Dr. Mahalingam College of Engineering and Technology
Office of Dean Research & Innovation
(RF & VLSI)
Research Interest Group

Knowledge sharing session

Report on "Research aspects of Software Defined Radio technology"

Date: 20.09.2024

About the Session:

S.No.	Name of the Resource Person	Topic	Date & Time	Venue	No of Participants
1.	1. Mr.S.Murthy, Senior Application engineer, 2. Mr.Ravikumar G, Senior Application engineer, VVDN Technologies Pvt. Ltd., Bangalore	Research aspects of Software Defined Radio technology	18.09.2024 & 3:30 pm	ECE Lab C408	10

Key highlights:

- The live demonstration offered participants practical insights into how SDR platforms can be leveraged for real-world applications, from basic communication systems to advanced 5G network research.
- Attendees gained an understanding of how to choose between open-source solutions like GNU Radio or proprietary tools like LabVIEW, depending on their project requirements and objectives.
- The presentation provided an overview of the growing research avenues in 5G technologies, with a specific focus on MIMO systems and the role of SDR in driving innovation in this field.

Overview:

Mr.Murthy explained the various aspects of SDR hardware platform i.e. Universal Software Radio Peripheral (USRP). The software required to run the USRP. They can be either open source like GNU Radio or Lab view. Demonstrated the transmission of audio and vieo files using USRP B200 (70 MHZ to 6 GHz). Also explained the NI OAI Reference Architecture for 5G Research, 5G MIMO research using lab view & USRP X410.

Mr. Murthy provided a detailed explanation of the **Universal Software Radio Peripheral (USRP)**, a flexible and widely used hardware platform that supports a wide range of frequencies. Specifically, he demonstrated the capabilities of the **USRP B200**, which operates within the frequency range of **70 MHz to 6 GHz**.

The session was a valuable learning opportunity for students, engineers, and researchers, providing both a theoretical foundation and practical exposure to SDR technologies and their applications in the evolving world of communication systems.

Poster of the event:

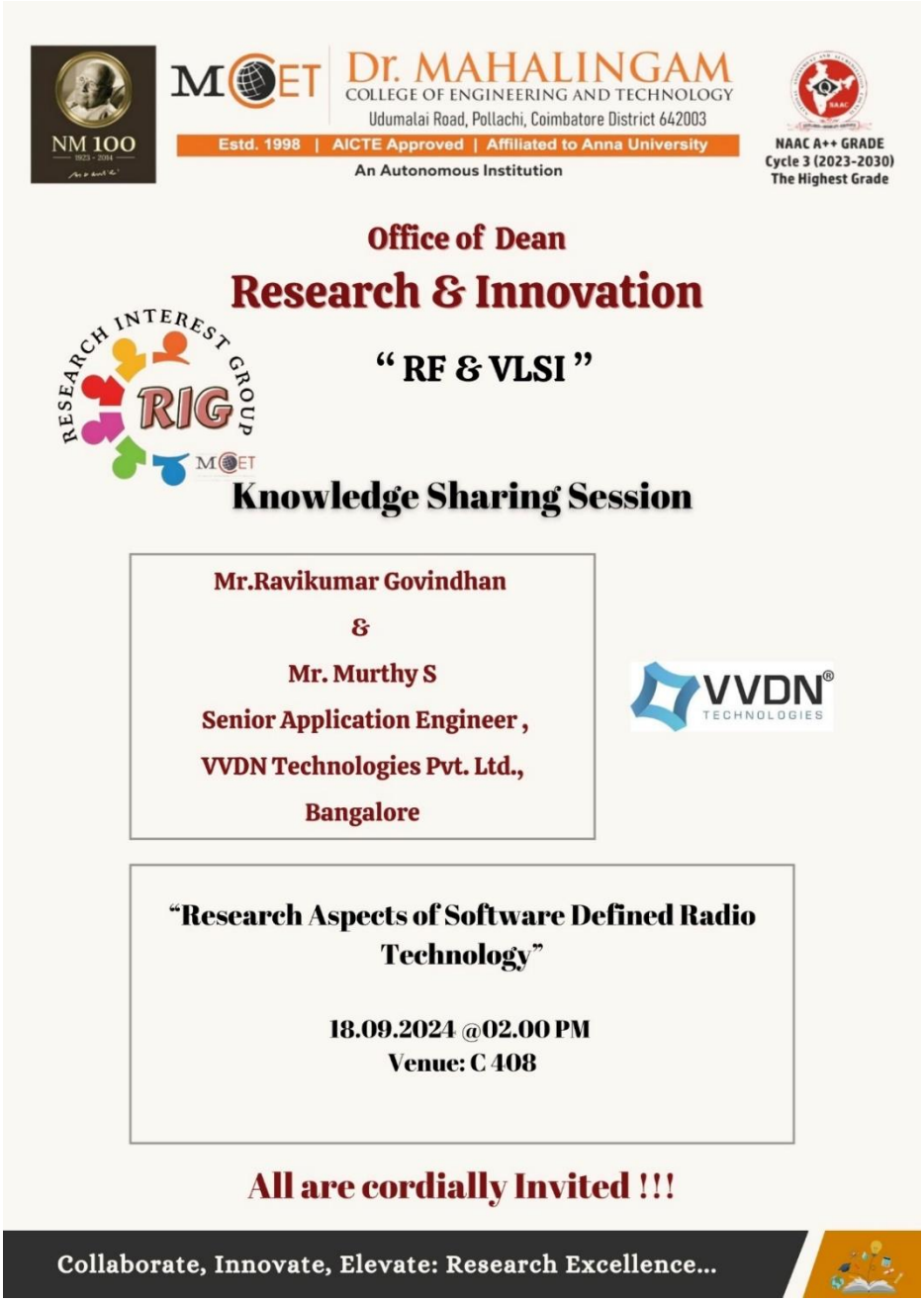

Photo taken during the event:

Dean R&I

Principal

--Sd--

Secretary