#### **ACKNOWLEDGMENT**

We sincerely express our gratitude to our institution and management for providing us with good infrastructure, library facilities, laboratory facilities, and qualified staff, whose guidance was of immense help in the completion of this project work on the topic "Design of RF-to-DC for Energy Harvesting" successfully.

First and foremost, we thank our parents for what we are and where we are today, without whose hard work and sacrifice we would not be here today.

We are very grateful and extend our sincere thanks to our guide **Ms. Swapna Srinivasan**, Senior Assistant Professor, Department of E&CE, and mini project coordinators, **Mr. Uday J**, Senior Assistant Professor and **Dr. Sruthi Dinesh**, Assistant Professor for their patience, valuable help and timely support.

Words are inadequate in offering our thanks to **Dr. Vinayambika S Bhat**, Dean of Quality Assurance and Head, Department of E&CE, MITE, Moodabidri for her encouragement and support in carrying out the project.

Hearty thanks to **Dr. Prashanth C M**, Principal, Mangalore Institute of Technology & Engineering, Moodabidri, for his kind support and the encouragement showered.

Special thanks to our chairman **Mr. Rajesh Chouta** for his encouragement and having given us the opportunity to do this project.

Our sincere thanks to all the teaching and non-teaching staff of the E&C Department, for their immense encouragement and support throughout the tenure of the project.

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### **ABSTRACT**

RF (radio frequency) to DC (direct current) converts an RF signal into a DC voltage. This process can be implemented in many applications like wireless power transmission, wireless data transfer, and energy harvesting. The conversion process can be used to power many devices through the transmission of Radio Frequency and converting it to DC voltage which can be used to power devices that are difficult to access or in remote locations and wirelessly charge batteries. The process allows transmitting power to these devices wirelessly, without any need for a physical connection to a power source.

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#### LIST OF ACRONYMS

WPT : Wireless Power Transfer

DC : Direct Current

AC : Alternating Current

RF : Radio Frequency

EDA : Electronic Design Automation

DBS : Deep Brain Simulator/Simulation

VSWR: Voltage Standing Wave Ratio

ISM: Industrial, Scientific, and Medical

MSTPA: Microstrip Patch Antenna

CMOS: Complementary Metal-Oxide Semiconductor

WSN : Wireless Sensor Network

IoT : Internet of Things

UAV : Unmanned Aerial Vehicles

UGV : Unmanned Ground Vehicles

ADS : Advanced System Design

BER : Bit Error Ratio

WLAN: Wireless Limited Area Network