SREENIVASA INSTITUTE OF TECHNOLOGY AND MANAGEMENT STUDIES
(AUTONOMOUS)
(Approved by AICTE, New Delhi & Affiliated to JNTU Anantapur) Dr.D.K.Audikesavulu Marg, Murukambattu Post, Chittoor – 517127

One day Technical Seminar
On

"Role of AI in Hardware Industries"


Introduction:

The field of "hardware for AI" is rapidly evolving, from custom neural network accelerators and event-based neuromorphic chips designed to process sensory information at the edge, to powerful AI platforms for training models in the cloud. We foresee that in the future the diversity in architectures, hardware platforms, and applications that drive AI hardware development will only continue to increase.

Objectives:

The main objective is to help the community broaden their understanding of what constitutes AI hardware and become aware of the sheer richness of this vast subject. To achieve this, we intend to use this topic to index in one location the state-of-the-art hardware systems that solve very different problems in AI. It will present a well-rounded and inclusive view of hardware solutions addressing the myriad aspects of the truly vast-ranging topic of "AI". The topic is designed to be inclusive and give voice to a broad variety of views in order to stimulate debate and cross-pollination in the community.

- Hardware systems for core areas of AI such as machine learning and deep learning accelerators, vector processing units, etc.
- Hardware for more unconventional areas, such as hyperdimensional computing, machine learning for sensing, and Bayesian computation.
- Hardware systems implementing principles of the neural computation in the brain

Speaker's Details : Dr.M.Sankar Ganesh, Assistant Professor (Senior), VIT University

Date : 16.02.2022

Target Audience : Students of SITAMS.

Organised by : Department of ECE, SITAMS.

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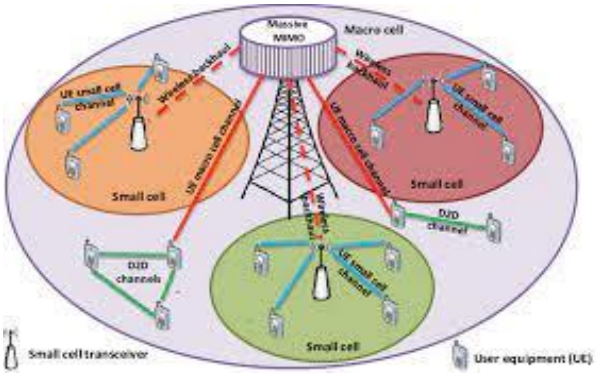
Seminar

On

"Latest Advancements in Antenna Design or 5G Heterogeneous Networks"



Introduction:

5G will support significantly faster mobile broadband speeds, low latency and reliable communications, as well as enabling the full potential of the Internet of Things (IoT). This will open up the possibility for new services such as tactile communications, smart manufacturing and cities, in addition to enhanced broadband connectivity.The forthcoming 5G system will truly be a mobile multimedia communication platform that constitutes a converged networking arena that not only includes legacy heterogeneous mobile networks, but advanced radio interfaces and the possibility to operate at mm wave frequencies to capitalise on the large swathe of available bandwidth. Future emerging handsets and base stations will require antenna technology that is multimode in nature, energy efficient, and above all able to operate on the mm wave band in synergy with legacy 4G and sub-6GHz 5G.

Objectives:

This Seminar aims to identify and discuss technical challenges and new results related to the design of 5G antennas.

- Antenna design techniques and measurement for 5G systems
- Multiple antennas for advanced 5G transceivers
- Multiband 5G antenna
- 5G Dielectric Resonator antennas
- Antennas on flexible substrates for medical applications

Speaker's Details : Ms.K.Karthika, Assistant Professor, ECE, Kumaraguru College of Technology,Coimbatore.

Date : 03.11.2021

Target Audience : Student & Faculty of SITAMS.

Organised by : Department of ECE, SITAMS.

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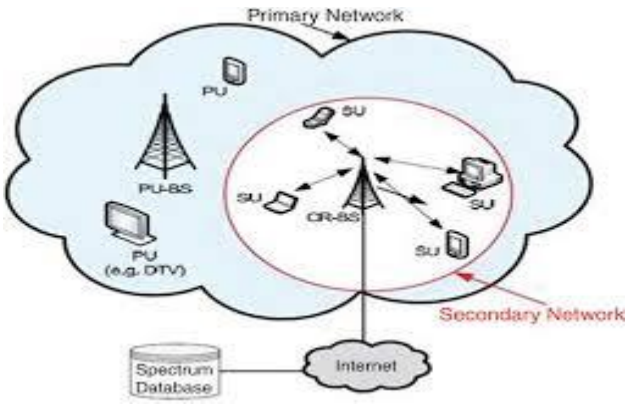
A Seminar
On
"Cognitive Radio"



Introduction:

In today's world, use of wireless devices has increased significantly with the advances in wireless technology. In the near future significant growth of connected devices is expected with mass adoption of IoT. Huge amount of spectrum is required to support this increasing number of wireless devices. But the spectrum available is a scarce resource. If we check current spectrum allocation chart, it's very hard to find free spectrum to support upcoming volumes of wireless devices and mobile data traffic. Cognitive Radio is a concept introduced to attack the upcoming spectrum crunch issue. Cognitive Radio users are unlicensed users who find unused licensed spectrum dynamically for its own use without causing any interference to licensed users.

Objectives:

Spectrum allocation typically happens through a licensing process. However, many parts of licensed spectrum are not optimally utilized. The key points of this techniques are

- spectral inefficiency where certain bands are overcrowded while other bands are relatively unused.
- spectrum sharing
- Spectrum Sensing

Speaker's Details : Ms. K.Anusha, Assistant Professor, ECE, KCT, Coimbatore.

Date : 21.01.2022

Target Audience : III year ECE Students, SITAMS.

Organised by : Department of ECE, SITAMS.

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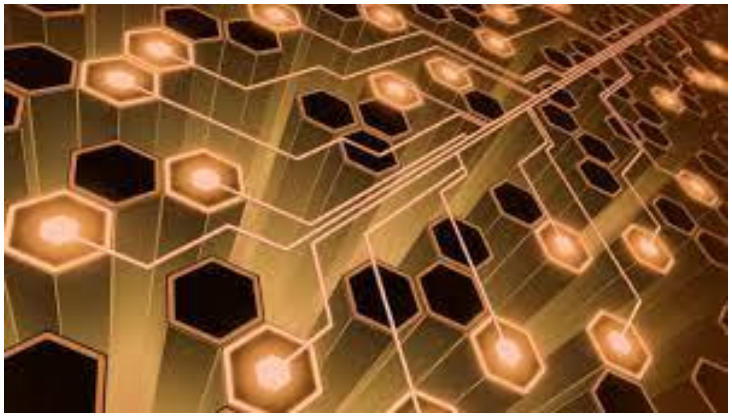
Seminar

On

"Importance of Electromagnetic Interference and Electromagnetic Compatibility(EMI/EMC) and its effect on humanity"



Introduction:

As the density of the electromagnetic environment continues to increase, the concern about its effects from sources producing EMI also increases. Advances in technology and the number of products produced are having a significant effect on the efforts aimed at maintaining the required operation and interoperability of products and systems used in our society. These events had added challenges for those who are responsible for keeping pace with the effort needed to maintain the required level of electromagnetic compatibility (EMC) in these products and systems.

Objectives:

This seminar generally addresses several key points EMI sources, both natural and man-made, and its effect on humanity that compose the EME can be categorized into several primary categories:

- Ambient EME
- High Powered Electromagnetic Pulse
- Power Quality degradation factors
- Railroad and Mass Transit Systems
- Medical equipment utilized in medical facilities

Speaker's Details : Mr.V.Gopalan, Assistant Professor, ECE, VCET, Erode.

Date : 17.09.2021

Target Audience : Students of SITAMS.

Organised by : Department of ECE, SITAMS.

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A Seminar
On
"Internet of Things"

Introduction:

It is hard to imagine life without your Smartphone – you have come to rely on it so much – for your work; to stay in touch with family and friends; to capture and share those special moments; to find your way around in a new neighborhood. Did you ever wonder how and when all this happened? Or how and when GPS sensors came to be in your cell phone? In this seminar, we will explore the convergence of multiple disciplines leading to todays' Smartphones. You will learn about the birth and evolution of Telephony Networks, Broadcast Networks (TV and Radio) and Consumer Electronics.

Objectives:

This seminar discusses the impact of Internet, (multimedia) content, smartphones and apps on everyday lives. We will then look at how this emerging platform called the Internet of Things – wherein billions and trillions of devices communicating with each other and "the cloud" – could enable unprecedented, innovative products and services.

Speaker's Details : Mrs.J.J.Nandhini, Assistant Professor, Sri Ramachandra Engineering and Technology, Chennai

Date : 10.03.2022

Target Audience : Students of SITAMS.

Organised by : Department of ECE, SITAMS.

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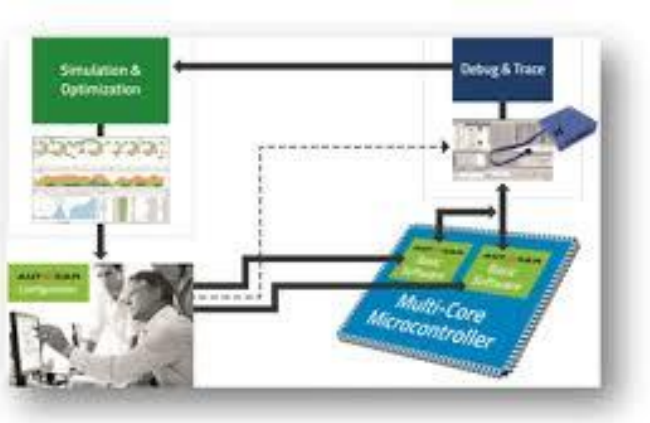
A Seminar
On
"Multicore Architecture"



Introduction:

Multicore refers to an architecture in which a single physical processor incorporates the core logic of more than one processor. A single integrated circuit is used to package or hold these processors. These single integrated circuits are known as a die. Multicore architecture places multiple processor cores and bundles them as a single physical processor. The objective is to create a system that can complete more tasks at the same time, thereby gaining better overall system performance. This technology is most commonly used in multicore processors, where two or more processor chips or cores run concurrently as a single system. Multicore-based processors are used in mobile devices, desktops, workstations and servers.

Objectives:

The concept of multicore technology is mainly centered on the possibility of parallel computing, which can significantly boost computer speed and efficiency by including two or more central processing units (CPUs) in a single chip. This reduces the system's heat and power consumption. This means much better performance with less or the same amount of energy.

Speaker's Details : Dr.K.Prabhuchandran, Associate Professor, ECE, SITAMS

Date : 19.07.2021

Venue : Gallery, SITAMS.

Target Audience : Students of ECE, SITAMS.

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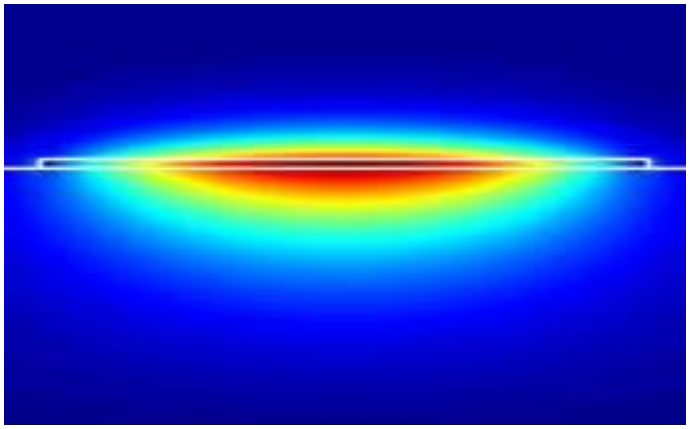
A Seminar
On

"Active Optical Devices Specialization"



Introduction:

This Active Optical Devices specialization is designed to help you gain complete understanding of active optical devices by clearly defining and interconnecting the fundamental physical mechanisms, device design principles, and device performance. You will study and gain active experience with light emitting semiconductor devices like light emitting diodes and lasers, nanophotonics, optical detectors, and displays.

Objectives:

The key areas discussed in the seminar are

- To design semiconductor light sources, and surrounding optical systems
- Analyze detection systems for LIDAR, microscopy and cameras
- Analyze systems for optical device systems that can adapt to the environment at hand.
- Use lasers and optical electronics in electronic systems through an understanding of the interaction of light and atoms, laser rate equations and noise in photo-detection.

Speaker's Details : Dr.C.Kumar, Associate Professor, Department of ECE, GTEC, Vellore

Date : 26.12.2021

Target Audience : Students of ECE, SITAMS.

Organised by : Department of ECE, SITAMS.

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A Seminar
On

"Python for Everyone"

Introduction:

Python is undoubtedly one of the most popular programming languages in today's world. With its quickly updated libraries and the ease to code, Python has managed to make its place in the rapidly growing technology era. Python is a programming language that places weight on coding productivity and code readability. Python makes use of coding which looks like written English. Moreover, the coding is done in words and sentences, rather than characters.

Objectives:

This seminar builds on the success of the Python for Everybody course and will introduce fundamental programming concepts including data structures, networked application program interfaces, and databases, using the Python programming language. You'll use the technologies learned throughout the seminar to design and create your own applications for data retrieval, processing, and visualization.

Speaker's Details : Dr.P.M.S.S. Chandu, Professor, CSE, Siddarth Institute of Engineering and Technology, Puttur.

Date : 18.08.2021

Venue : Gallery, SITAMS.

Target Audience : Students of ECE, SITAMS.

Organised by : Department of ECE, SITAMS.

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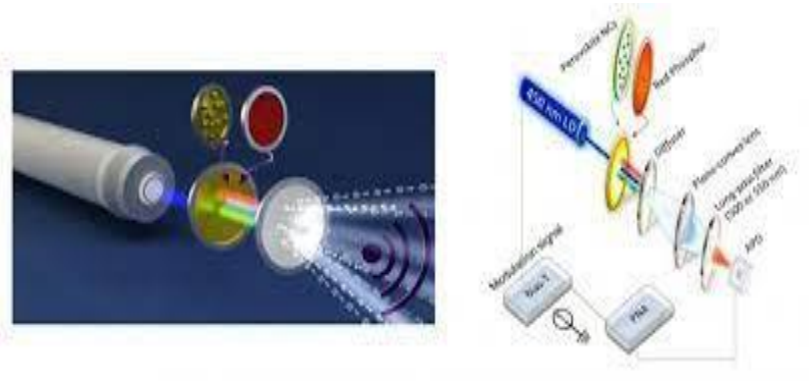
A Seminar
On
"Laser-based Visible Light Communication"



Introduction:

Visible light communication (VLC or LiFi) has been a topic of intense research after the idea was proposed in 2011. To date, a data rate of multiple 100s Mbps has been demonstrated using LED as light source. At KAUST, we are developing the next generation of SSL lighting using visible laser diodes (LDs). Laser diodes do not suffer efficiency droop at high current densities. This allows for the design of lamps using a single, small footprint, light-emitting chip operating at high current densities.

Objectives:

This seminar focus on the recent progress of visible diode LD-based VLC technology, High-speed optoelectronics and communication systems for multiple Gbps.

Speaker's Details : Mr.S.Prem kumar, Associate Professor from Adhi Parasakthi college of Engineering, Chennai

Date : 11.10.2021

Target Audience : Students of ECE, SITAMS.

Organised by : Department of ECE, SITAMS.