GTU – Graduate School of Engineering and Technology

Online Seminar on
"Microwave-Millimetre Wave to THz Instrumentation for Tokamak Plasmas"
Under
Skill Enhancement Program

Coordinated By: Prof. Gautam D. Makwana

Date & Day: 2nd January, 2021 Saturday
Time: 11:30 AM to 01:PM

Expert Profile:

Mr. Janmejay Buch completed his MSc(Physics with specialization in Electronics) from the Saurashtra University in 2005 and M.Phil in 2007. After working a Lecturer in Engineering colleges for about two years, he joined Institute for Plasma Research in 2009 as a Scientist where he is currently working as Scientific Officer- E. He has developed for the first time a density profile measurement technique at IPR capable of measuring radial and temporal plasma density profiles. Reflectometry is a variation of FMCW RADAR technique which uses phase measurement rather than the time delay as the distances to be measured are ~ 1/2 meters. For a hands-on experience and he was deputed at Joint European Torus at Oxford England for a year. He is the responsible for the design and development of ultra-fast sweep driver setup for the microwave source, the superhetrodyne transceiver frontend, high speed data acquisition and the digital signal processing codes for estimating the beat frequency and the profile inversion of the plasma density profiles. He has published more 20 articles in journals of international repute.

About the Webinar:

GTU – Graduate School of Engineering and Technology organizes skill enhancement program by renowned experts on every Saturday. The purposes of this session are to explore research domain, research opportunities at Institute of Plasma Research, Gandhinagar in the field of RF and Microwave, and aware various methods, techniques of RF & Microwave for Plasma Applications. The session is organized on **""Microwave-Millimeter Wave to THz**

Instrumentation for Tokamak Plasmas””” is organized. The session is given by Mr. Janmejay U. Buch, Scientific Officer, Institute for Plasma Research, Gandhiangar

Objective of the Session:

- To Introduce of basics of Plasma, Tokamak in view of RF & Microwave fundamentals,
- Various techniques such as Reflectometry, and Electron Cyclotron Emission measurement techniques, instrumentation, result and discussion work done at IPR
- To explore research opportunities, PG Dissertation/Internship opportunities among the student in the field of RF & Microwave, Electronics at IPR.

Glimpse of the Session