PMRF-ISSS Teaching Programme

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

PMRF- ISSS130/VI/2024

AlGaN/GaN HEMTs for RF Applications

Name of the PMRF student

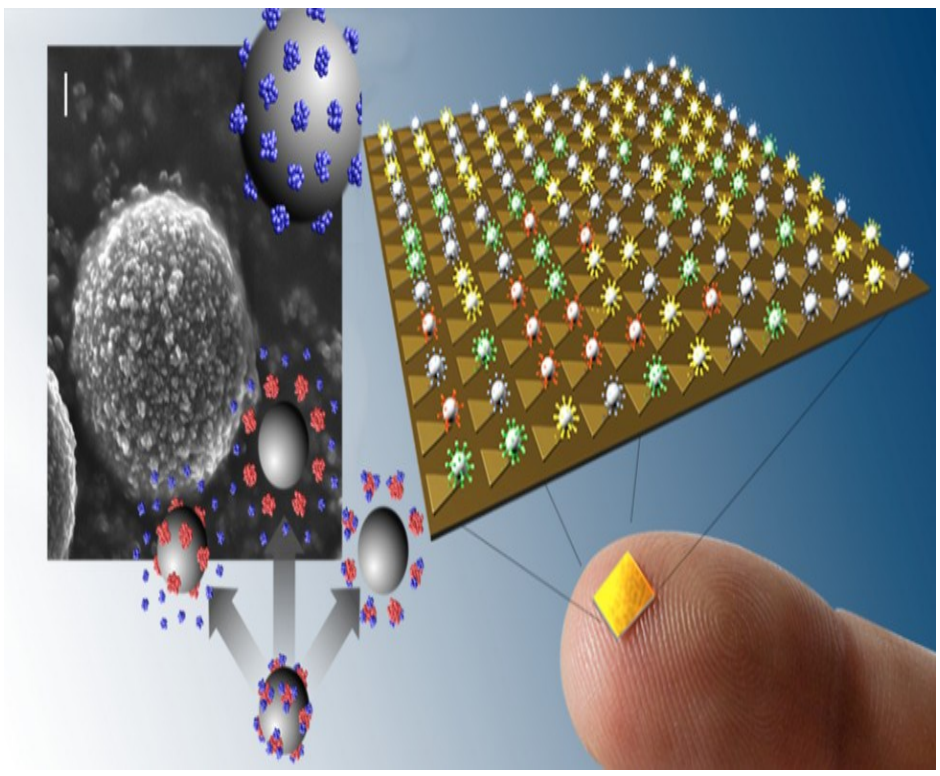
Mohammad Ateeb Munshi

Required background of the students taught

Electronics, Electrical, Physics, Material Sciences, Microwave engineering

Online session coordinator

Will be chosen from the list of registrants



Details of the content of the module

- **Introduction to AlGaN/GaN HEMTs**

HEMTs, AlGaN/GaN HEMT, Polarization concept,

- **AlGaN/GaN HEMT Device Basics**

Device Basics, Traps, current collapse, Passivation.

- **GaN HEMT Design**

Fabrication process, Field Plates, trade-offs in design.

- **GaN HEMT for RF applications**

Practical aspects, commercial GaN HEMTs.

- **GaN HEMTs Technology**

GaN HEMTs evaluation board, emerging technologies.

- **GaN HEMTs Linearity**

Linearity in GaN RF HEMTs a device perspective.

Schedule of the module

Lectures will be uploaded on **Saturday** 8pm

Lectures will start from **1st September 2024 (Tentative)**

Course will end on November 10th 2024.

Course Hours: 22 Hours

Link

Contact email ID: isss.forum@gmail.com

Registration link: https://forms.gle/Q5RBeyGH96S4ZXJS9