TECHNICAL PAPER PRESENTATION

presented by IEEE and IETE

OVERVIEW

The IEEE standard format will be followed for the paper. The participants can choose any of the below topics.

1. **Artificial Intelligence:**

Artificial intelligence (**AI**, also **machine intelligence**, **MI**) is intelligence exhibited by machines, rather than humans or other animals (*natural intelligence*, *NI*). In computer science, the field of AI research defines itself as the study of "intelligent agents": any device that perceives its environment and takes actions that maximize its chance of success at some goal. Colloquially, the term "artificial intelligence" is applied when a machine mimics "cognitive" functions that humans associate with other human minds, such as "learning" and "problem solving".

The scope of AI is disputed: as machines become increasingly capable, tasks considered as requiring "intelligence" are often removed from the definition, a phenomenon known as the AI effect, leading to the quip "AI is whatever hasn't been done yet." For instance, optical character recognition is frequently excluded from "artificial intelligence", having become a routine technology. Capabilities generally classified as AI, as of 2017, include successfully understanding human speech, competing at a high level in strategic game systems (such as chess and Go), autonomous cars, intelligent routing in content delivery networks, military simulations, and interpreting complex data.

AI is relevant to any intellectual task. Modern artificial intelligence techniques are pervasive and are too numerous to list here. Frequently, when a technique reaches mainstream use, it is no longer considered artificial intelligence; this phenomenon is described as the AI effect.

High-profile examples of AI include autonomous vehicles (such as drones and self-driving cars), medical diagnosis, creating art (such as poetry), proving mathematical theorems, playing games (such as Chess or Go), search engines (such as Google search), online assistants (such as Siri), image recognition in photographs, spam filtering, prediction of judicial decisions] and targeting online advertisements.

With social media sites overtaking TV as a source for news for young people and news organisations increasingly reliant on social media platforms for generating distribution, major publishers now use artificial intelligence (AI) technology to post stories more effectively and generate higher volumes of traffic.

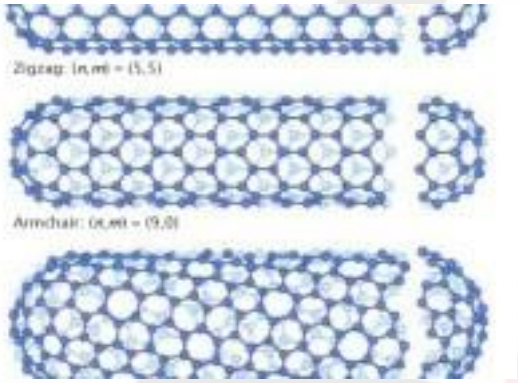
2. **Application of microcontroller in vehicle monitoring or fuel saver system:**

The VMSS (Vehicle Monitoring and Security System) is a GPS based vehicle tracking system that is used for security applications. The project uses two main underlying concepts. These are GPS (Global Positioning System) and GSM (Global System for Mobile Communication). The main application of this system in this context is tracking the vehicle to which the GPS is connected, giving the information about its position whenever required and for the security of each person travelling by the vehicle. This is done with the help of the GPS satellite and the GPS module attached to the vehicle which needs to be tracked. The GPS antenna present in the GPS module receives the information from the GPS satellite in NMEA (National Marine Electronics Association) format and thus it reveals the position information. This information got from the GPS antenna has to be sent to the Base station wherein it is decoded. For this we use GSM module which has an antenna too. Thus we have at the Base station; the complete data about the vehicle.

The fuel resources which are non-renewable and presently available can last only for about 50 years. Being aware of this rapidly exhaustible resource the serious thought needs to be given for its conservation. The most vulnerable resource is the crude oil which is a source for most utilized oils like Petrol, Diesel, and Kerosene. The increase in the number of automobiles is multiplying every year leading to the use of fuel to a larger extent. The fastest resource that is getting exhausted is the fuel resource, hence there is an urgent need for conserving the fuel resources. The common place where the engines of vehicles are not switched off when the traffic is halting. To study the impact of keeping the engines switched on during the traffic halts at signals is of prime importance.

3. **Carbon Nanotubes**

Carbon nanotubes, long thin cylinders of carbon, were discovered in 1991 by Iijima. Carbon nanotubes (CNTs) are allotropes of carbon which are members of the fullerene structural family, which also includes the spherical buckyballs.



4. **Computational Fluid Mechanics:**

Computational fluid dynamics (CFD) is a branch of fluid mechanics that uses numerical analysis and data structures to solve and analyze problems that involve fluid flows. Computers are used to perform the calculations required to simulate the interaction of liquids and gases with surfaces defined by boundary conditions. With high-speed supercomputers, better solutions can be achieved. Ongoing research yields software that improves the accuracy and speed of complex simulation scenarios such as transonic or turbulent flows. Initial experimental validation of such software is performed using a wind tunnel with the final validation coming in full-scale testing, e.g. flight tests.

RULES

- The Decision of the judges shall be final and binding.
- The presentation should last for 10 minutes maximum including the Q&A session.
- The participants having the highest points wins.

JUDGING CRITERIA

- 15 points for the paper.
- 10 points for the presentation.
- 10 points for the Q&A.
- 10 points for the clarity of expression.
- Total points: 55

Prizes worth: Rs. 5000/-

Registration: Rs. 50/- (Team of 2)

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