



MGR ASSOCIATION FOR GREAT INNOVATIVE CREATORS

Department of Electronics and Communication Engineering

Event Title	Subject Lecture on" Applications of Cognitive Radio"		
Objective of Event	To understand about cognitive radio systems		
Chief Guest /Speaker Details	Mr. N. Lakshmi Narayanan, Assistant Professor, Dr. M. G. R Educational and Research Institute		
Date	22/01/2024	Time	02.00 PM to 04.00 PM
Venue	VLSI Lab	No. of Participants	100

REPORT

TITLE

Subject Lecture on" Applications of Cognitive Radio"

CONTENT

The Department of ECE conducted a Subject Lecture on the topic 'Cognitive Radio' on 22/01/2024 at 2pm. The event was attended by 4th year ECE students. The speaker for the event was Mr. N. Lakshminarayanan, Assistant Professor, Department of ECE. The event focussed on enlightening the students with an in-depth examination of Software Defined Radio (SDR), emphasizing its pivotal role in enabling dynamic reconfiguration of radio parameters. Essential functions of SDR were elucidated, covering aspects such as source coding and decoding, facilitating a nuanced comprehension of the information processing involved. The discourse extended to multi-band technology and multi-mode radio, shedding light on the versatility of cognitive radios in adapting to diverse frequency bands and operating modes.

The second part of the lecture delved into intricate technical aspects, including channel encoding, joint control, and agile beamforming, illustrating the sophisticated techniques employed to enhance communication efficiency. Discussions also encompassed the air interface, exploring the intricacies of communication links, and the plug-and-play architecture, emphasizing seamless integration in varying environments. The lecture further delved into receive and transmit modes, unraveling the functionalities associated with each. Additionally, the software architecture of an SDR and the top-level interface topology were explored, providing a comprehensive



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overview of the cognitive radios' structural and operational frameworks. Overall, the lecture offered a profound exploration of Cognitive Radios, elucidating their advanced functionalities and applications in modern communication systems. The session was interactive and enabled the students to enhance their knowledge. The event was organized by Dr. Chunchu Rambabu, Professor, ECE department. The Department thank our Honourable President for his support and all Executives for their encouragement in organizing the event.



EVENT OUTCOME

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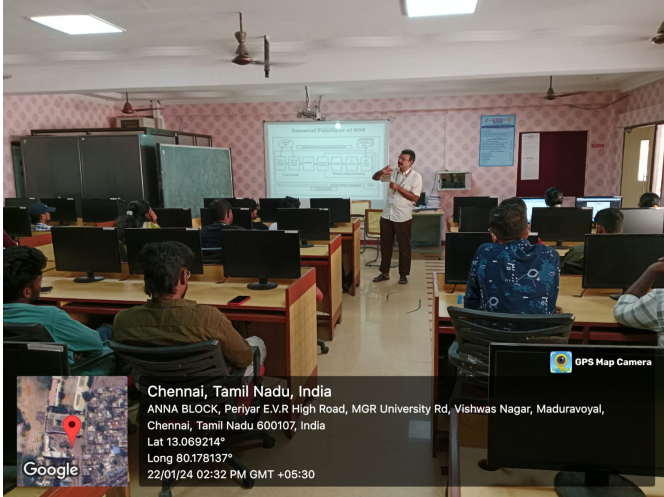
PHOTOS



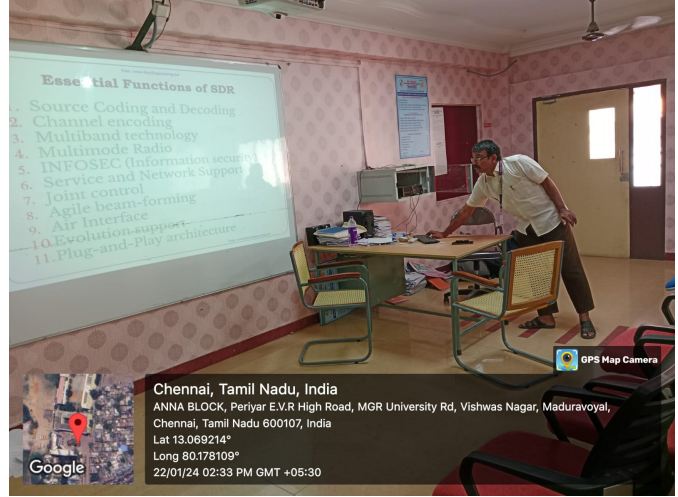
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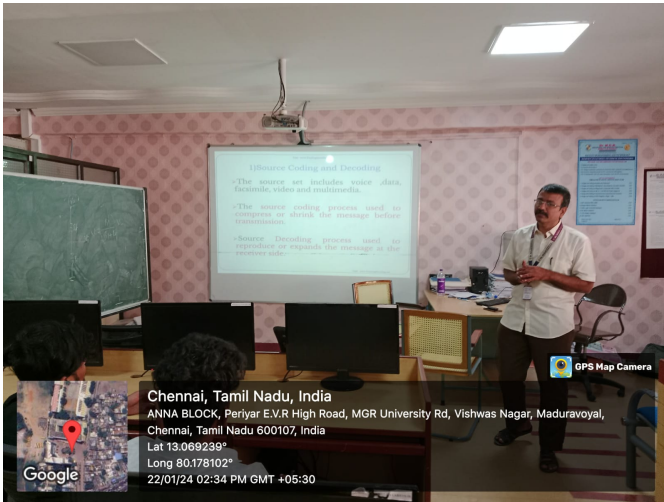
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Dr. Chunchu Rambabu