second of the way there, a sixty-fourth of the way there, and so on. Ultimately, in order to perform even the simplest of tasks like walking down a street, you'd have to perform an infinite number of smaller tasks—something that, by definition, is utterly impossible. Not only that, but no matter how small the first part of the journey is said to be, it can always be halved to create another task; the only way in which it cannot be halved would be to consider the first part of the journey to be of absolutely no distance whatsoever, and in order to complete the task of moving no distance whatsoever, you can't even start your journey in the first place.

TENDRAL NARAYANAN
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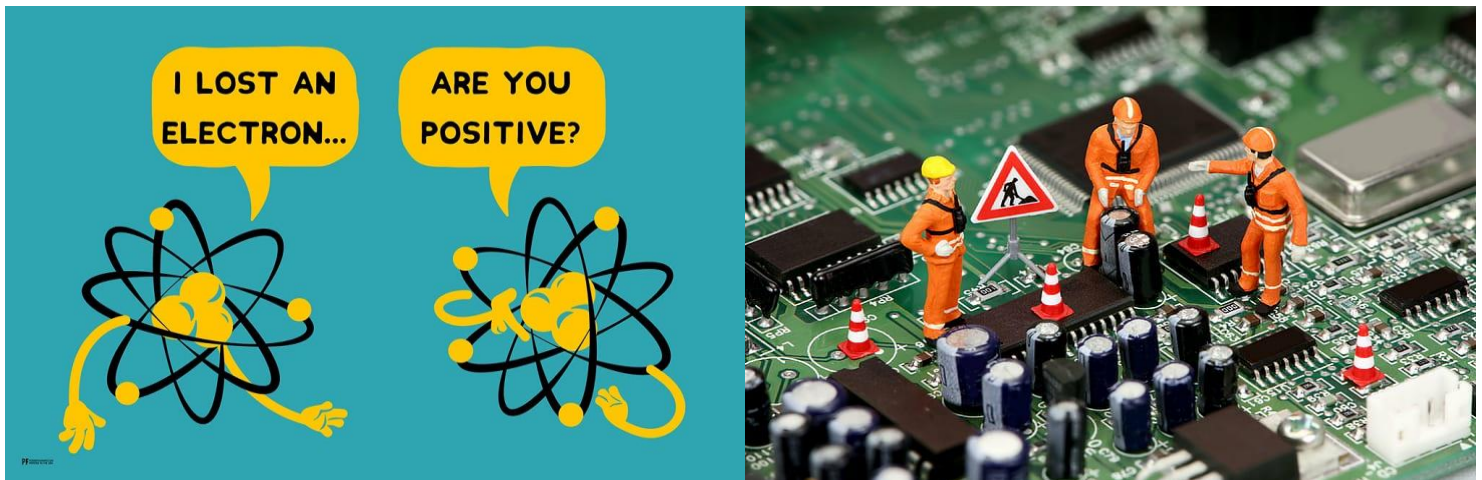


STUDENT CONNECT

WHAT IS IES?

THE ESE FULL FORM IS THE ENGINEERS ENGINEERING SERVICES EXAMINATION. THE IES OR IESE QUALIFIED CANDIDATES WORK FOR THE INDIAN GOVERNMENT AND IS CATEGORIZED AS CLASS - 1 OFFICER ARE MEMBERS OF THE INDIAN ENGINEERING SERVICES (IES) OR ENGINEERING SERVICES EXAMINATION (ESE).

THEY OVERSEE A SIGNIFICANT PORTION OF THE PUBLIC SECTOR ECONOMY, INCLUDING INDIAN RAILWAYS, POWER, TELECOMMUNICATIONS, CENTRAL WATER ENGINEERING, AND DEFENSE. CANDIDATES CAN CHECK THE IES LATEST UPDATES.



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Kindly share your thoughts and research experiences via e-mail to our team, and be featured in next month's issue!