

PMRF-ISSS Teaching Programme

Prime Minister Research Fellowship students' teaching requirement facilitated by the Institute of Smart Structures and Systems



Module PMRF-ISSS063/III/2024

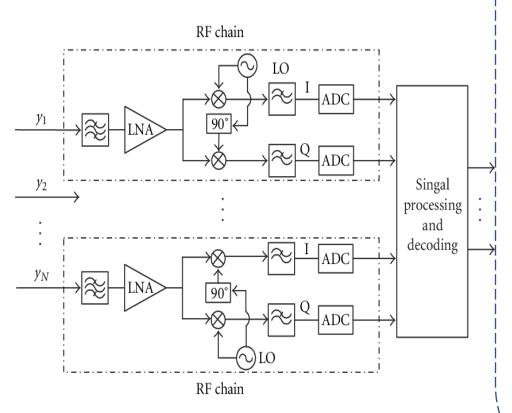
Communication System Design

Name of the PMRF student

Vineetha Yogesh

Required background of the students taught

ECE, Telecommunication engineering and any field of engineering involving communication.



Details of the content of the module

Course is designed for people working with hardware and deal with impairments in the hardware. Specifically, in this course we model the hardware impairments in communication systems and design/devise suitable estimation and compensation algorithms.

- 1) Introduction
- 2) Noise characterization and modelling
- 3) Communication link budget
- 4) Oscillator phase noise
- 5) Sampling jitter
- 6) Carrier frequency offset
- 7) Sampling frequency offset
- 8) IQ mismatch
- 9) DAC and ADC interface
- 10) Compensation techniques

Image Credits: Wikipedia

Schedule of the module

Start date: 1st Aug, 2024

Class schedule: Monday, Wednesday, Thursday – 2PM -

4PM

End date: 1st Oct, 2024 (Tentative)

Number of hours: 48 hours

Meeting link: Will be shared later

Link

Contact email ID: <u>isss.forum@gmail.com</u>

Registration link:

https://forms.office.com/r/m7h0GFua1B