PMRF-ISSS Teaching Programme

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

Module PMRF-ISSS032/2022

Time-Frequency Analysis: Fourier and Wavelet Transforms

Name of the PMRF student

ADITYA ANAND

Required background of the students taught

Undergraduate students in any Engineering discipline

Online session coordinator

Will be chosen from the list of registrants

Sound of Colliding Black Holes
Howard, S. (2017). THE LIGO CHIRP. *Journal of the Washington Academy of Sciences*, *103*(4), 25-50.

Details of the content of the module

Lectures

- Introduction to Time-Frequency Analysis
- Fourier Series and Fourier Transform
- Discrete Fourier Transform (DFT) and FFT
- Applications
- Shortcomings of Fourier Transform and STFT
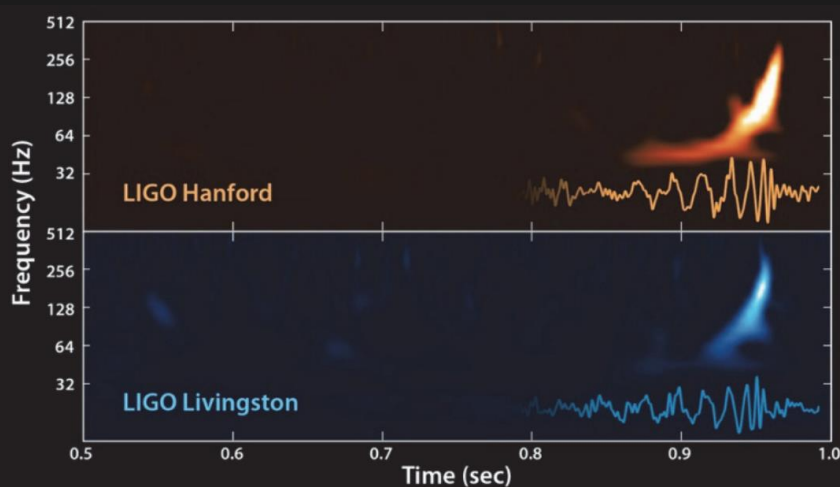- Wavelet Transform
- Applications

Quiz

1. Fourier Transform
2. Wavelet Transform

Project

Analysing a signal using FFT and Wavelet Transform.

Schedule of the module

Course Starts Date: 22nd October, 2022

End Date: 3rd December, 2022

Classes on : Saturday   10AM-12PM

Sunday   10AM-12PM

Meeting link : Will be shared later

Link

Contact email ID: isss.forum@gmail.com

Registration link:
https://tinyurl.com/e2k92e8r